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This is to certify that the information in the attachment documents is verified by me and is true to the best of my knowledge.

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2.3.1
SELF LEARNING

2.3.5

Journal Club / Journal Presentations

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JOURNAL CLUB 2022-23

COMMITTIE MEMBERS

1. **Dr. Prof. Manjula S**
2. **Mrs. Lijna N P**
3. **Mrs. Neenu P K**

KMCT College of nursing journal club presentation 2023 were started by 15th June 2023, 3rd year BSc nursing students are the groups who are participating in journal club presentation and it will be conducting every Thursday. On June 15th Mr Dulkafel and Mr Athul Krishna were the resource persons and the group of participants were 3rd year BSc Nursing students. The teachers were present on the day where Dr, Prof. Manjula S. Prof. Lijna N P. and Mrs. Neenu P K and other teaching faculty.

The students of 3rd years will select a journal research content according to their interest with the help of teachers ready with the topic and do presentation over the class and with the principal, vice principal and other teaching faculty.

And after the presentation the group were allowed for the open discussion regarding the topic and each and every aspect of the research topic and their opinion regarding the study and recommendations etc.

The topic of the study presented on 15.06.2023 where:

- A descriptive study to assess the work-related disability among patients with arthritis attending Arthritis op at selected hospital, Chennai.
- A study to assess the practice of smoking cessation counseling by Nurses in GKNM Hospital, Coimbatore

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JOURNAL PRESENTATION BY 3RD YEAR(2023)

PROBLEM STATEMENT

A pre experimental Study to assess the effectiveness of mobile based Eye health promotion strategies in increasing the Awareness and knowledge on eye health Among school children

About author : Mrs.j.vanvangula devi,dr.giby Jose issued on jan_ June 2022

The pretest mean and standard deviation were 8.90 and 4,2738 and post test mean and standard deviation were 17.9454 and2.7941.the data showed that there is improvement in the knowledge level after the intervention. Awareness and knowledge about eye health promotion were inadequate among school children and mobile based education was found to be cheap,fast and effective advocacy strategy.

INTRODUCTION

Vision has an essential role in child's development and visual deficit is a risk factor not only for altered Vision and sensory development but also for overall socioeconomic status throughout life. Early detection leads to effective treatment of eye and vision problems in children. Therefore timely screening is vital to avoid life long visual impairment. Globally in developing countries 7%_31%of the Childhood blindness and visual impairment is avoidable.

In India the resources and infrastructures for eye care service are very less than actual requirement estimated. Refractive services coverage for the age group 5 to 15years on an average in rural areas in India is 30% and it is 55% for urban areas.

OBJECTIVES

- To evaluate the effectiveness of mobile based eye health promotion strategies among school children.
- To associate the post test level of knowledge on eye health of school children with their selected demographic variables.

HYPOTHESIS

- The study, the research hypothesis state: There is significant difference between the level of knowledge on eye health among school children before and after investigation.
- There is significant association between the post test level of knowledge of school children with their selected demographic variables.

METHODOLOGY

1. Research approach :quantitative research approach
2. Research design: pre experimental one group pre test and post test design

VARIABLES

1. Dependent variable: increasing the awareness and knowledge among school students
2. Independent variable: eye health promotion strategy
3. Sampling technique: non probability convenient sampling technique.
4. sampling size: sample size was 55 school children.
5. Population: school children
6. Setting of the study: conducted on school children in selected rural areas of Chennai district

DATA COLLECTION TOOL

The data collection tool was questionnaire and results were compared the demographic (age,sex,education, family history of wearing spectacles) Knowledge questionnaire

DATA ANALYSIS

The study revealed that majority of sample 28(50.9%)were in the age group of 11_15year were male and 35(63.63%) sample were studying in 9th standard, 39(79.90%) had family history of wearing spectacles and 25(45.45%) sample had exposure to eye health information Through mass media.

The data showed that there is a significant improvement in the knowledge level on eye health after the intervention (the questionnaire consist of 20 item)

The pretest mean and standard deviation were 890 and 4.2738 post test mean and standard deviation were 17.9454 and 2.7941.

The data showed that there is significant improvement in the knowledge level on eye health after the intervention. There is no significant association between

the post test level of knowledge and demographic variables of school children.

CONCLUSION

Awareness and knowledge about eye health promotion were inadequate among school children. Dissemination of Eye health promotion through mobile was found to be cheap ,fast and effective advocacy strategy for the

RECOMMENDATIONS

- The study can be done as 2 group pretest post test control group design
- The study can conduct on large sample
- The same study can conduct in college students

REFERENCE

→ B t basavanthappa (2011) Community health nursing, 2nd edition Jaypee brothers medical publishers pvt.ltd.india

REPORT ON SELF LEARNING

Self learning is process by which individuals take the initiative , with or without the assistance of others in diagnosing their learning needs ,formulating learning goals ,identifying human and material resources for learning and evaluating learning . self learning introduced the students by assignment , drug presentation and journal presentation according to learning needs of each batch .

Students were actively participated and they are much interested in learning process through this type of learning methodology

EFFECTIVENESS OF PROGRESSIVE MUSCLE RELAXATION WITH DEEP BREATHING EXERCISE ON SLEEP AMONG THE ELDERLY

Theentha P
Third year bsc nursing

PROBLEM STATEMENT

A study to determine the effectiveness of Progressive Muscle Relaxation & Deep Breathing Exercise on Sleep Among Elderly Persons Residing in Old Age Homes At Puducherry.

ABOUT JOURNAL

It is Journal of community health nursing
Tamilnadu nurses and Midwives Council, chennai Vol. 8/ Issue 1/Jan-June 2014

ABOUT AUTHOR

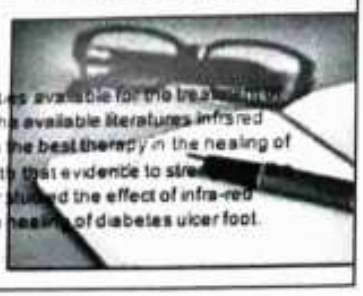
Jayasri, Professor, MTPG&RIHS, Puducherry
Karalinn Karunagari**, Professor, RMCON, Chidambaram
Ramuprabu, Lecturer in Psychology, Tagore Arts College, Puducherry

in a quantitative pre experimental one group pre-test post test design 75 diabetic ulcer foot clients who met the sampling criteria were included as sample. Consecutive sampling method was used to select the sample as they report to OPD or admitted as inpatient. Following pre-test Infra-red radiation was applied for 10 days and the post test was done seventh and tenth day.

The pre test mean and standard deviation were 51.5067 and 4.21828 respectively and the post test mean and standard deviation were 20.32 and 3.673 respectively. The "t" value was 68.352. Client's demographic variables like education and occupation had significant influences in the wound healing process.

INTRODUCTION

Diabetes Mellitus" is a metabolic disorder characterized by glucose intolerance



there are many modalities available for the treatment of diabetic ulcer8. From the available literatures infra-red radiation is one among the best therapy in the healing of diabetic ulcer foot5. With that evidence to strengthen finding the investigator studied the effect of infra-red radiation therapy in the healing of diabetes ulcer foot.

OBJECTIVES

1 To assess the pre-test condition of diabetic ulcer foot among patients with Diabetes mellitus

2 To assess the post-test condition of diabetic ulcer foot among patients with Diabetes mellitus

3 To compare the pre and post test condition of diabetic ulcer foot among patients with Diabetes mellitus

4 To associate the effectiveness of intervention in healing of diabetic ulcer foot with the selected demographic variables of the diabetic ulcer foot clients

2. Association of post test score of infrared radiation in healing of diabetic foot ulcer with the selected demographic variables:
The clients' education and occupation had statistically significant association at $P<0.05$ level. Age, gender, marital status like other demographic variables did not have any influences in healing of diabetic ulcer foot.

CONCLUSION

The study concluded that infrared radiation application was the most effective means of treatment in healing the diabetic ulcer foot. Client's demographic variable education and occupation had significant influences.

RECOMMENTATIONS

1. A similar study can be replicated in public and private sector.
2. Infra-red radiation with different doses can be tried
3. Comparative study may be conducted between infra-red radiation, insulin dressing, and vacuum dressing and or hyper baric oxygen therapy may be tried.
4. Gender differentiated study with same dose of infra-red radiation may be considered.

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1. Ramachandran A, Ma RC, Snehalatha C. Diabetics in Asia. Lancet. 2010;408-416
2. Brunner and Suddarth. Textbook of medical and surgical nursing. JB Lippincott company, Philadelphia. 10th edition 2010.1377-1429
3. http://en.wikipedia.org/epidemology of diabetes
4. Www.diabetics encyclopedia

TARGET POPULATION: ALL THE CLIENTS WITH DIABETIC FOOT ULCER IN TAMILNADU

SAMPLING

Sample size: 75 ulcer foot clients

Sampling technique : Non probability consecutive sampling technique

DATA COLLECTION TOOL

- In pre test descriptive statistics like number and percentage was used
- In post test inferential statistics like Chi- square test was used

DATA ANALYSIS

1. After comparing the pre and post te condition of diabetic ulcer foot among patients with Dm, The mean score wa 31.187 and the standard deviation 3. and the 't' value were 68.35. This sho that there is significance improvement the healing of diabetic ulcer foot with infrared radiation.

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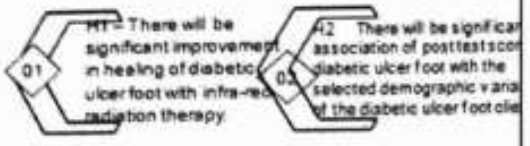
HYPOTHESIS



RESEARCH APPROACH: QUANTITATIVE APPROACH

RESEARCH DESIGN: Pre-experienmental one group pretest posttest design

RESEARCH SETTING: Melmaruvathur Adhiparasakthi Institute of Medical Sciences and Research Hospital (MAPIMS), Melmaruvathur, Kancheepuram district, Tamilnadu.

VARIABLES

1. INDEPENDENT VARIABLE: INFRARED RADIATION
2. DEPENDENT VARIABLE : HEALING OF DIABETIC ULCER FOOT
3. AGE, SEX, RELIGION, EDUCATION, OCCUPATION, MONTHLY INCOME OF FAMILY, MARITAL STATUS, DIETARY PATTERN, RESIDENTIAL AREA, FAMILY HISTORY OF DIABETIC MELLITUS AND FOOT ULCER DURATION

POPULATION

ACCESSIBLE POPULATION : ALL THE DIABETIC CLIENTS WITH FOOT ULCER ATTENDED IN OUTPATIENT DEPARTMENT AND ADMITTED IN SURGERY WARD AT MAPIMS

JOURNAL PRESENTATION

Presented By :
Muhammed Ajmal

01 PROBLEM STATEMENT

- A study to assess the Effectiveness of Infrared Radiation, in healing of diabetic ulcer foot at MAPIMS

ABOUT JOURNAL

I have taken this journal from international journal of nursing education and research, volume IX, issue 4 Oct - dec 2021

EFFECTIVENESS OF INFORMATION EDUCATION COMMUNICATION ON KNOWLEDGE REGARDING BREAST SELF-EXAMINATION AMONG COLLEGE STUDENTS

SHASNA. P
II YEAR BSC NURSING
KMCT CON

PROBLEM STATEMENT

A Pre-Experimental Study to evaluate the Effectiveness of Information Education Communication on Knowledge regarding Breast Self-Examination among college Students in Selected colleges at Kanyakumari district.

ABOUT JOURNAL

- IT IS AN INTERNATIONAL JOURNAL.
- TNNMC JOURNAL OF OBSTETRICS AND GYNECOLOGICAL NURSING.
- VOL XI, ISSUE 1 ,JAN 2023.

ABOUT AUTHOR

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ABSTRACT

Breast cancer is one of the leading cancers among women in the world. Breast self-examination and clinical breast examination are carried out to improve breast cancer outcome. This study had assessed the effectiveness of IEC on knowledge regarding Breast self-examination. A quasi experimental, pre-experiment alone group pre-test post-test design was adopted. Pre-test was done through structured knowledge questionnaire. Post-test was conducted after seven days of IEC. The findings revealed that, there was a highly significant difference between pre-test and post-test knowledge ($t=26.15, <0.05$) which depicted that EC was effective in enhancing the knowledge of college students on breast self-examination.

INTRODUCTION

Breast cancer is a global health issue and a most prevalent form of cancer among women. It is a progressive disease with poor prognosis if detected late. Breast cancer distinguishes itself from other types of cancer, by the fact that it occurs in a visible, external organ and shall be detected and treated at an early stage.

According to World Cancer Research Fund International and WHO, in 2020, there were 2.3 million women diagnosed with breast cancer and 6,85,000 deaths globally. ICMR report describes that, the incidence rates of breast cancer in India began to rise in early thirties and peak at the ages between 50 to 64 years. Overall, 1 in 28 women is likely to develop breast cancer during their life time.

There are several preventive techniques to reduce mortality due to breast cancer, which includes breast self examination, clinical breast examination and mammography. Breast self examination is an inexpensive tool that could be carried out by anyone to examine themselves. Though Breast self examination is a simple and cost effective the practice of breast self examination is abysmal, i.e very low in India.

Younger women generally do not consider themselves as developing breast cancer though they are at the risk of getting cancer at any age. Every woman must be aware of their personal risk factors of breast cancer. They may ignore warning signs, which leads to delay in diagnosis and poor prognosis. More than 90% of women who were diagnosed with breast cancer were found at early stages may survive with good health. Hence young women need to be educated on breast cancer and breast self examination.

OBJECTIVES

- To assess the pre-test score knowledge regarding breast self-examination among college students.
- To evaluate the effectiveness of IEC on knowledge regarding breast self examination among college students in post test.
- To find out the association between selected demographic variables among college students with their pretest knowledge scores regarding breast self- examination.

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HYPOTHESES

H: There is a significant difference between the pre-test and post-test scores on knowledge regarding breast self examination among college students after IEC

RESEARCH METHODOLOGY

A quantitative research approach with pre-experiment alone group pre test post-test design was adopted for the study. The study was conducted in Mother Gnanamma college of Education at Kanyakumari district. Forty college students who fulfilled the inclusion criteria were selected using convenience sampling technique. The tool used for the study was organized in two sections.

Section A consist of demographic variables that includes Age, Religion, Marital Status, Type of family, Educational status of mother, Family History of Breast cancer and Previous awareness of breast cancer.

Section B consists of Structured knowledge questionnaire with 25 multiple choice questions on breast self-examination. The total score was 25.

RESULT

Data collected were analysed using descriptive and inferential statistics. The frequency and percentage distribution of demographic variables revealed that majority 24 (60%) college students were between the age group of 21 to 30 years. More than half of them, 28 (70%) were Christians, majority of them 30 (75%) were unmarried and most of them 26 (65%) belongs to nuclear family. More than half of the parents 19 (47.5%) were home makers, none of them had a family history of breast cancer and no one was aware of breast self-examination

.The first objective was to assess the pre-test knowledge score regarding breast self examination among college students

Table 1: Frequency and percentage distribution knowledge score regarding Breast self-examination

Sl.No	Level of Knowledge	Frequency	Percentage
1	[illegible]	5	12.5%
2	[illegible]	32	80%
3	[illegible]	3	7.5%

Table 1 shows that during pre-test, the knowledge score revealed that 5 (12.5%) students have inadequate knowledge, 32 (80%) had moderately adequate knowledge and 3(7.5%) had adequate knowledge.

The second objective was to evaluate the effectiveness of IEC on knowledge regarding Breast self examination among college students.

Figure 1: Pre-test and post-test knowledge score regarding Breast self-examination among college students

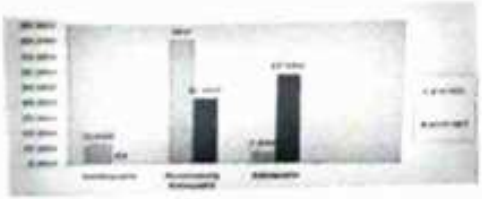

Figure 1 shows that during pre-test, the knowledge score revealed that 5 (12.5%) students have inadequate knowledge, 32 (80%) had moderately adequate knowledge and 3(7.5%) had adequate knowledge

In post-test, after the IEC, the knowledge score improved that none of them had inadequate knowledge, 17 (42.5%) students had moderately adequate knowledge and 23 (57.5%) of them had adequate knowledge

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The third objective was to associate the pre- test knowledge score regarding breast self- examination among college students with selected demographic variables.

The result showed that there was no association between pre-test level of knowledge regarding Breast self examination and demographic variables of students.

CONCLUSION

Breast self-examination is a cost effective and simple method used for detecting breast cancer at the earliest. The findings of present study showed that IEC on breast self- examination improved the knowledge on breast self examination among students and is a feasible and cost effective intervention Therefore, nurses shall conduct educational sessions regarding breast self examination periodically to prevent breast cancer.

RECOMMENDATIONS

- A comparative study can be conducted between students residing in rural and urban area.
- A study can be conducted to find out the relationship between knowledge and practice on breast self- examination among women.

REFERENCES

1. Brunner LS, Suddarth D.S., Janice (2014) Text book of Medical Surgical nursing 13th edition | Lippincott Williams & Wilkins
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KNOWLEDGE REGARDING BREAST CANCER SCREENING PROGRAMME AMONG WOMEN

SNEHA SEBASTIAN

3RD YEAR BSC NURSING

KMCT COLLEGE OF NURSING

PROBLEM STATEMENT

A Study to assess the knowledge regarding breast cancer screening programme among women in a selected community at Chennai

ABOUT JOURNAL

- IT IS AN INTERNATIONAL JOURNAL.
- TNNMC JOURNAL OF MEDICAL SURGICAL NURSING.
- VOL XI, ISSUE 1, JAN -JUN 2023

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ABSTRACT

The study was conducted to assess the knowledge regarding breast cancer screening programme among women in a selected community.Non -experimental explorative research study design was used and purposive sampling technique was followed. The tool used for the study was self structured questionnaire that consists of demographic variables and knowledge about the breast cancer screening programme.The results revealed that 87% had moderately adequate knowledge, 25% had inadequate knowledge and none of them had adequate knowledge.

INTRODUCTION

NCDs, including cancers occur mainly due to epidemiologic transitions and perceptible shift in lifestyle towards unhealthy habits.Based on GLOBOCAN estimates , by 2030 there will be 26 million deaths due to cancer ,of which 60% will occur in most developing countries that faze an increase in the incidence of Noncommunicable disease and middle income countries.

According to WHO in 2020 ,there were 2.3 million women diagnosed with breast cancer and 685000 deaths globally.

India has more patients coming up in advanced stages and they do not survive long, irrespective of the best treatment they get,hence the mortality is fairly high.There are lots of reasons for late presentations including lack of awareness, shyness on part of patients, social stigma staunch belief in alternate treatments, financial issues,lack of availability of cancer care centers and sometimes even ignorence of general doctors,and many other causes.

OBJECTIVES

- To assess the knowledge regarding breast cancer screening programme among women
- To find out the association between the knowledge of breast screening programme with their selected demographic variable.

RESEARCH METHODOLOGY

A Quantitative research approach was adopted for the study.Non experimental explorative research study design was selected.The study was conducted in kundrathur at Chennai.The total of 100 samples who fulfilled the inclusion criteria from 30 to 60 years women were chosen using purposive sampling method.The tool used for the study was self structured questionnaire that consists of 20 questions regarding the knowledge about the breast cancer screening prosprogramme.After Obtaining consent from the women ,the data collection procedure was done by interview method with questionnaire.It took 10-20 minutes to complete the questionnaire by interview.

RESULTS AND DISCUSSION

The findings of the study were discussed based on the objectives.

The demographic variables showed that most of the women 65 (65%) were aged between 30-45 years,47 (47%) had primary education, majority 44 (44%) were homemakers,64(64%) were married.60(60%) had 1-2 children and the source of information about breast cancer majority 33(33%) received information through media.

The first of the study was to assess the knowledge regarding breast cancer screening programme among women.

Table 1 frequency and percentage distribution of knowledge regarding breast cancer screening programme among women

Level of Knowledge	Frequency (f)	Percentage (%)
Inadequate (< 50)	0	0
Moderately adequate (51 - 75)	75	75
Adequate (76 - 20)	25	25

The table 1 showed that 75(75%) women had moderately adequate knowledge,25(25%)had inadequate knowledge and none of them had adequate knowledge regarding breast cancer screening programme.

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Figure 1: percentage distribution of knowledge regarding breast cancer screening programme among women

The second objective was to find out the association between the knowledge of breast cancer screening programme with their selected demographic variable.

The table 2showed that none of the demographic variables had statistically significant association with knowledge regarding breast cancer screening programme among women at P<0.05level.

CONCLUSION

The breast cancer is the commonest disease among women,since the burden is rising at a faster rate nowadays, better preparedness is essential to combat the disease.A vigorous awareness campaign and its effective implementation of a national cancer screening programme are the need of the hour.conducting a training programme for medical and paramedical professionals,is essential in the current scenario.

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LEVEL OF ANXIETY AMONG PATIENTS UNDERGOING CT SCAN

Sona. V. K
3rd year bsc. nursing

PROBLEM STATEMENT

A Quasi experimental study to evaluate the effectiveness of sensory procedural information on level of anxiety among patients undergoing CT scan in Government Head Quarters Hospital at Tenkasi.

ABOUT JOURNAL

It's an international journal
TNNMC journal of medical and surgical nursing
Vol_6/Issue 1/Jan_June 2018

ABOUT AUTHOR

Sankaraselvi, Caroline, Vengatalakshmi, Vice Principal, Associate Professor,Asst. Professor, Annasamy Ragammal College of Nursing. Tirunelveli

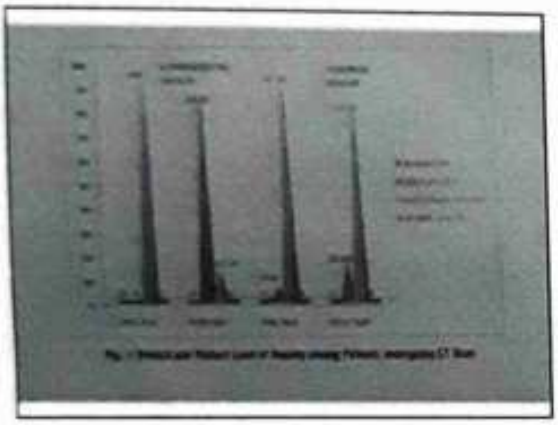
KMCT College of Nursing

HYPOTHESIS

- H1. There will be significant difference between the pretest and post-test Level of anxiety among the experimental group after sensory procedural information.
- H2. There will be significant association between the post-test level of anxiety with their selected demographic variables

RESEARCH METHODOLOGY

- In this study, quasi experimental design with one group Pre test -post test was adopted.The 100 population compnsing of 60 samples were selected using non probability sampling technique from the radiology department of Government Head Quarters Hospital. After obtaining the formal permission from the hospital authority, pre test anxiety level was assessed by using the standardued State trait anxiety inventory (STAI) scale and the post test level of anxiety after providing sensory procedural information was assessedusing the same standardized STAI scale



RESULTS AND DISCUSSION

- The present study reveals that majority 30(100%) had moderate anxiety in pretess and 26(86.6%) had mild anxiety in post test level of anxiety in experimental group whereas in the control group majority, 28(93.3%) had moderate anxiety in pretest, 2518335%) had moderate anxiety.
- The mean value in experimental group before intervention was 0.46 and after CT examination seas 42.7. the standard deviation for

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- anxiety was 44.53 before intervention and 3.77 after CT examination. The Obtained "T" value for anxiety level of experimental group before giving sensory procedural information and after CI was 12.34. "" value at the level of significance at pe 0.05. Thus there was reduced level of anxiety after CT examination.
- The mean value for post test level of anxiety in experimental group was 42.7 and 42.03 in control group. The standard deviation for post level of anxiety scas 7,79 in experimental group and 29.52 in control group

CONCLUSION

- This study highlighted that there was significant difference in level of anxiety between control group and experimental group.
- The experimental group showed decreased lewdat anxiety after receiving sensory procedung information than control group. The de suggested that the patients perception of the procedure should be taken into consideratine by the CT unit personnel, nurses and t refering physician and the detailed information about the procedure, teaching and relaxation techniques should be taught priority

REFERENCE

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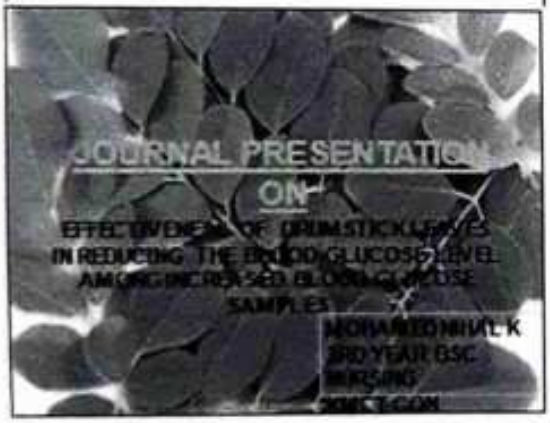

ABOUT JOURNAL

Tamilnadu nurses and midwives counsil , chennai
Www.tamilnadunursingcouncil.com
Vol. II / Issue 2 / Jul - Dec 2014

ABOUT AUTHOR

>Francis Maria, PG student*, Margaret Ranjitham**
Nehru Nursing College, Vallioor

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ABSTRACT

Assessment of effectiveness of drumstick leaves in reducing the increased blood glucose level among increased blood glucose samples in Vallioor at Tirunelveli District was undertaken during the year 2013. The purposive sampling technique was used. A pre-experimental research approach with one group pre-test and post-test research design was used. The study findings revealed that the drumstick leaves were effective in reducing the increased blood glucose levels with the mean score of pre-test blood glucose level in fasting was 144 +/- 23.19 and the post-test, mean blood glucose level was 130.26 +/- 19.57.The mean score of pre-test post prandial blood glucose level was 180.10+/- 27.52 (P<0.05) and post-test mean blood glucose was 162.63+/- 37.97 (P<0.05).

INTRODUCTION

India has more diabetics than any other country in the world. Diabetes affects more than 50 million Indians and kills about one million Indians in a year. In India 7.1% of the Indian adults are suffering with diabetes mellitus.

Drumstick is a natural medicine for diabetes.

Anti-oxidant and anti-inflammatory properties of drumstick help to control the blood sugar levels.

OBJECTIVES

- To assess pre-test fasting and postprandial blood glucose level among increased blood glucose samples
- To compare the fasting and postprandial blood glucose level among increased blood glucose samples before and after consumption of drumstick leaves.
- To find out association between pre-test fasting blood glucose level samples with their selected demographic variables.

HYPOTHESIS

- There is a significant difference between before and after consumption of drumstick leaves.
- There is a significant association between pre-test fasting blood glucose level and selected demographic variables.

METHODOLOGY

A Quantitative approach using pre experimental one group pre- test and post- test design was undertaken to assess the effectiveness of drumstick leaves on reducing level of blood glucose levels at selected areas of North Vallioor.

A total of 30 Pre-diabetes samples and the newly detected increased blood glucose samples between the age group of 30-70 years were selected by using non - probability purposive sampling. Biophysical measurement was collected before and after administration of intervention after 30 days to assess the blood glucose levels.

DATA COLLECTION PROCEDURE

Preparation procedure involved drying of fresh drumstick leaves which was then and made into fine powder. 30 individual packs were made with 8 gms of drumstick leaf powder in each pack and stored in a clean dry area. These packs were distributed by the investigators directly after breakfast for each sample for 30 days. After 30 days fasting and post prandial blood glucose level was checked to compare the effectiveness of drumstick leaf powder.

RESULTS

The pre-test level of mean fasting blood glucose level was 144.50+/-23.19, but after consuming drumstick leaves during the post-test the mean blood glucose level was reduced to 130.26+/-19.57 and it is statistically significant at P<0.05.

The pre-test level of mean post prandial blood glucose level was 180.10+/-27.52, but after consuming drumstick leaves during the post test, the mean blood glucose level was reduced to 162.63+/-37.97 and it is statistically significant at P<0.05.

All the demographic variables were associated among which occupation, family history, exercise, sleeping pattern and body mass index were found significance at p<0.05.

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CONCLUSION

The drumstick leaves is effective in reducing blood glucose level during fasting and post prandial. There is significant association between pre- test fasting blood glucose level and selected demographic variables such as occupation, family history, exercise, sleeping pattern and body mass index at 0.05 level of significance.

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• http://www.riceplex.com (Moringa leaves lower diabetes)

KMCT College of Nursing

JOURNAL PRESENTATION ON EFFECT OF WARM INTRAVENOUS FLUID ADMINISTRATION MANAGEMENT OF HYPOTHERMIA ON CABG PATIENT

Sneha ob
3rd year bsc nursing
kmct con

PROBLEM STATEMENT

- A STUDY TO ASSESS THE EFFECT OF WARM INTRAVENOUS FLUID ADMINISTRATION ON MANAGEMENT OF HYPOTHERMIA AND SELECTED PARAMETERS AMONG POST OPERATIVE CABG PATIENTS IN GKNM HOSPITAL, COIMBATORE

ABOUT JOURNAL

- TNNMC JMS Vol XI / Issue 1 / Jan - Jun 2023

ABOUT AUTHOR

- Jaeny Kemp', Malarvizhi.S', Vijayalakshmi,

'Principal, 'Professor, 'M.Sc (N) II Year student, Institute of Nursing, GKNM Hospital, Coimbatore.

ABSTRACT

- Quasi - experimental non randomized control group design was used to assess the effect of warm intravenous fluid administration on management of hypothermia and selected parameters among post operative CABG patients. The study was conducted in CTICU. The experimental samples were administered warm IV fluids whereas control group received routine care.

- The study results showed that there was a significant difference in the mean recovery time between experimental group and control group . Hence the study concluded that the intervention was effective in

INTRODUCTION

Thermo regulation is a mechanism by which living organisms maintain their body temperature. Temperature regulation is a type of homeostasis whereby, the body temperature and the atmospheric temperature are balanced. Hypothermia resulting from intervention by health personnel and therapeutic hypothermia for treatment purposes such as during cardiac surgery are common in hospitals.

Coronary Artery Bypass Grafting (CABG) remains the most common cardiac surgery performed worldwide. The clinical complications of peri-operative hypothermia are patient discomfort, shivering and vasoconstriction which leads to high risk for wound infection. It is imperative for the nurse in the post-operative period to adopt various measures for hypothermia prevention and treatment.

OBJECTIVES

- To assess the level of hypothermia and selected parameters in experimental and control group of post -operative CABG patients.
- To evaluate the effect of warm intravenous fluid administration on body temperature in experimental group.

- To associate the pretest level of hypothermia with demographic and clinical variables in experimental and control group.

HYPOTHESIS

- H1: There will be a significant decrease in the duration of resilience to normothermia among post operative off pump CABG patients who received warm IV fluids compared to those who have not received.
- HO : There will be no significant association between the pretest level of hypothermia with selected demographic variables.

METHODOLOGY Quasi experimental non randomized control group design

SETTING OF STUDY : GKNM hospital, coimbatore

SAMPLE : Post off pumb CABG surgery patient

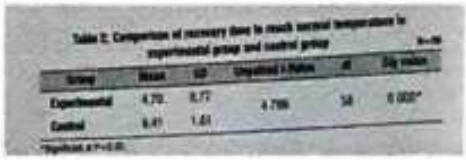
SAMPLE SIZE: 60 samples, with 30 sample allotted to each group

SAMPLING TECHNIQUE: Non-probability purposive sampling technique

RESULT AND DISCUSSION

- The table 1 shows the recovery time to reach normal temperature among control and experimental group. In experimental group, majority of the samples 22 (73.3%) had moderate recovery time to reach normal temperature, only 1 (3.3%) had delayed recovery and 7 (23.3%) samples had quick recovery.

- Whereas in control group only 1(3.3%) had quick recovery, 12(40%) samples had moderate recovery and more than half of patients 17 (56.7%) had delayed recovery. The table concludes that delayed recovery time to reach normal temperature was observed more in control group and quick recovery was observed more in the experimental group which shows the intervention given in experimental group was effective.



- Table 2 represents the comparison of recovery time to reach normal temperature in experimental and control group. In experimental group the mean recovery time was observed as 4.70 which was less than the mean recovery time in control group 6.41.

- Statistically, there was a significant difference in the mean recovery time between experimental group and control group. It revealed that the intervention was effective in reducing the recovery time.

CONCLUSION

- Hypothermia is the most prevalent post-operative complication and it is a subjective observation that can be assessed from all the patients. This study was taken up to assess the effectiveness of administering warm IV fluids on prevention of hypothermia among patients undergoing off pump CABG patients at GKNM hospitals, Combatore.

- It is a cost-effective method and can be incorporated as evidence based practice in hospital settings. Thus the study concluded that, administering warm intra venous fluid was an effective method which can be used as evidence based therapy in management of hypothermia.

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EFFECTIVENESS OF BALLOON BLOWING EXERCISE IN HEMIBRIDGE POSITION AMONG PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE

PROBLEM STATEMENT

- A study to evaluate the effectiveness of balloon blowing exercise on respiratory status among patients with chronic obstructive pulmonary disease at a selected private hospital ,coimbatore .

ABOUT JOURNAL

- *It is an international journal*
- *TNNMC journal of medical and surgical nursing*
- *Vol.IX / issue.2 / Jul - Dec 2021 .*

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ABSTRACT

Chronic obstructive pulmonary disease (COPD) is one of the major respiratory diseases affecting many in India. Dyspnea in patients with COPD is common which subjectively experienced by the patient. A quasi experimental pre-test post-test control up design was conducted to evaluate the effectiveness of balloon blowing exercise on respiratory status among 30 patients with chronic obstructive pulmonary disease by using purposive sampling technique.

Observation technique, modified borg's dyspnea scale and incentive spirometry was used to assess the respiratory rate, level of dyspnea and lung capacity respectively.Balloon blowing exercise was implemented using 90/90 hemibridge with ball and balloon position for 10-15 minutes three times a day for 5 consecutive days the paired ttest showed highly significant (t=12.5) for respiratory rate, level of dyspnea (t=6.7) and lung capacity (t=8.2). The independent t test value showed significant difference in respiratory rate (t-5.8), level of dyspnea (14.2) and lung capacity (t-6.9) in posttest

INTRODUCTION

- Breathing is fundamental of life. According to Lung India Journal (2013) WHO estimates, 65 million people have moderate to severe COPD in India. More than 3 million people died of COPD in 2005, which corresponds to 5% of all deaths globally. Lung India also states that COPD mortality is estimated to be amongst the highest in the world; i.e. more than 64.7 is estimated age death rate per 100,000 amongst both sexes.

- This would translate about 556,000 in case of india (>20%) which is of a world total of 2,748,000annually [1]. Respiratory disease such as COPD and asthma are the major health problems in india carolyn.L. Rochester (2003) suggested that exercise rehabilitation measureslike balloon blowing relieves shortness of breath or dyspnea, reducing hospitalizations and disability for COPD, increases capacity and thereby improves the quality of life. Hence, patients with COPD will be benefited with early participation in exercise programme as it may tend to alleviate dyspnea and improves the respiration. It also helps in reduction in exacerbation where activity is convincingly limited.

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OBJECTIVES

- To assess the respiratory rate, level of dyspnea and lung capacity among patients with chronic obstructive pulmonary disease
- To assess the effectiveness of balloon blowing exercise on respiratory rate, level of dyspnea and lung capacity among patients with chronic obstructive pulmonary disease in experimental group.

HYPOTHESES

- H1 : There is significant difference between mean post test scores of respiratory rate, level of dyspnea and lung capacity among patients with Chronic obstructive pulmonary disease in experimental and control group .

METHODOLOGY

- RESEARCH APPROACH : Quantitative approach.
- RESEARCH DESIGN : Quasi-experimental non equivalent, pre test post testresearch design.

In experimental group majority of the samples were 24(80%) were other workers. 24 (80%) of the samples 15(50%) were having less than 18 BMI. In control group about 11 (36.7%) were less than 18 BMI. In the experimental group about half 15(50%) of the samples were having hereditary diseases and half were 15 (50%) were not diseased. In experimental group about 14 (46.7%) of the samples were having the family history of COPD, 16(53.3%) of the samples were not having the family history of COPD. In control group more than half 18 (60%) samples were not having history of COPD, whereas 12(40%) samples were having history of COPD. In experimental group majority of the samples 24(80%) were not having smoking habit, in control group majority of the samples20 (66.6%) were non smokers.

RESULT

In experimental group, during pre test assessment majority of the samples 22(73.3%) had lung capacity of 600cc/ minute. During post test assessment, in experimental group higher percentage of the samples 24(80%) had 900cc/minute and in control group higher percentage 27 (90%) of the samples had lung capacity of 600 cc/minute .

In experimental group the overall mean score on level of dyspnea reveals that 2.4±0.7 mean in pretest and 1.5±0.5 in post test respectively. The mean difference was 0.9 and calculated paired t test value (t=6.7) which was highly significant at p<0.05.

In experimental group, the post test mean score on respiratory rate among patients with COPD was 18±0.5, mean score on level of dyspnea was 1.5±0.5, and mean score on lung capacity was 1.32+0.7, the calculated independent t test value on respiratory rate was 5.8, level of dyspnea was 4.2 and lung capacity was 6.9 respectively. Balloon blowing exercise is effective in improving the respiratory status among patients with COPD.

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In experimental group there was significant association found between the pre test level of Lung and demographic and clinical variables in age, gender, BMI, family history of COPD, history of smoking and regular practices of exercise. All other variables are not associated.

CONCLUSION

- The breathing exercise was effective in improving the respiratory status among patients with chronic obstructive pulmonary disease. In experimental group, there was a significant association found between the pre test level of respiratory rate and demographic variables such as history of smoking

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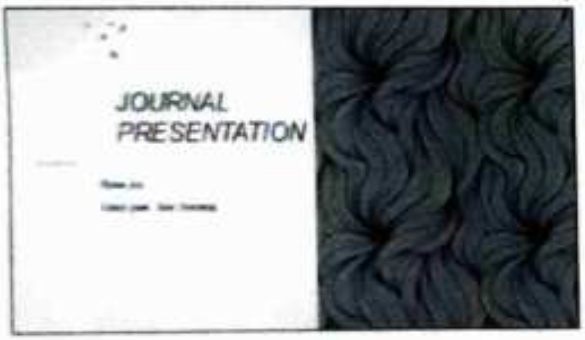

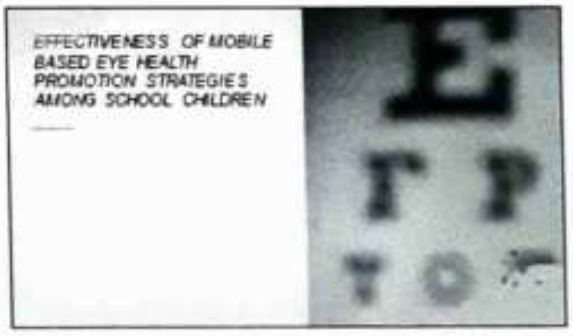

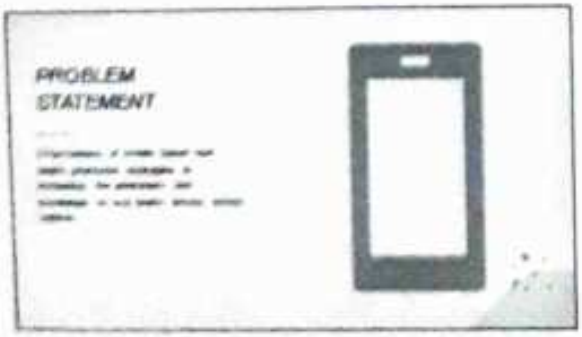

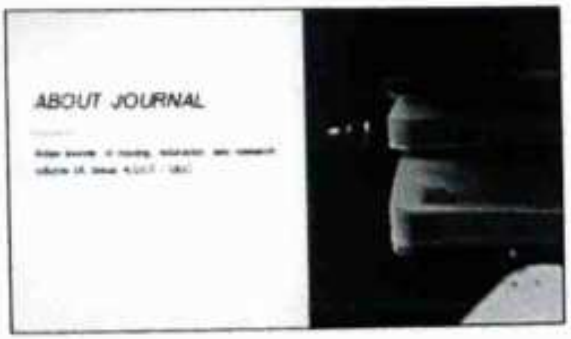

Mahesh

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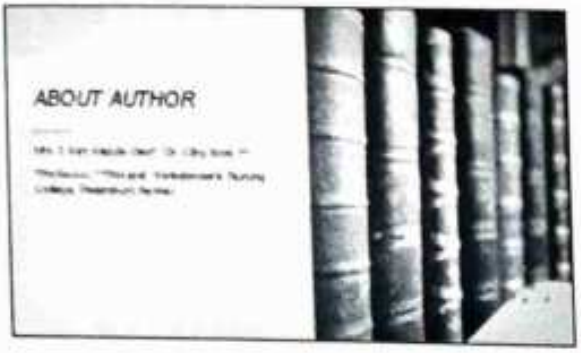

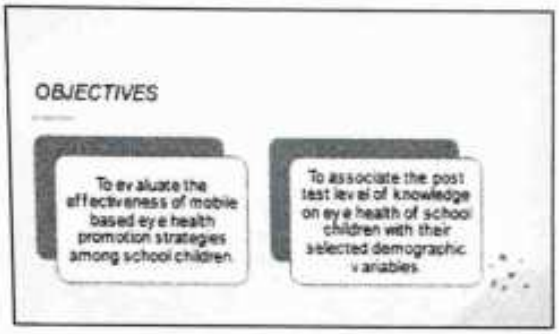

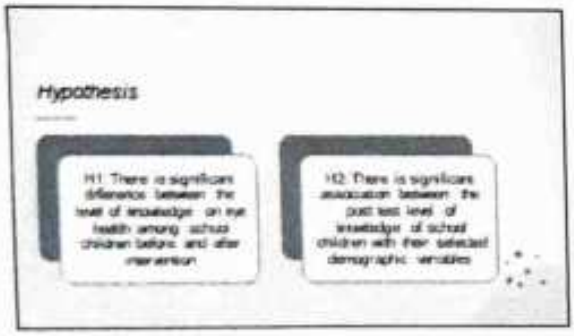

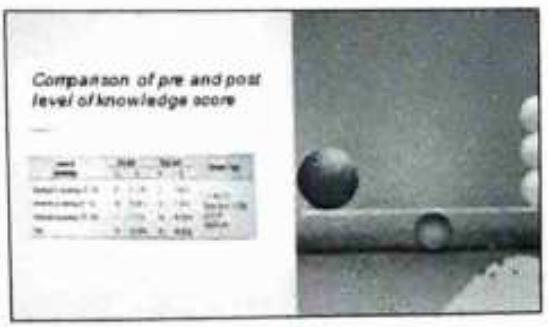

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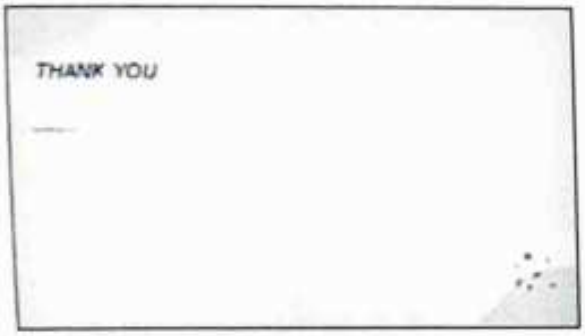

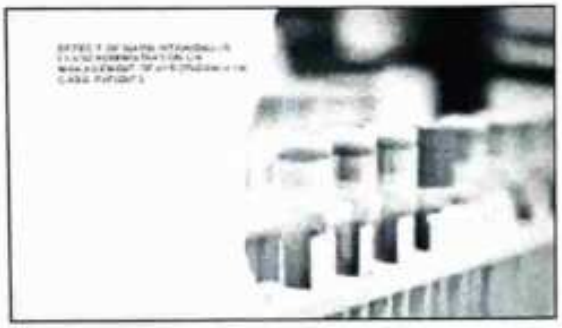

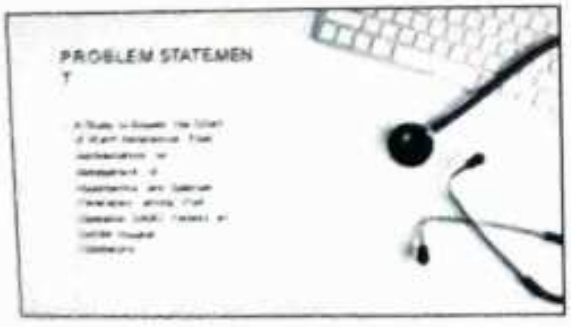

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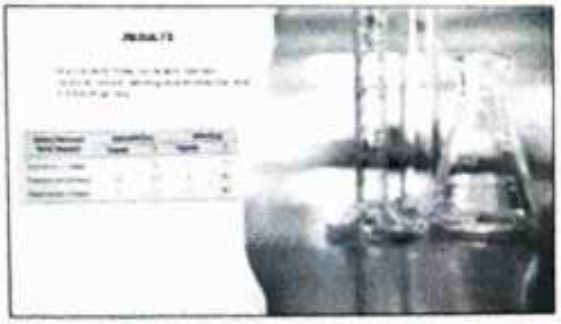

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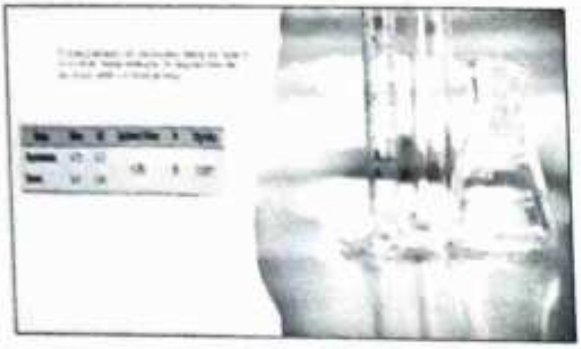

CONCLUSION

REFERENCES

THANK YOU

THE EFFECT OF DEEP BREATHING EXERCISE ON BLOOD PRESSURE AMONG PATIENTS WITH HYPERTENSION IN SELECTED RURAL AREA AT ELAMBALUR

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PROBLEM STATEMENT

A study to assess the effectiveness of Deep Breathing Exercise on blood pressure among patients with hypertension in selected rural area at Elambalur.

ABOUT JOURNAL

TNNMC Journal of Community Health nursing ,
Volume IX, Issue 2, Jul--Dec 2021

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ABSTRACT

Hypertension is one of the contributing factors for cardiovascular disease and stroke the leading cause of death worldwide. Most low and Middle -Income countries are currently confronting a significant public health challenge due to a continued high burden of communicable and non-communicable disease, especially hypertension. The aim of the study is to assess the effectiveness of Deep Breathing Exercise on blood pressure among patients with hypertension in selected rural area at Elambalur.

Study design was quasi experimental, nonequivalent control group design. 60 patients with hypertension were selected by purposive sampling technique (N=30) and experimental group received Deep Breathing Exercise for 15 minutes twice a day for 21 days. Pretest and posttest were done by measuring Systolic blood pressure and Diastolic blood pressure with sphygmomanometer by observation method.

Statistical analysis revealed that the posttest mean of systolic blood pressure in experimental group was 125.6 ± 8.89 whereas in the control group was 133 ± 5.6. The mean difference was 7.4. The obtained 't' value 3.87 was significant at $p<0.05$ level. In posttest mean of diastolic blood pressure in experimental group 79.3± 6.26 and in control group 87.6 ± 7.39. The mean difference was 8.3. The obtained 't' value 4.71 was significant at $p<0.05$ level. Findings revealed that Deep Breathing Exercise is effective in reduction of blood pressure among patients with hypertension.

INTRODUCTION

Elevated blood pressure represents the principal contributor to the global mortality of disease and burden. WHO has termed India as the emerging capital in the world of hypertension. Hypertension is one of the contributing factors for cardiovascular disease and stroke the leading cause of death.

It is estimated that nearly 1 billion people are affected by hypertension worldwide and predicted to increase to 1.5 billion by 2025. As per WHO recent estimate there are approximately 199 million hypertension reside in India accounting for global burden of hypertension of 20.6%.

OBJECTIVES

*To assess the level of blood pressure among patients with hypertension in experimental and control group.

*To assess the effectiveness of Deep Breathing Exercise on reduction of blood pressure among patients with hypertension.

*To find the association between post test level of blood pressure among patients with hypertension who received Deep Breathing Exercise and their selected demographic variables

HYPOTHESIS

H 1: There is a significant reduction in blood pressure among patients with hypertension after Deep Breathing Exercise

H 2 : There is a significant association between the post test level of blood pressure among patients with hypertension who performed Deep Breathing Exercise and their selected demographic variables in experimental group

METHODOLOGY

RESEARCH APPROACH : Quantitative and evaluative.
RESEARCH DESIGN : Quasi experimental, non equivalent control group

POPULATION

patients with hypertension

SETTING OF THE STUDY

patients with hypertension at selected rural area at Elambalur

SAMPLING

SAMPLING TECHNIQUE :purposive sampling technique
SAMPLING SIZE :60, 30 patients in experimental group, 30 patients in control group

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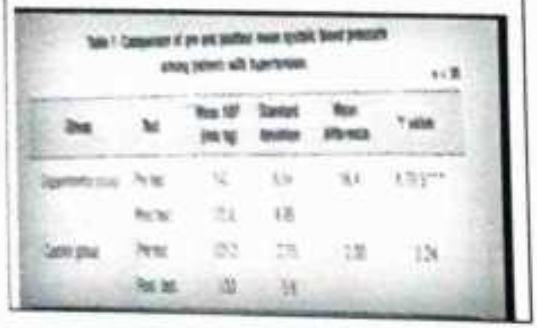
RESULT AND DISCUSSION



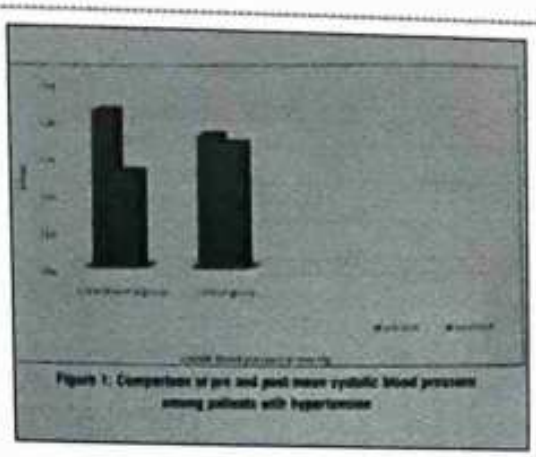
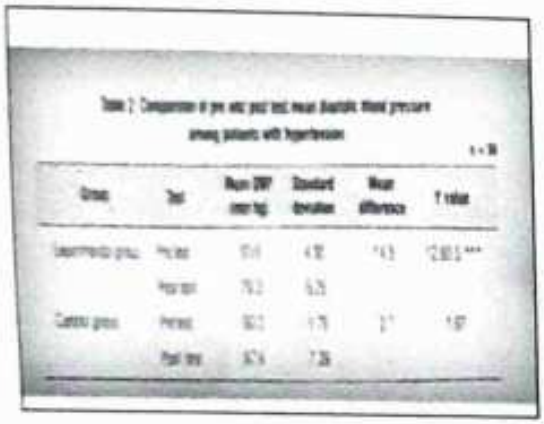


Figure 1: Comparison of pre and post mean systolic blood pressure among patients with hypertension



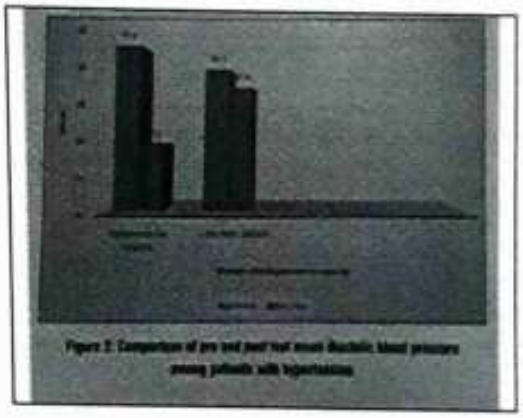
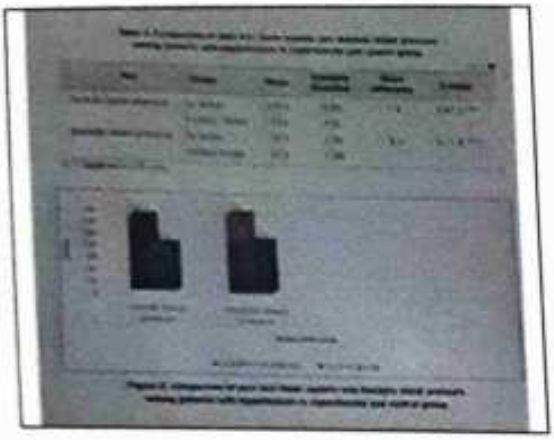


Figure 2: Comparison of pre and post test mean diastolic blood pressure among patients with hypertension



The study findings showed that post test mean systolic blood pressure in experimental group was 125.6 ± 8.89 and in control group it was 1335.6 with a mean difference of 7.4. The calculated 't value 3.87 was found to be statistically significantat p<0.001level.

The post testinean diastolic blood pressure in experimentalgroup was79.3 6.26 and in control group it was 87.6±7.39 with a mean difference of 8.3. The calculated 't' value 4.71 was found to be statistically significant at p<0.001 level

CONCLUSION

The study was to assessed the effectiveness of Deep Breathing Exercise on blood pressure among patients with hypertension from the above findings, it evident that Deep Breathing Exercise is effective in reducing blood pressure among patients with hypertension

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ABOUT JOURNAL

Tamilnadu Nurses and Midwives Council
Chennai Volume 11 Issue 1 Jan - June
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ABSTRACT

A study was conducted on the effectiveness of beetroot juice on blood pressure among clients with hypertension residing in rural area. A quasi-experimental, non-equivalent control group design was used. Each experimental and control group had 30 clients chosen using the non-probability purposive sampling technique

The pre-test was conducted by biophysiological measurement with sphygmomanometer. Beetroot juice was given to the experimental group for 30 days and a post-test was conducted. Study results showed that beetroot juice consumption had a significant reduction in blood pressure and was associated with age, food habits, family history and BMI

INTRODUCTION

American Heart Association Journal of Hypertension (2011) has found that drinking beetroot juice causes blood nitrate levels to rise, and thus reducing blood pressure within three hours of consumption. The high nitrate concentrations of beetroots may also act as a protective factor against heart attacks, making the regulation of blood pressure within normal limits

OBJECTIVES OF STUDY

- To assess the pretest level of blood pressure level in clients with hypertension among experimental and control group
- To evaluate the effectiveness of beetroot juice on blood pressure level among clients with hypertension in the experimental group

- To evaluate the effectiveness of beetroot juice on blood pressure level among clients with hypertension in the experimental group

HYPOTHESES

- H1. There will be a significant difference between the pretest and posttest level of blood pressure among hypertensive clients residing in Rural area in Madurai
- H2. There will be a significant association between the mean blood pressure level with their selected demographic and clinical variables

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METHODOLOGY

- Research approach: A quantitative study
- Research design: Non equivalent control group pretest and post test design
- Population: clients with hypertension and on treatment
- Setting of the study: clients residing at Samayanallur, Madurai

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SAMPLING

- Sample: clients with hypertension and on treatment residing at Samayanallur, Madurai
- Sampling size: 60 clients
- Sample technique: Non probability sampling technique

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DESCRIPTION OF THE TOOL

- Section A: Socio demographic variables-Age, sex, educational status, marital status occupation, nature of work, income (monthly), type of family, family history of hypertension and food habit.
- Section B: Clinical variables Duration of Illness (Hypertension), duration of treatment, medication, checking blood pressure duration, compliance of drug, sleeping hours, habits, duration of non veg intake and BMI.

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- Section B: Clinical variables Duration of Illness (Hypertension), duration of treatment, medication, checking blood pressure duration, compliance of drug, sleeping hours, habits, duration of non veg intake and BMI.

14

METHOD OF DATA COLLECTION

Formal permission was obtained from the Principal, College of Nursing and Institutional Review Board Government Rajaji Hospital Madurai. The investigator explained the purpose of the study to clients who participated in the study and oral and written consent was obtained. Pretest was done by collecting socio- demographic and clinical variables among clients and hypertension was assessed by sphygmomanometer for both experimental and control group.

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Freshly prepared beetroot juice, 50 ml was given to the experimental group once a day in the morning after food for 30 days. Post test was done after 30 day. The data collection period was 4 to 6 weeks from 1st October to 15 November 2013

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RESULT

- In pretest majority of the clients SBP in experimental group was 16(53.3%)and in control group 15(50%)was at stage 1 hypertension. In posttest majority of the clients in experimental group SBP was 25(83.3%)and in controlled group were in 30(100%)level 1 hypertension

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- In pretest majority of the clients DBP in experimental group was 30(100%)and in control group 30(100%) was in stage 1 hypertension. In posttest majority of the clients in experimental group SBP was 25(83.3%) and in controlled group 30 (100%) were in level 1 hypertension

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TABLE 1

Comparison Of The Pretest And Posttest Level Of Systolic Blood Pressure In Clients With Hypertension

		Systolic Blood Pressure						
		EXPERIMENTAL GROUP n=30			[illegible] GROUP n=30			
S.NO	TEST	MEAN	MEAN DIFFERENCE	SD	MEAN	MEAN DIFFERENCE	SD	PAIRED t TEST VALUE MEAN
1	Pretest	[illegible] mm Hg	[illegible]	[illegible]	[illegible] mm Hg	[illegible]	[illegible]	[illegible]
2	Posttest	[illegible] mm Hg		[illegible]	[illegible] mm Hg		[illegible]	

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TABLE 2

Comparison Of The Pretest And Posttest Level Of Diastolic Blood Pressure In Clients With Hypertension

		[illegible] Blood Pressure						
		EXPERIMENTAL GROUP n=30			[illegible] GROUP n=30			
S.NO	TEST	MEAN	MEAN DIFFERENCE	SD	MEAN	MEAN DIFFERENCE	SD	PAIRED t TEST VALUE MEAN
1	Pretest	[illegible] mm Hg	[illegible]	[illegible]	[illegible] mm Hg	[illegible]	[illegible]	[illegible]
2	Posttest	[illegible] mm Hg		[illegible]	[illegible] mm Hg		[illegible]	

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Hence the consumption of beetroot juice is effective on blood pressure among clients with hypertension with selected demographic and clinical variable.

As to diastolic blood pressure, it lowers from 91.5 mmHg to 71.3 mmHg, and the mean difference is 20 mmHg. On the basis of the pre- test assessment, the majority of the clients in the experimental group were in stage 1 hypertension, while in the post-test assessment 25 clients came under the normotensive category, 5 clients were in the pre-hypertensive category, and none of them were in stage 1 hypertension. Thus, beetroot juice consumption was effective on blood pressure among hypertensive clients.

CONCLUSION

On the whole, the study confirmed that the assumption that was formulated at the beginning was factual, and the study revealed that beetroot juice was effective in reducing the blood pressure level. After beetroot juice consumption, the post test was done for 30 samples in the experimental group. The systolic blood pressure lowers from 145.33 mmHg to 111.67 mmHg, and the mean difference was 28.6 mmHg.

There was a significant association between age, food habit, family history, BMI, average sleep hours, nature of work, and duration of treatment.

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JOURNAL PRESENTATION

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PROBLEM STATEMENT

A descriptive study to asses the knowledge regarding bacterial infections among mothers of under five in selected community areas of Kerala

ABOUT JOURNAL

I have taken this journal from International journal of nursing education and research volume 9 issue 4 October-December 2021.

ABOUT AUTHOR

Aksa P Daniel, Alphonsa Thomas, Amina, Ancy B Raju, Aneesha, Jyothilakshmi J. 4th year BSc Nursing students, Bishop Benziger College of Nursing, Kollam.

KMCT College of Nursing

ABSTRACT:

A descriptive study to assess the knowledge regarding bacterial infections among mothers of under-five in selected community areas of Kerala.

The objectives of the study were:
a) to assess the knowledge regarding bacterial infections among mothers of under-five in selected community areas in Kerala.

b) to find out the association between knowledge regarding bacterial infections among mothers of under-five with selected demographic variables such as age of mother, type of family, area of residence, educational status, occupation, immunization of the child and source of information.

A quantitative approach was used in this study.Purposive sampling technique was used. Sample consisted of 100 mothers of under-five residing in selected community areas of Kerala. The researcher collected the data using self- structured questionnaire regarding knowledge of bacterial infection. The tool was found to be reliable.

The study result shows that 04% of sample had poor knowledge, 25% had average knowledge, 16% had good knowledge, 32% had very good knowledge and 23% had excellent knowledge regarding bacterial infection amongmothers of under-five residing in selected community areas of Kerala and

there was significant association between age in years, type of family, area of residence,educational status at 0.05 level of significance. Based on the findings the investigators have drawn implication which were of vital concerns in the field of nursing practice, nursing administration and nursing education for future development.

INTRODUCTION

A bacterial infection is a proliferation of a harmful strain of bacteria on or inside the body. Bacteria can infect any area of the body. Pneumonia, meningitis, and food poisoning are just a few illnesses that may be caused by harmful bacteria.Bacteria may also be classified as gram positive or gram-negative.

Gram positive bacteria have a thick cell wall while gram-negative bacteria do not. The most common bacterial infection among children are skin infections, ear infections and throat infections .Other infections occur at all ages but have specific consideration in children . Several severe bacterial infections are preventable by routine immunisation early in childhood.

OBJECTIVES

The Objectives of the study were:

- To assess the knowledge regarding bacterial infections among mothers of under five in selected community areas of Kerala.

- To find out the association between knowledge regarding bacterial infections among mothers of under five with selected demographic variables such as age of mother, type of family, area of residence, educational status, occupation, immunization of the child and source of information.

HYPOTHESES

- Mothers of under-five may possess knowledge regarding bacterial infection.
- There will be a significant association between the knowledge regarding bacterial infection among mothers of under-five and selected demographic variables.

METHODOLOGY

- Research approach : Quantitative research approach
- Research design : Descriptive research design

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POPULATION

Mothers of under-five residing in selected community of Kerala

SETTING OF THE STUDY

Selected community areas of Kerala

SAMPLING

- Sampling technique: Purposive sampling technique
- Sample size: 100 mothers of under five residing in selected community areas of Kerala.

DATA COLLECTION TOOL

- Tool 1: Structured knowledge questionnaire
- Tool 2: Socio-demographic performa
- Tool 3: Structured knowledge questionnaire on bacterial infection

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RESULT:

In this study it shows that:

*04% of the under-five mothers had poor knowledge

* 25 % had average knowledge

* 16% had good knowledge

*32% had very good knowledge and *23% had excellent knowledge when tested by using a structured questionnaire.

CONCLUSION

The present study aimed to assess the knowledge regarding bacterial infections among mothers of under five in selected community areas of Kerala.

RECOMMENDATION

- Based on the findings of the study, it is recommended that:
- A similar kind of study can be conducted for a large group.
- A study to assess the attitude and practice regarding bacterial infections among mothers of under five in selected community areas of Kerala

* A quasi experimental study can be conducted to assess the effectiveness of the video assisted teaching programme on knowledge regarding bacterial infection among mothers of under-five.

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Thank You!

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JOURNAL PRESENTATION

PROBLEM STATEMENT

- A Quasi- Experimental study to evaluate the effectiveness of Jacobson's progressive muscle relaxation on pain among patients recieving chemotherapy at Oncology ward , Government Rajaji Hospital ,Madurai

ABOUT JOURNAL

- I have taken this journal from TNNMC journal of Medical Surgical nursing. It is a peer reviewed journal of TNNMC Medical Surgical Nursing has been launched to publish the most recent findings of scientific research in field of medical surgical nursing care in acute and chronic situation with evidence based nursing

ABOUT AUTHOR

- Mrs.Saraswathi S MSc(N)Assistant professor Teerthanker Mahaveer University ,Morabad UP

ABSTRACT

- The study was aimed to evaluate the effectiveness of jacobson's progressive muscle relaxation on pain among patients recieving chemotherapy study was conducted using quasi experimental pretest - post test control group research design among 60 patients (30 control group and 30 experimental group)at Oncology ward, Government Rajaji Hospital ,Madurai .Samples were selected using Non probability purposive sampling technique and randomly assigned to control and experimental group

Data was collected using demographic data ,clinical variables and numerical pain rating scale was used to measure the pain level through self administration method.Study findings reveals that in post test ,the mean level of pain in experimental group (M - 2.07,S.D-0.69)was lesser than mean level of pain in control group (M-3.06 S.D-1)(P<0.001). It indicates that jacobson's progressive muscle relaxation exercise was effective in reducing pain among patients recieving chemotherapy

INTRODUCTION

- Cancer is a dreaded disease and patients suffering from it go under many psychological pressure including pain,fear,stress,tension,depression and anxiety. Chemotherapy drugs can have a painful side effects such as headache,muscle pain,stomach pain,mouth sore
- Pain serves a biological function it signals the presence of damage or disease within the body. Pain management should begin with a preventive approach to pain and both pharmacologic and non pharmacologic methods are used together for the most effective pain control

VARIABLES

Independent variable : Pain among patients receiving chemotherapy

Dependant variable : Jacobson's progressive muscle relaxation

POPULATION

- Patients recieving chemotherapy at Oncology ward,Government Rajaji Hospital,Madurai

SETTING OF THE STUDY

- Government Rajaji Hospital , Madurai

SAMPLING

Sampling technique : Non probability purposive sampling technique.

Sample size : Sample size for study is 60 ,30 were in experimental group and 30 were in control group .

- As a non pharmacological method, relaxation exercise helps to reduce pain and anxiety and thereby prevent complications.
- Jacobson's muscle relaxation is a type of therapy that focuses on tightening and relaxing specific muscle groups in sequence(mainly major skeletal muscles). It aims to reduce feeling of tension ,to lower stress ,and to induce relaxation.

OBJECTIVES

- To assess the effectiveness of Jacobson's progressive muscle relaxation on pain among patients recieving chemotherapy .

HYPOTHESIS

- H1: There is a significant difference in pre test and post test level of pain among patients recieving chemotherapy at Oncology ward who has recieved Jacobson's progressive muscle relaxation exercise in experimental group
- H2: The mean post test pain level of the experimental group is significantly lesser than the mean post test pain level of the patients recieving chemotherapy at Oncology ward in control group

METHODOLOGY

- The Research Approach adopted for this study is a Quasi experimental research approach.
- For the study, the Research Design chosen is Quasi experimental pre test post test control group research design .

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CRITERIA FOR SELECTION OF SAMPLES

Inclusion Criteria

- patients recieving chemotherapy.
- patients those who are willing to participate in study.

DATA COLLECTION TOOL

- Data was collected using demographic data, clinical variables and numerical pain rating scale consist of 0-10. The reliability of tool was established by split half method with the r = 0.707, which shows that the tool was highly reliable.
- **Demographic variables** - Age, Gender & Educational Status.
- **Clinical variables** - medical diagnosis ,stage of cancer ,duration of illness, number of chemotherapy, analgesics received for pain, location of pain ,characteristics of pain,frequency of pain ,provoking factors of pain.

DATA ANALYSIS

- **RESULT AND DISCUSSION**

  - In control group, 30 subjects (100%) have moderate pain in I day pre test & subjects (26.67%) have mild pain, 22 subjects (73.3%) have moderate pain in IIday pretest 7% & 16 subjects (53.33%) have mild pain, 14 subjects (46.67%) have moderate pain in III day pretest.
  - In experimental group 30 subjects (100%) have moderate pain in I day pretest, 9 subjects (30%) have mild pain, 21 subjects (70%) have moderate pain in II day pretest & 24 subjects (80%) have mild pain, 6 subjects (20%) have moderate pain in III day pretest.

- Difference between post test level of pain among patients receiving chemotherapy at Oncology ward in experimental & control group.

  There was significant difference between the post level of pain among control & experimental group of patients in day I of experiment. T-test value of for experimental group is 24.81, for control group is22.32 (DF = 29) P value is 0.0001>0.05. There was significant difference between the post level of pain among control and experimental group of patients in day II of experiment.

T-test value for experimental grooup is 22.8, for control group is 23.26 (DF=29), P value is 0.0001>0.05. There was significant difference between post level of pain among control and experimental group of patients in day III of experiment. T test value for experimental group is 16.27, for control group is 19.65 (DF=29), P value is 0.0001>0.05

- Association between post test level of pain in relation to demographic variables among patients receiving chemotherapy at oncology ward.

  There was no associationbetwen the post test level of pain with selected demographic variables such as age, gender, educational status among patients receiving chemotherapy at oncology ward in experimental group in the first, second and third day of experimentation.

CONCLUSION

- Overall study findings proved that Jacobson's progressive muscle relaxation exercise reduces the level of pain among patients recieving chemotherapy at oncology ward. The cancer patients Wwho recieved Jacobson's progressive muscle relaxation exercises had a significant improvement in reduction of pain level than control group.

- There was no association between post test level of pain and demographic variables such as age, gender ,educational status and clinical variables such as medical diagnosis ,stage of cancer,duration of illness,number of chemotherapy,analgesics recieved for pain, location of pain, characteristics of pain,frequency of pain ,and provoking factors of pain in experimental group.

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RECOMMENDATIONS

- This study can be done as a comparitive study.
- This study can be done in a large population.

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JOURNAL PRESENTATION

ON

EFFECTIVENESS OF LAUGHTER THERAPY ON STRESS AMONG ELDERLY PEOPLE AT SELECTED SETTINGS , CHENNAI

Libina Nasrin M
3rd year BSc Nursing
KMCT CON

PROBLEM STATEMENT

A study to assess the effectiveness of laughter therapy on stress among elderly people selected old age home at the Chennai

ABOUT JOURNAL

Tamilnadu Nurses and Midwives Council Chennai
Volume 9 , Issue 1 , Jan - June 2021

ABOUT AUTHOR

E. Elamathi, M Hemamalini Assistant professor, Principal.
Hindu Mission College of Nursing, Chenna

ABSTRACT

Stress is defined as the physiological or psychological tension that threatens homeostasis or a person's psychological equilibrium. Laughter therapy aims to get people laughing in both group and individual session can help to reduce stress make people happier and more committed and improve their in that personal skills. The study aimed to assess the effectiveness of laughter therapy on stress among the elderly people at the selected old age home at the Chennai

That is such design used was pre-experimental one group pre-test and a post-test design. The sample was selected by known probability convenient sampling technique and pretest score assessed by structured questionnaire. After 4 week of laughter therapy level of stress among elderly people were analyzed by student paired 't' test . The result on post test showed significant reduction of stress in score.

The overall pre test score was 62.2% whereas in the post test it was 29.9%. So the significant difference between pree test and post test score is32.6%. The above finding revealed that laughter therapy was effective and helped the elderly people to reduce their stress level

INTRODUCTION

Stress is defined as "any uncomfortable emotional experience accompanied by predictable biochemical, physiological and behavioural changes" (APA- 2010). When man faces a condition in which he begins to lose functional parts of his body and begins to go through challenges; there is tendency for stress to set in. Stress occur when the affected person has less resources to overcome the challenging situation he find himself and there is less probability of effective coping skills.

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Laughter is a part of human behaviour regulated by the brain, helping humans to clarify their intentions in social interaction and providing an emotional context to conversations. It is used as a signal for being part of a group. It signals acceptance and positive interactions with others. Laughter is the best relaxant as even one minute of laughter can give the body an effect of 45 minutes of therapeutic relaxation and 10 minutes of laughter is enough for the effect to last throughout the day.

OBJECTIVES

- To assess the pre-test and post-test level of stress before laughter therapy among elderly
- To evaluate the effectiveness of the laughter therapy among elderly
- To associate the effectiveness of laughter therapy among elderly with their selected demographic variables

HYPOTHESES

Ho: There is no statistically significant difference between pretest and post-test level of stress scores among the elderly people

Ho: There is no statistically significant association of the post test scores with their selected socio demographic variables

METHADOLOGY

- RESEARCH APPROACH : Qualitative research approach
- RESEARCH DESIGN : A pre experimental one group pre-tested and post test
- POPULATION: it consisted of 60 elderly people who met the inclusion criteria
- SETTING OF THE STUDY : For the study selected old age home at Chennai

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SAMPLING

- Sample - A total of 60 elderly people at selected oldage home at Chennai
- Sample size - 60 elderly people
- Sample technique - Non probability convenience sampling technique

DATA COLLECTION TOOL

. Pre test questionnaire

. **Structured scale**

DATA COLLECTION PROCEDURE

The total 60 elderly people were divided into two groups. Each group contain 30 people Every day the participants were gathered around 10 am in the common hall.The pretest questionnaire was administered to them and they were asked to give appropriate answers for all statements to find out the stress level by structured scale before laughter therapy. First the investigator demonstrated the laughter therapy steps for 45 to 50 minutes in the morning (30 no's) and evening (30 no's) per day

Steps of the laughter therapy

1. Deep Breathing Exercises
2) Rhythmic clapping and warming up exercise
3. Ho. Ho-Ha-Ha chanting
4. Laughter exercises (Yogic laughter exercises, Playfull laughter exercises and Value based laughter exercises)
5. Playfull laughter techniques
6. Closing technique

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RESULT

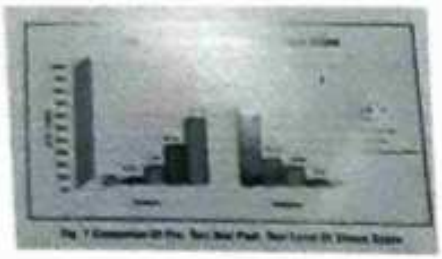

figure that pretest score were 1.6% of them are normal, 3.3% of them having mild stress 15% of then having moderate stress, 30% of them having severe stress and 51. 7% of them having extremely severe stress. In postest. 61.7% of the elderly are normal. 21.7% of them having mild stress and 16.6% of them having moderate stress 3.3% of them having severe stress and 1.6% of them having extremely severe stress

Table is shows that in pretest, elderly people scored 25.38 for Depression and post test score
11. 78. So the difference is 13.60. For Anxiety, pre-test, elderly people scored 26.17 and posttest sore
12. 70. So the difference is 13.47. For Stress, pre-test elderly people scored 27.28 and post test score
13. 29. So the difference is 14.05. All the values are statistically significant. It was calculated by using student's paired test.

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CONCLUSION

Stress is the factor which cause more physiological problem in our life it occurred when a person has difficulty dealing with the life situations problem and a goal. Each person handles stress differently someone can thrive in a situation that create great distress for another

Recommendation

- Similar study can be conducted in large groups
- Similar study can be conducted for longer periods

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KMCT College of Nursing

Journal Presentation

ON

EFFECTIVENESS OF HOT WATER FOOT BATH THERAPY ON QUALITY OF SLEEP AMONG GERIATRIC POPULATION AT SELECTED GERIATRIC HOMES.

JUBNA P
3RD YEAR BSC NURSING
KMCT CON

PROBLEM STATEMENT

EFFECTIVENESS OF HOT WATER FOOT BATH THERAPY ON QUALITY OF SLEEP AMONG GERIATRIC POPULATION AT SELECTED GERIATRIC HOMES, THANJAVUR.

ABOUT JOURNAL

Tamilnadu nurses and midwives counsil , chennai
Www.tamilnadunursingcouncil.com
Vol. II / Issue 2 / Jul - Dec 2014

ABOUT AUTHOR

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ABSTRACT

- Sleep disorders are fairly common in older adults, resulting in many getting sleep less than they need. In this study 50 participants were selected by purposive sampling technique and quasi experimental design was adopted to assess the quality of sleep by Chel Shin sleep quality scale for a period of 15 days. The statistical analysis reveals that there were significant differences in post test levels of quality of sleep in experimental group in comparison with control group. So the given hot water foot bath therapy was effective in promoting the geriatric population.

INTRODUCTION

Sleep is the basic human need; it is a universal biological process common to all the people. A human spends about one-third of their life asleep. We require sleep for more reasons: to cope with daily stress, to prevent fatigue, to conserve energy, to restore the mind and body, to enjoy life more fully. Sleep can be defined as a normal state of altered consciousness during which the body rests; it is characterized by decreased responsiveness to the environment, and a person can be aroused from it by external stimuli.

The percentage of the elderly population is growing due to increased life expectancy and improved socio-economic development.

Surprisingly, in the World Health Organization's 2015 world report on ageing and health, there is no mention of sleep disorders. In India, the aged population is expected to be around 20-25% of the population by 2050. By then, the elderly population would be more than 25% of the population in developed nations. It already exceeded 30% in Japan in TNNMG JOHN Vol. X/ Issue 2 / Jul - Dec 2022
2017. The increase in the aged population will bring with it a huge burden of sleep-related health problems.

OBJECTIVES

- To assess the pretest and posttest level of quality of sleep among geriatric population in experimental and control
group at selected
geriatric
homes, Thanjavur.
- To evaluate the effectiveness of hot water foot bath therapy on quality of sleep among geriatric population of experimental
group at selected
geriatric homes, Thanjavur.

Nakeer

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HYPOTHESIS

- H1: There will be a significant difference between the pretest and posttest level of quality of sleep among geriatric population in the experimental group and control group.

- H2: There will be a significant difference in posttest level of quality of sleep among geriatric population between the experimental group.

METHODOLOGY

- RESEARCH APPROACH : QUANTITATIVE RESEARCH APPROACH
- RESEARCH DESIGN : QUASI EXPERIMENTAL PRE TEST POST TEST CONTROL GROUP DESIGN
- POPULATION : GERIATRIC POPULATION IN OZANAM GERIATRIC HOME AND GRACE GERIATRIC HOME
- SETTING OF STUDY : OZANAM GERIATRIC HOME AND GRACE GERIATRIC HOME AT THAVANUR

SAMPLING

- 50 participants were selected by purposive sampling techniques and quasi experimental design for a period of 15 days. 25 were experimental groups and 25 were control group.

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DATA COLLECTION TOOL

- Part-1: Demographic variables such as age, gender, ward, educational status, dietary pattern, habit of walking before bed time, habit of drinking milk before bed time and availability of social support.

- Part-2: Chol Shin Sleep Quality Scale.
- • One point: For positive statement (7,9) score 4,3,2,1
- • One point: For negative statement (1,2,3,4,5,6,8,10) score 1,2,3,4

DATA COLLECTION PROCEDURE

- The main study was conducted in Ozanam geriatric home and Grace Geriatric home at Thanjavur. The investigator obtained the written permission from the institutional authorities. The procedure was explained to the geriatric people and informed consent was obtained. The geriatric people were asked to sit in a comfortable position and all the materials were assembled near to them. The basin was filled with water. By using lotion thermometer the temperature of the water was checked. The temperature of the water was maintained between 40-42°C.

- Heat tolerance was checked by allowing them to touch the water by using their palms. Then the geriatric people were instructed to immerse their foot till the ankles for 20 minutes for fifteen consecutive days. The temperature of the water was checked in between the procedure. Hot water was added when the water cools. Collected data were analyzed by descriptive statistics and inferential statistics.

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SCORE INTERPRETATION

* The Total score: 30
* • Score 1 to 10 = Good sleep
* • Score 11 to 20 = Disturbed Sleep
* Score 21 to 30 = Poor Sleep

RESULTS

•The first objective was to assess the pretest and posttest level of quality of sleep among geriatric population. In pretest, 2(8%) geriatrics had good sleep, 4(16%) geriatrics had disturbed sleep and 19 (76%) geriatrics had poor sleep in the experimental group. While in control group pretest level quality of sleep displays that 0(0%) geriatrics had good sleep,3 (12%)geriatrics had disturbed sleep and 22 (88%) had poor sleep.

•Table. 1

Quality of Sleep	Experimental group (n=25)	%	Control group	%
Good sleep	2	8%	0	0%
Disturbed sleep	4	16%	3	12%
Poor sleep	19	76%	22	88%

I pastes, 18(72. 0) samples had good sleep, 6(21%) samples had disturbed sleep and 1(4%) sample had poor sleep. While in control group posttest level of quality of sleep displays none of them had good sleep, 4(16%) had disturbed sleep and 21(84%) had poor sleep.

•Table.2

Quality of Sleep	Experimental group	N=25	Control group	
Good sleep	18	72%	0	0%
Disturbed sleep	6	24%	4	16%
Poor sleep	1	4%	21	84%

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The mean value 26.92 with standard deviation 1.9 of the pretest, the posttest mean value 12.36 with standard deviation 4.4. Paired 't' value 18.05 was significant at 0.05 level for experimental group. Whereas in the control group the analysis revealed that mean value of 25 with standard deviation 2.6 of pre test had no significant to the posttest mean value 24 with standard deviation 4 and the 't value CV= 1.25 and TV=2.06 (CV < TV) which is not significant at 0.05 level.

CONCLUSION

- The present studywas undertaken to evaluate the effectiveness of hot water footbath therapy on quality of sleep among geriatric population at selectedgeriatric homes,Thanjavur.
- The study findings revealed that there was a significant difference in the pretest and posttest level of quality of sleep. So the investigator found that the hot water foot bath therapy was effective in improving the sleep among the geriatric population.

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JOURNAL PRESENTATION

- EFFECTIVENESS OF GLYCERINE MAGNESIUM SULPHATE DRESSING IN REDUCING PAIN PERCEPTION AND SWELLING AT IV INFILTRATION SITE.

Statement of the problem

- A study to assess the effectiveness of glycerine magnesium sulphate dressing in reducing pain perception and swelling at the intravenous infiltration site among the inpatients of a selected hospital, Chennai.

ABOUT JOURNAL

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Abstract

- Infiltration is a common complication at the site of IV cannulation resulting in decreased flow rate and pain from edema. The present study was conducted to evaluate the effectiveness of Glycerin Magnesium Sulphate dressing in reducing pain perception and swelling at the Intravenous infiltration site.

- Post assessment of pain and swelling in the experimental group showed a highly significant reduction in pain perception (p 0.001) and swelling (p <0.001) in comparison with the control group of patients

Introduction

- Hospitalization of patients is mostly associated with intravenous infusion of fluids and medication. An infiltration occurs when intravenous fluids enter the subcutaneous space around venipuncture site resulting in decreased flow and pain from edema. According to Spring House Corporation 18 to 80% of general Hospital admissions will include some aspect of intravenous therapy. The reported incidence of extravasations is 10% to 30%. Application of warm glycerin MgSO, or warm water because vasodilatation increased the capillary permeability.

Introduction

- Glycerin acts as a solvent for
- MgSO, and its hygroscopic action helps in reducing swelling.
- Heat applications have four main effects on body tissues,
- including pain relief, muscle
- relaxation, vasodilatation, and connective tissue relaxation
- Whitney (2003) performed a

Introduction

- systematic review of 12 clinical studies and concurred that systematic and local warming of tissues produces physiological and cellular responses in the local wound environment conducive to wound healing.

Objectives

- • To assess the level of pain perception and swelling at the intravenous infiltrated site among adult patients
- • To compare the level of pain perception and swelling at the
- intravenous infiltrated site among adult patients in the experimental group and control group before and after the application of GlycerinMgSO, dressing.

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Methodology

- True experimental pre test post test design was adopted for the study. The study population comprises of all the hospitalized adult patients who received intravenous fluids for more than one day were selected using purposive sampling technique. The samples were randomized to the experimental and control group. Protocol on glycerine magnesium sulphate therapy was developed.5gm of MgSO, was added to 30 ml of glycerine and warmed to dissolve in it and the temperature was maintained by keeping it in a bowl of warm water and applied externally. A written permission from setting and Written consent was obtained from the patient in his/her own language. Study was approved by the Ethics Review Committee.

- Glycerine magnesium sulphate was applied to the experimental group after checking their tolerance and secured with bandage for 6 hrs applied twice daily for two days. For patients in the control Group Ice Cold compress was applied for 15 minutes three times daily for two days. To measure the swelling an observational check list with 5 criteria and grading was done. A 5 point scale (0-4) was used to assess the visible

- signs of infiltration such as blanching, tenderness, coolness, hardness and swelling.Score 0 was given when the parameter was not present score 1 was given when the sign

- extended up to 2 cms., score 4 was given when sign extended up to 8 cms. Pain measurement was by the modified Mc Gills pain scale. The

- tools were found to be reliable (r = 0.8) using

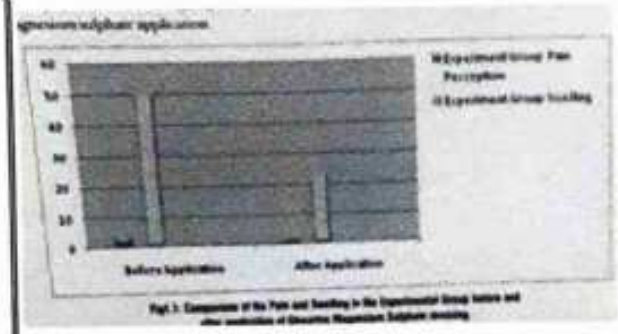
- inter rater observation. Post assessment of pain and Swelling was done after 6 hrs of Day application on the second day.

- On crystalloids (76.6% 60%), flow of 24 to 48 hours, drop rate 25-35 drops per minute.

- Patients belonging to experimental and control group experienced moderate pain 56%, 53.3% respectively and 33.3%of experimental subjects and, 46.75% of control subjects reported severe pain.

Results

- Majority of patients with IV Infiltration in the experimental group and control group of patients belonged to the age group of 51 to 60 years (43.3%, 33%), females (73.3%, 86%), house wives (56.6%, 60%) hospitalized for 1 day to 4 days (50%, 50%). Martinez et al (1994) reported that obeerved patients were aged more than 65 years, females, decreased levels of consciousness, poor venous circulation of the patient etc. Many in the experimental and (46.6%) control group had the median cephalic vein most accessed with. Venflon (86.6, 96.6%).



Conclusion

- Nurses should be alert to signs of infiltration in patients on IV therapy and relieve it by Glycerine Magnesium Sulphate dressing and other warm applications. Research should be undertaken to prevent IV Infiltrations and evaluate the effectiveness of interventions.

- Nursing administrator must conduct audits on infiltrations and facilitate quality practices.

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FIRST AID MODULE

Signature of the student

20/1/23

Signature of the subject coordinator

FIRST AID

Definition

First aid is defined as, "the immediate care given to the injured or suddenly ill person'. "First aid is the provision of initial care for an illness or injury. It is usually performed by lay person to a sick or injured until definitive treatment can be assessed'.

Principles of first aid

1. Reach the site as early as possible: First aider should reach the site of accident_as early as possible to prevent delay in providing first aid.
2. Act quickly but quietly: Never waste time in asking unnecessary questions and do not handle the casualty in hurry and worry.
3. Check the consciousness: Find out whether the patient is dead or alive. Observe the patient carefully from head to toe.
4. Restoration of airway, breathing and circulation:
   a. Firstly maintain airway to prevent aspiration.
   b. Give the patient artificial breathing immediately, if required.
   c. Then, maintain circulation.
5. Control bleeding: The bleeding should be controlled as early as possible by applying pressure on site so as to prevent excessive blood loss and shock condition.
6. Treat shock: Observe for unconsciousness, if there and treat the shock by maintaining proper circulation.
7. Do not let the crowd gather: Crowd should be avoided to prevent suffocation and nervousness, relatives should be reassured.
8. Improvise rather than wait for specific equipment: The first aider should be that much confident, knowledgeable, economical and smart as well, so that he may use the substitute of equipments rather than, - waiting and then, using specific equipment because it may cause delay in providing care.
9. Arrange medical aid: After providing first aid necessary for the victim, call for the transportation system of nearest hospital to provide medical aid, so that preservation of life and recovery process can be started. Reassurance: Reassure the victim about his health and relatives also. Proper psychological support should be given to the victim, to strengthen the patient.

Safety in first aid

1. Safety first – Make sure there is no danger to you and victim.
2. Check response - is the person asleep or unresponsive – Call, Shake, Shout.
3. Seek help - Shout or call for help if you are alone but do not leave the person unattended.
4. Quick assessment of victim's condition – Check consciousness and breathing (look, listen, feel). Look for bleeding and other life threatening conditions and take life-saving measures such as:

- If no breathing, start Chest compression (Cardio Pulmonary Resuscitation (CPR))
- If breathing present but unconscious, casualty is placed inside recovery position
- If bleeding present, stop/control bleeding by direct pressure

- Immobilize bone/joint injuries and take care when handling or moving to prevent any injury to the spine or neck
- And protecting casualty from heat/cold

5. Take complete assessment and stabilize the person as per available local resources.

Top to toe assessment

Head

Look for:

- lacerations and bruising
- blood or cerebrospinal fluid from the ears or nose
- re-check pupil size and response
- pallor and sweating
- cyanosis

Feel for:

- scalp hematomas (swellings)
- depressed skull fractures
- facial tenderness and fractures

Listen for:

- airway noise suggesting obstruction
- breathing adequacy and rate

Neck

Look and feel for:

- lacerations and contusions
- surgical emphysema
- spinal deformity, tenderness or hematoma
- re-check pulse rate and strength

Chest

Look for:

- wounds and evidence of penetrating injury
- deformity and abnormal movements
- breathing distress and pain on breathing

Feel for:

- tenderness
- instability of a flail segment (multiple rib fractures)
- surgical emphysema (air under the skin)

Abdomen

Look for:

- penetrating wounds and contusions
- seat-belt contusions and clothing imprints
- distension

Feel for:

- tenderness, either localized or generalised
- guarding – involuntary muscle spasm on gentle palpation.

Extremities (limbs)

Look for:

- obvious wounds and contusions

- deformity and swelling associated with fractures
- voluntary movement

Feel for:

- tenderness and deformity
- distal pulses
- intact nerve supply – sensation to touch and pain, motor function
- normal movements in joints

Rule of first aid

The golden rules of first aid areoutlined as follows :

1. Be confident: Do first thing first, quickly, quietly and do not be panic.
2. Provide reassurance: Reassure thecasualty and his relatives sympathetically.
3. Control crowd: First aider should control the crowd and never allow gathering around the victim, to prevent suffocation, nervousness and panic both in victim and first aider.
4. Look for the triad: ABC
5. Observe the area: Observe all around for causative agent, try to remove it, if still present.
6. Try to avoid unnecessary handling and turning of patient to reduce pain.
7. Be economical: Try to use the available resources for care, e.g. cloth for bandaging rather than waiting for bandage.
8. Do not leave the treatment in between and never open the alreadyclosed wounds or dressings.
9. Shift the patient to the safer place, e.g. if patient is feeling suffocation inroom, then shift him to yard.
10. Inform relatives about accident,name and place where the casualty is placed.
11. Arrange for safe removal ofcasualty: Transport to nearest medical aid.
12. Handle the victim properly if youare alone because too much investigations and moving parts can worsen the condition of casualty.

Malen

FIRST AID KIT

Definition

First aid kit is a kit which contains different equipments and supplies which are needed to provide first treatment to the patient who is seriously injured at any place like home, industries, road and institution.

Features/Characteristics of First Aid Kit

1. The kit can be a metal box or plastic box.
2. The size of kit depends on its use.
3. First aid kit of different sizes can be bought at a chemist's shop.
4. Supplies should not be kept at different place
5. Each and every supply should be ready for immediate use.
6. First aid kit is important thing which can be needed at any place at road, industries, homes and institutions.
7. The box should be labeled with sign of redcross and kept away from children.

SIZE OF FIRST AID KIT

Small size first aid kit

Contents	Number
First aid dressing small	2
Medium	2
Sterilized medium burn dressing	1
Adhesive plaster	1
Roller bandage 1"	1
Roller bandage 2"	1
Cotton wool small packet	1
Small scissor	1
Safety pins	1
Betadine ointment	6
Eye pad	1

Medium size first aid kit

Contents	Number
Triangular bandage	1
Light wooden splints	1
Sterilized cotton	3 packets
First aid dressing	
small	3
Medium	3
Large	3
Roller bandage- small, Large	8
burn dressing	2
Safety pins	12

scissors	1
Adhesive plaster	1
Betadine ointment	1
Antiseptic solution	1
Torch	1
Eye ointment	1 bottle
Gauze	1
Pad and pencil	1
Aspirin tablets	10
Band aids	10
Eye pads	2
Record card	1

Large size first aid kit

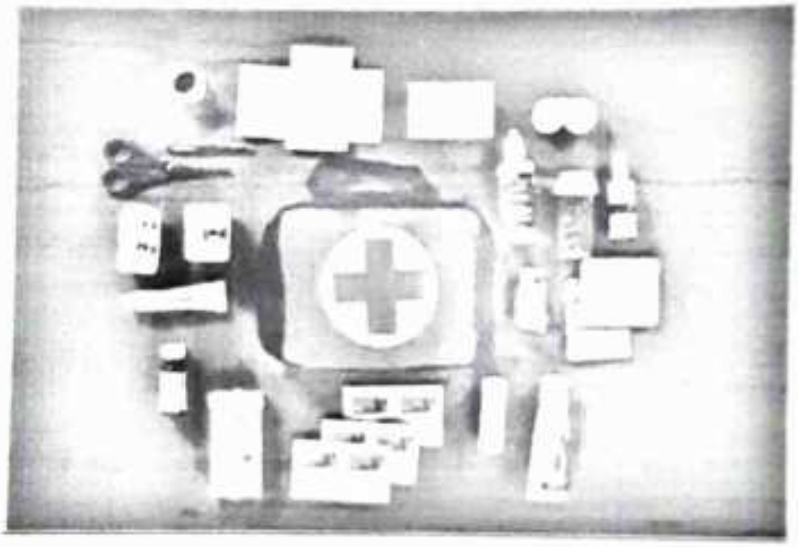
Contents	Number
Triangular bandage	1
Light wooden splints	1
Sterilized cotton	3 packets
First aid dressing	
Small Medium Large	3 3 3
Roller bandage- small, Large	8
burn dressing	2
Safety pins	12
scissors	1
Adhesive plaster	1
Betadine ointment	1
Antiseptic solution	1
Torch	1
Eye ointment	1 bottle
Gauze	1
Pad and pencil	1
Aspirin tablets	10
Band aids	10
Eye pads	2
Record card	1

SOLUTIONS

1. Dettol
2. Savion
3. Hydrogen peroxide
4. Potassium permanganate
5. Spirit
6. Boric acid
7. Iodine

8. Betadine (povidine – Iodine)5%
9. Xylocaine jelly2%
10. Normal saline
11. Lysol
12. Carboxylic acid
13. Neosporin powder
14. Nitrofurazone
15. Phenol

IMAGE OF FIRST AID KIT



BANDAGES

A bandage is any gauze or cloth material used for any of purpose to support, to hold or to immobilize the body part.

Uses

1. To control bleeding by pressure.
2. To immobilize sprained or fractured limb.
3. To hold a dressing or compress in place.
4. To secure splints in case of fracture of deformity.
5. To prevent contaminations of wound.
6. To provide support and aid in case of varicose vein or impaired circulation.

Principle of Bandaging

1. The patient should be placed in a comfortable position and it should be convenient for the aider and casualty.
2. The bandage should be of proper size and suitable material.
3. Always bandages to right side.
4. Exert even pressure as far as possible.
5. Do not cover the fingers, toes, unless it is necessary in order to cover the injury. It is necessary to observe circulatory changes.
6. Never apply a wet bandage, when wet bandage applied, terms to shrink and become tight as it dries.
7. Do not apply a bandage too loosely because it may slip and expose the wound.
8. All turns of bandage should be made clockwise unless there is some special reasons for doing, otherwise the roll should be held in palm of hand, with the free end of bandage coming from past of roll.
9. Always remove bandage by gathering folds in a loose mass. Passing mass from one hand to other.
10. Apply bandage, secure terminal extremity by pinning with safety pins or strapping adhesives.
11. While applying bandage, the face should be towards the casualty.
12. Always pad bony prominences.

Types of Bandages

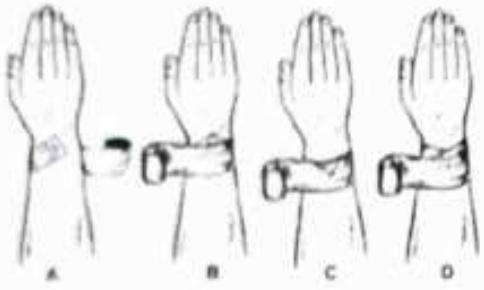
1. Circularbandage

A circular bandage is a type of bandage that is used to secure dressing or to provide support to a limb or joint. It is usually made of a soft, absorbent material such as cotton or gauze and is shaped like a tube or donut. It is typically applied by wrapping it around the affected area in a spiral pattern, starting from the center and working outward. The bandage can be secured with tape or safety pins.

Steps to apply circular bandage

1. Start by laying the bandage out flat on a clean surface.
2. Place the center of the bandage over the wound or injury

3. Wrap the bandage around the wound or injury in a circular motion, overlapping each layer by about half.
4. Secure the end of the bandage with tape or a safety pin.
5. Make sure the bandage is not too tight, as this can cause further injury or discomfort.

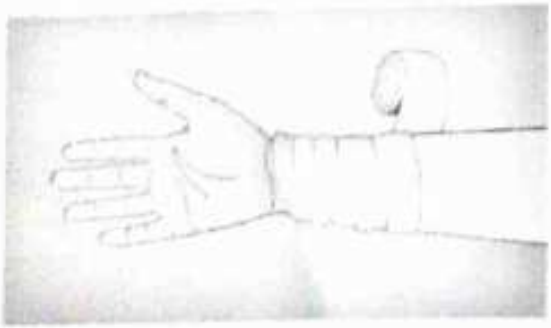


2.Spiral bandage

A spiral bandage is a type of bandage that is used to wrap around a limb or other body part. It is usually made of a flexible material such as cotton or elastic and is wound around the body part in a spiral pattern. The bandage is used to provide support and compression to the area, and can be used to treat sprains, strains, and other injuries.

Steps for applying spiral bandage

1. Start by wrapping the bandage around the injured area in a spiral pattern, beginning at the center of the injury and working outward.
2. Secure the end of the bandage with tape or a safety pin.
3. Continue wrapping the bandage in a spiral pattern, overlapping each layer by about one-third.
4. Secure the end of the bandage with tape or a safety pin.
5. Make sure the bandage do not make any discomfort for the patient.



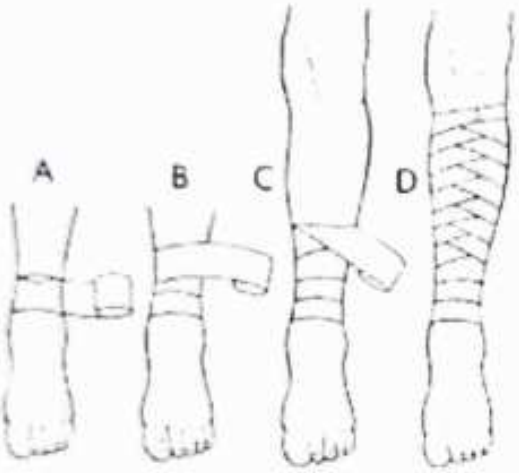
3.Reverse spiral

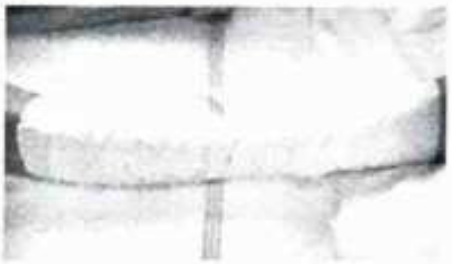
A reverse spiral bandage is a type of bandage used to secure a dressing or splint to a limb. It is applied by wrapping the bandage in a spiral pattern in the opposite direction of the limb's

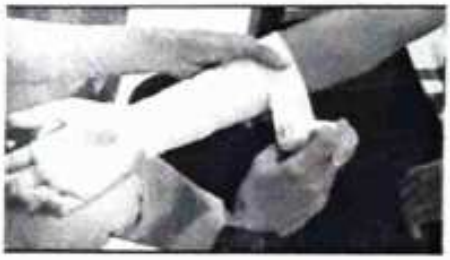
natural curvature. This helps to keep the dressing or splint in place and prevents it from slipping off. The bandage is usually secured with tape or a safety pin.

Steps for applying reverse spica

1. Start by wrapping the bandage around the injured area in a spiral pattern, beginning at the end closest to the body.
2. Wrap the bandage in a clockwise direction, overlapping each layer by about one-third.
3. Continue wrapping until the entire area is covered.
4. Secure the end of the bandage with tape or a safety pin.
5. To remove the bandage, start at the end closest to the body







4. Recurrent bandage

Recurrent bandaging is used for blunt body parts consists partly of recurrent turns. The bandaging is applied repeatedly from one side across the top to the other side of the blunt body part. To be able to fix the recurrent turns well, not only the wound, but the entire length of the blunt body part should be covered. Depending on the width of the bandage and the body part, successive turns either cover the proceeding turn fully or partially. Recurrent bandages are fixed using circular or spiral turns. E.g Caplin bandage, Stump bandage

5. Figure-of-eight bandage

A bandage in which the turns cross each other like the figure eight, used to retain

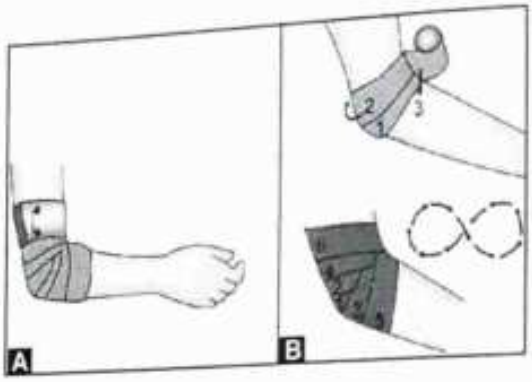
dressings, to exert pressure for joints (or to leave the joint uncovered), to fix splints for the foot or hand, for the great toe, and for sprains or hemorrhage.

Hand/Fingers Figure 8

Uses: Stabilize wrist/hand

Steps

1. Anchor: wrap around the palm 1-2 times
2. Wrap diagonally across the hand and around the wrist
3. Wrap diagonally across the hand and back around the palm
4. Repeat as many times as needed



Special bandages

1. **Capeline Bandage**

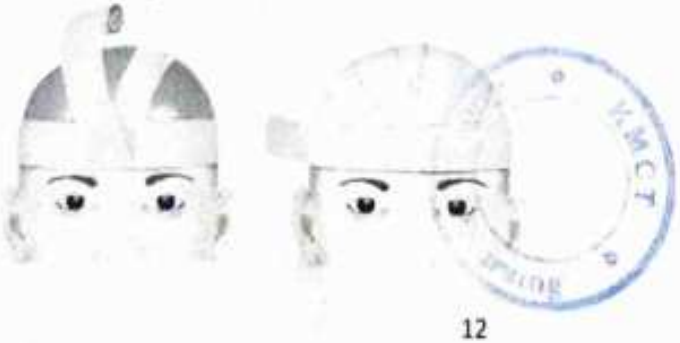
Bandage that covers the head or an amputation stump like a cap.

Purposes

Head bandages can be useful after extensive scalp operations because of their capacity to hold the primary dressing in place, protect the wound from digital manipulation, absorb exudate, compress the area operated on, and also serve for aesthetic purposes in the postoperative period.

Procedure

1. Cat the bandage in maximum length 4-6 m.
2. Pass the bandage over the head and bring it out on the other side under the lower jaw.
3. Take help from assistant in hold it tightly.
4. Make the knot of bandage at the level of forehead in front ear.
5. Thus bring the bandage over the back of head.
6. Make several spiral turns over the top of the head obliquely.
7. Bring the bandage over the back of the head to the front.
8. The spiral turn until entire head is covered.
9. Tie the bandage with knot.



Eye bandage

An eye bandage is a small patch that is worn in front of one eye. It may be a cloth patch attached around the head by an elastic band or by a string, an adhesive bandage, or a plastic device which is clipped to a pair of glasses. It is often worn by people to cover a lost or injured eye, but it also has a therapeutic use in children for the treatment of amblyopia.

Purposes

- To maintain gentle pressure over an eye pad.
- To arrest haemorrhage.
- To reduce swelling after eyelid surgery.
- For a child, to ensure the pad is not disturbed.

1. Single eye bandage:
   a. Make a circular turn over the head securing the eye pad.
   b. Now give another turn obliquely from below the ear covering the eye pad.
   c. Make similar turns covering the previous 2/3rd turn.
   d. Give one straight turn at the head.
   e. Secure the bandage and cover one eye.
2. Double eye bandage:
   a. Make a circular turn around the head.
   b. Similarly as one eye bandage coved one eye.
   c. From the back of the head start covering the other eye.
   d. Alternatively give one turn to each eye.
   e. Repeat the turns to secure the pads of both eyes uncovering the nose. (
   f. Each turn should cover 2/3" of the previous turns.
   g. Secure the bandage by straight turn around the head.

Ear Bandage

Ear bandages are use to protect wounds and control hemorrhage. They must supply enough compression to support the injury but not so much that it restricts breathing. Learn how to apply a safe ear bandage using figure-of-eight configuration.

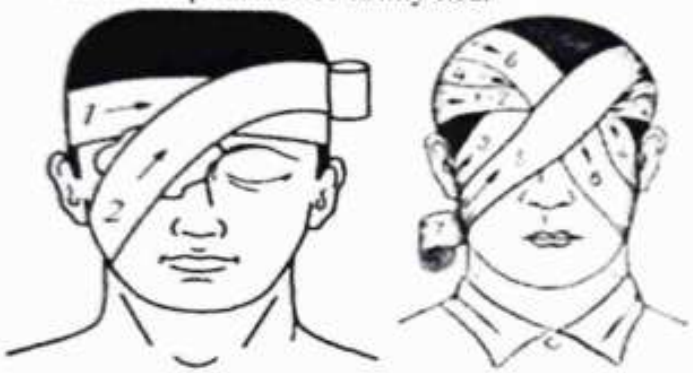
Procedure

1. Single ear bandage:
   a. Make two turns around the head.
   b. Take the bandage obliquely to the lower border of the ear dressing.

c. Give more turns covering whole of the ear dressing.
d. A circular turn is then given at the head to secure the bandage.

2. Double ear bandage:

a. A piece of tape is laid over the head at the outer comer of each eye for securing the bandage.
b. The fixing turn round the head.
c. Takes in the upper margin of each dressings, then passes behind the right ear, up in front of it, is reversed at the corner of eye, crosses the forehead, reverse again and passes down over the front of the left ear and across the occiput ready to begin the next series of turns.
d. A crepe bandage is advised and 2 finsihing tums around the head.
e. The side tapes must be firmly tied.



Jaw Bandage

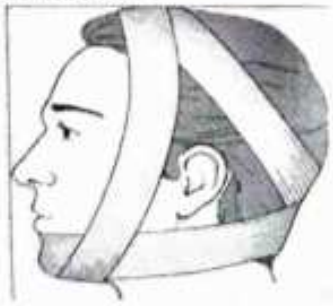
This figure 8 bandage is wrapped around the head and jaw to provide support below and anterior to the lower jaw.

Purposes

To hold dressings on the chin, cheeks, and scalp and as a temporary support to immobilize a fractured or dislocated jaw.

Procedure

- Start bandage in front of ear, then bring over top of head and under jaw. Make several turns as needed.
- Anchor vertical bandage by making several horizontal turns around head.
- Reinforce both loops with strips of adhesive placed in direction of loops. To prevent vertical turns under jaw from slipping, anchor with strips of adhesive tape across the front of the chin.



Thumb spica:

Thumb spica splints are devices applied to immobilize the thumb and adjacent structures.

1) Make two circular turns around wrist.
2) From the wrist passing back of hand move to thumb.
3) Making a turn around the thumb again return to wrist.
4) Cover whole of the thumb in spiral manner and secure at wrist.

Triangular bandage:

A 100 cm square of a pie of calico is cut from comer to commer to make two triangular bandages. The longest border is called "base" and other two the "sides". The corner opposite the base ts called "point" and other two are called "ends".

1. For the scalp:

a. Make a narrow hem by folding the base and place it on the forehead just before the eyebrows and remaining part covering the scalp with point hanging near the nape of neck.

b. Cross the two ends at the back of head and take them forward over ears to tie them to forehead.

c. Draw the point firmly forward while Pressing o,, the head and pin it forwards to bandages.

2. For front or back of chest:

a. Place the centre of open triangular bandage over the dressing with its point over one of shoulders.

b. Tie the ends on opposite side in such a way that one end is longer than other.

c. Tie it on the opposite side to the extended longer end.

d. The steps are reverse, if wound is on back of chest.

3. For shoulder:

a. Place the centre of open triangular bandage on injured shoulder from the side with point kover e neck reaching ear.

b. Hem the base and carry the ends inwards round the middle of arm and tie the knots on outer side, thus firmly fixing the bandages.

c. applying a sling, turn down the point of bandage over the sling knot, draw tight and pin it.

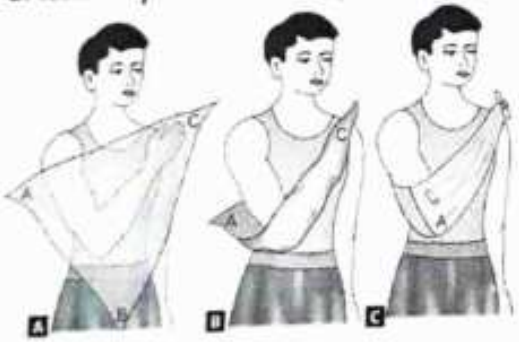
4.For elbows:

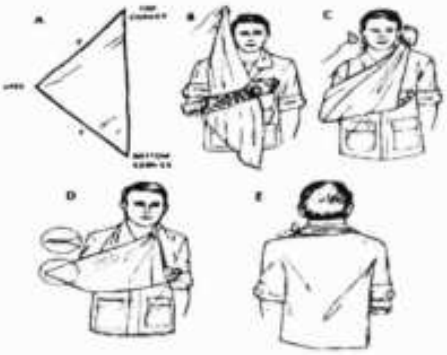
a. bend elbow at right angle.

b. fold a suitable hem of base of triangular bandage and place the middle part of it on the back of forearm, keeping the point on back of upper arm.

c. cross the ends round the forearm and then round the upper arm and tie the knot above the elbow

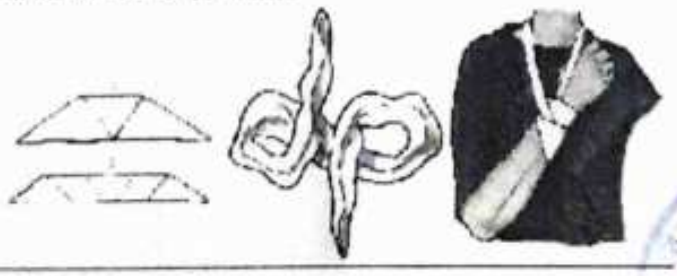
d. turn the point down and pin it low down





Arm Sling

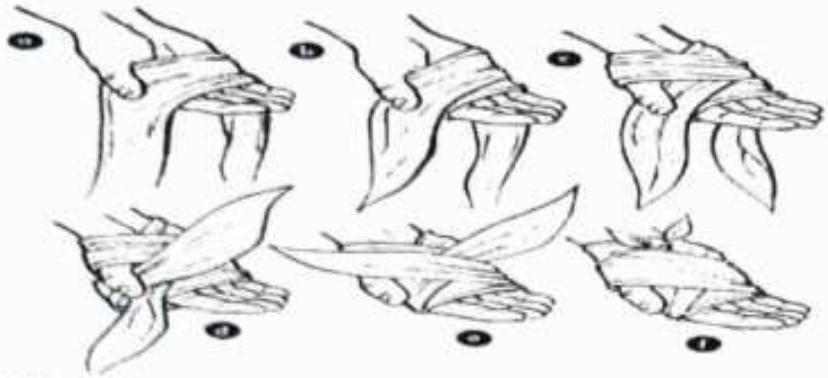
It is a cloth support for an injured arm that wraps around the back of the neck to maintain the arm is a set position.



5.For hands

a. fold triangular bandages over the hand with its base and point towards the wrist.

b. make a narrow inward hem, pass the ends around wrist, cross over the tie the knot over point



6. For the knee:

a. Bend the knee to a right angle.

b. Place the point of triangular bandage on the outer side of thigh, make an inward narrow hem of base and cross the ends to take them upwards round the thigh, tie knot in front of thigh.

c. Bring the point down over the knot and knee to pin it up.

d. If the knee cannot be bent, g-shaped bandage is applied.

Splint

Definition

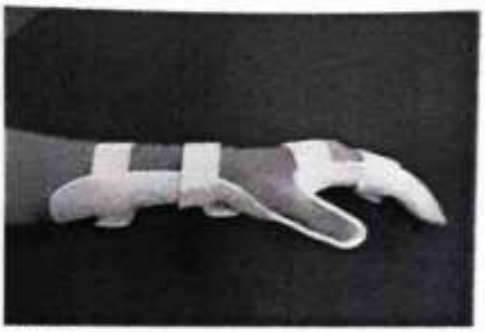
A splint is any device used to stabilize a fracture or a dislocation.

Purposes

1. Minimizes the movement of disrupted joints and broken bone ends.
2. Decrease the patient pain.
3. It prevents a closed fracture from becoming an open fracture.
4. It minimizes blood loss.

General Rules for Applying Splint

- Before moving the injured extremity, expose the area and control any bleeding.
- Assess and record the pulse, motor function and sensation
- Align long bone injuries to anatomical position under gentle traction.
- No attempt to push protruding bones back into place. Splint to immobilize both the injury site and adjacent joints, °
- Splint patient before moving them to stretcher or other location. A good rule of thumb is "least handling causes least damage.
- The method of splinting is always dictated by the severity of patient's condition and priority decision.
- If patient is unstable, do not waste time with splinting care for life threatening problem first.



Binder

Binders are special wide, flat, piece of fabric used to support a specific body part or to hold a dressing. Binders are used to support large area of body such as; abdomen, arm or chest.

Purposes of Binders

1. To maintain the intra-abdominal pressure and to prevent shock and collapse
2. To hold dressing in place.
3. To support abdomen and prevent wound dehiscence following surgeries.

Types of Binders

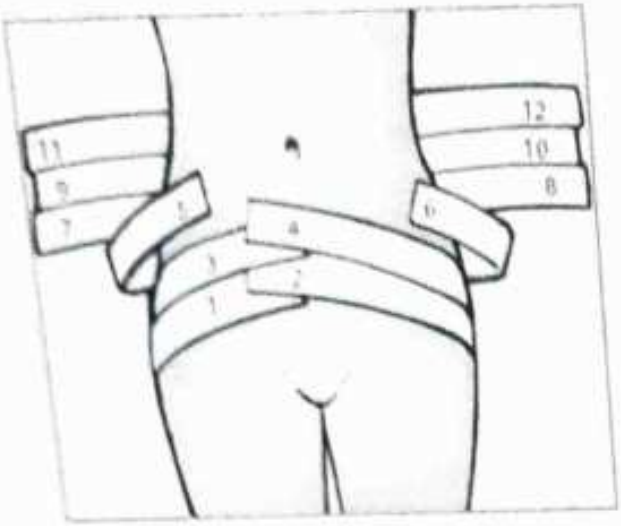
1.Abdominal Binders
2.Breast Binders
3.T-Binders
4.Arm slings

Abdominal Binders

Two types of abdominal binders are used to support the abdominal musculature straight abdominal binders of many tailed binders. Straight binder is a straight piece of cloth material about 15-20 cm wide and long enough to circle the abdomen. It is used to support the large abdominal incision that are vulnerable to tension or stress as the patient moves or coughs.

Procedure

- Provide supine position to the patient
- place the abdominal binder smoothly under the patient with upper border of binder at the waist and the lower border at the level of gluteal fold to prevent interference with respiration.
- Apply padding over iliac crest.
- The tails are brought out to the sides of the patient's body with the bottom tail in position to wrap around the lower part of abdomen first.
- A tail from each side is brought up and placed obliquely over the abdomen until all tails are in floes. The last tails are fastened with safety pins.

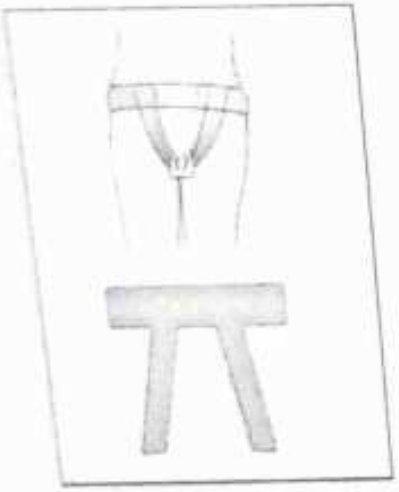


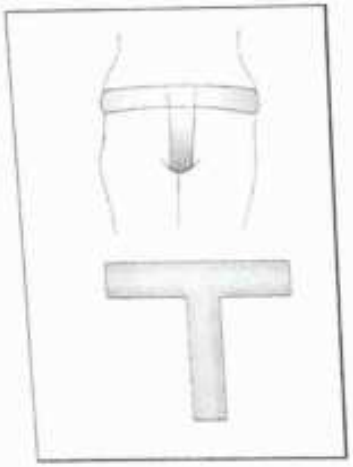
Breast Binders

It provides support after breast surgery or after child birth. While applying a breast binder encircle chest with bind, overlap and secure in middle of chest. Pull the shoulder straps tight and secure in front just below shoulder line. Place patient in comfortable position and document the date and time, type or area and mention reason for applying binder.

T-Binders

It look like alphabet T and is used to secure rectal or perineal dressings. The single T bandage is used for females and double T binders are used for males. The belt is secured around the patient's waist with single tail or double tails are passed between the legs from back to front and pinned to the belt making tail that fits smoothly and against the dressing.





FIRST AID MANAGEMENT

Wound

A wound is a break in the continuity of skin as a result of injury. It may be superficial or may affect blood vessels, muscles, nerves, and bones.

Types of Wounds

Open Wound

Closed Wound

First Aid- Care of Wounds

1. Examine the patient for degree of hemorrhage and shock. Ifpresent, treat it first.
2. Examine the patient for fractures/dislocation and treat.
3. Wash your hands with soap and water.
4. Remove visible foreign bodies that can be picked.
5. Clean the area with antiseptic solution. If in the wound edges, gapis more than 5 mm, then maintain them in apposition by putting a strip of sticking plaster across the wounds.
6. Put sterile gauze over the wound and secure it.
7. In case of burn, wrap the patient in clean, hot ironed sheet.
8. If there is contusion, then on first day, apply ice to decreasebleeding and increase of wound in size.
9. Then, after 24 hours apply hot water bottle locally to faster theabsorption of hematoma.
10. If there is any wide gap, then suture it.
11. If there is penetrating chest injury, then put the patient in semi upright position.
12. Cover the wound with firm airtight dressing. 13.Fix the dressing to chest with firm bandage.
14. Transfer the patient to hospital, because there can be any injury to lungs, heart, aorta, etc.
15. If any serious abdominal wound, i.e., if the foreign body is foundprojecting, then do not remove it.
16. Place ring pad around the object and secure the dressing. 17.If the intestine come out, then do not put it back.
18. Cover the intestine with clean cloth soaked with warm water. 19.Treat the shock.
20. Transfer to a hospital immediately.

Hemorrhage

Hemorrhage is the loss of blood from blood vessels. It is caused due to injury or we can say any accident which results in rupturing of blood vessels.

The classification is of two types:

Type-1

Depending on the Basis of Time Interval:

1. Primary hemorrhage: The primary hemorrhage occurs at a time of injury or it is immediate. e.g. a cut finger or an operative incision.

2. Reactionary hemorrhage: It occurs in the first 24 hours after operation. It may be due to recovery from shock, slipping of ligatures or dislodgement of blood clot sealing the injured vessel, e.g. with coughing, which increase venous pressure.

3. Secondary hemorrhage: It occurs 3-10 days after injury. It is due to sloughing of wall of blood vessels. The commonest cause is bacterial infection.

Type – II

1. External bleeding: It occurs when blood can be seen coming out from open wound.
   Internal hemorrhage: It is also called concealed. The bleeding cannot be seen. The bleeding occurs into one of body cavities such as abdomen, lumen of intestine into tissues

First Aid Care External Bleeding

1. Protect yourself against any diseases by wearing gloves. If not available, wear gauze pads.
2. Expose the wound by removing or cutting the victim's clothing to find source of bleeding.
3. Clean the area with clean cloth or sterile pads, if available.
4. Apply pressure over the area to reduce blood loss, be sure pressure remains constant.
5. If bleeding continues, use elevation to help reduce blood flow. Combine with direct pressure over wound.
6. Give comfortable position to patient so that pain get reduced.
7. Give fluids to patient, so that fluid and electrolyte balance can be maintained.
8. If bleeding is continued, then again press the area.
9. Reassure the patient.
10. Shift the patient to hospital as soon as possible.

First Aid Care Internal Bleeding

1. Put patient on bed and give him comfortable position so that pain gets reduced.
2. Provide psychological support to patients and relatives.
3. Monitor ABCs.
4. Donot give anything by mouth because injury may be gastrointestinal tract.
5. Expect vomiting : If vomiting occurs, keep victim lying on his or her left side to allow drainage and to prevent both inhalation of vomitus and expulsion of vomit from stomach.
6. Treat the shock by raising victim's legs 8-12 inches and cover the victim with coat or blanket to keep warm.
7. There may need to blood transfusion to prevent shock.
8. Shift the patient to the nearby hospital

Shock

It is a condition of collapse which results from decrease in circulation blood volume or fluid in the body leading to severe depression of vital functions.

Types

1. Neurogenic shock: Spinal or head injury resulting in loss of nerve control.
2. Hemorrhagic shock: Loss of blood due to wounds, multiple trauma, burns.
3. Respiratory shock: There is an insufficient amount of oxygen in blood due to inadequate breathing of respiratory arrest.
4. Cardiac shock: Cardiac muscles not pumping effectively due to injury or previous heart attack. Heart muscles no longer impart sufficient pressure to circulate the blood.
5. Psychogenic shock: Something, psychological affects the patient, i.e. death of loved one, accident, etc. blood drains from head and pools in abdomen, person faints due to lack of blood in brain.
6. Metabolic shock: Loss of body fluids with a change in biochemical equilibrium, i.e. insulin shock, diarrhea.
7. Septic shock: Severe infection toxins cause pooling of blood in capillaries with dilatation of vessels, enough blood is not remained available for tissues.
8. Anaphylactic shock: Severe allergic reactions of body to foreign proteins.

Signs and Symptoms

Signs	Symptoms
1. Casualty is anxious and restless. 2. Weakness, fainting, giddiness and disorientation. 3. Shallow, rapid or grasping breathing. 4. Nausea, vomiting. 5. Extreme thirst. 6. Skin becomes pale, cold and clammy. 7. Sweating.	1. Pulse rate increase. 2. Blood pressure falls. 3. Unconsciousness 4. Pupils are dilated 5. Lusterless eyes. 6. Shaking and trembling of arms and legs. 7. Evidence of associated external or internal injury. 8. Half opened eyelids. 9. Dullness of mind, apathy, lethargy. 10. Anuria, oliguria.

First Aid Treatment

Make the victim lie down at once with head level lower than the rest of his body.
However, if the breathing in this position is difficult due to chest injury, raise head and shoulder placing pillows under them.
Cover him properly. Carefully place a blanket under him. If the weather is not hot. Place a coat or blanket over him, if cold weather, then use several blankets. Loosen the clothes of patient.
Apply heat along inner sides of arms and legs but do not apply heat to head.
Look for any serious bleeding or cause of severe pain. Try to control bleeding as described previously.
In case of injuries to abdomen and chest, give nothing by mouth, because he may require an operation later on. Nothing per oral should be given.
Do not let a crowd gather round the patient.
Reassure the casualty, if he is conscious.
Arrange for transportation to a hospital or institution on top priority basis.

Fracture

A fracture is a break or crack in a bone. Or It is the partial or complete breakage of periosteum (bone)

1. Injury to the bones: Fracture, crack of bone.

2. Injury to the joints: Dislocation, sprain and bruises. Causes The most common cause is the force or violence.

Types

1. Simple fracture: It is one in which a bone has been broken, but there is no serious injury to other important tissues. The broken ends of bone do not cut open the skin nor are visible outside.

a Transverse fractures: In this, bone is broken almost straight across due to direct violence

b. Spiral fractures: In this, the bone is obliquely broken due to indirect violence

c. Fissured fractures: In this, the bone is cracked but not completely broken.

2. Compound or open fracture: A compound or open fracture is one, when there is wound leading down to the broken bone or when the fracture ends protrude through the skin, thus allowing air and germs to obtain access to the site of fracture

3. Comminuted fracture: A comminuted fracture is one in which a bone is broken and there are more than two fragments, e.g. fracture of patella due to direct violence.

4. Complicated fracture: It is the one, when there is associated injury to some important internal structure. e.g. brain, spiral cord, lungs, liver, etc.

5. Impacted fracture: It is one when the fragments of a fracture are driven into one another and wedged firmly together. This kind of fracture usually occurs at the end of long bones, e.g. upper end of humerus.

6. Green stick fracture: This type of fracture occurs in children under the age of twelve. In this, the bone may be cracked and bent without breaking completely across

7. Depressed fracture: Broken parts of bone are driven inwards, e.g. in upper skull

8. Pathological fracture: The pathological changes or carcinoma of bone make the bone weak and brittle, it breaks spontaneously without or with a little force.

Signs and Symptoms

1. Pain at or near the site of fracture.
2. Tenderness or discomfort felt on applying gentle pressure on affected areas.
3. Swelling.
4. Loss of activity, may be partial or complete.
5. Deformity of limb, fractured part appears out of shape.
6. Irregularity of bone: If the fracture is near the skin, irregularity of bone may be felt.
7. Crepitus (peculiar cracking vibration is felt or heard at the site of fracture). This is due to the sharp ends of fragments rubbing together.
8. Ecchymosis.
9. Shock.

General Rules for Treatment of Fractures

1. Check and treat ABCs.

2. Determine what happened at the location of the injury.
3. Gently remove cloths covering the injured area. Cut clothing, if necessary.
4. Examine the area by looking and feeling the DOTS:

D – Deformity

O - Open wound

T – Tenderness

S – Swelling

5. Look at the injury site, for swelling and discolorations (black and blue colors). Which indicate escape of blood into the tissues, may come from either the bone end or associated muscular and blood vessel damage.

6. Feel the injured area. If a fracture is not obvious, gently press, touch or feels along the length of bone for deformities, tenderness and swelling.

7. Treat the fracture of the spot: No attempt should be made to move the casualty until the fractured part has been immobilized, unless the person's life is in immediate danger.

8. Steady and support the injured part at once, so that fractured part is immobilized. This is to prevent further injury and any increase in the bleeding which is always present at site of fracture.

Muscle injuries- sprain

Sprain is defined as an injury to the ligament and the joint capsule.

Causes

1. Sudden movement.
2. Twisting of the part involving joint.

Signs and Symptoms

1. Burning, pain and swelling
2. Severe pain on movement
3. Discoloration
4. Tenderness

Treatment

1. Sprain or strain is firstly treated as RICE:
   R - Rest the injured part.
   I - Apply Ice or a cold compress.
   C - Compress the injury.
   E — Elevate the injured part.
2. Give comfortable position to the patient.
3. Provide support to the injured part.
4. Immobilize the injured part.
5. Elevate the injured part.
6. Cold compress is given to reduce swelling.
7. Hot fermentation is applied to absorb the blood collection and reduce discoloration.
8. Apply firm elastic bandage.
9. Weave supports are useful in providing firm and condition support.

10. All doubtful cases should be treated as fracture cases.
11. Shift the patient to the hospital as soon as possible for medical aid.

Strain

A strain occurs when a muscles or group of muscles are over stretched and possibly torn by violent or sudden movement.

Causes

1. While lifting weights.
2. During sports
3. Strain occurs when muscles are stretched during sudden jerky motions.

Signs and Symptoms

1. Sudden pain at the site of injury.
2. Stiffness and cramps.
3. Swelling at the site of injury, Sometime redness is also present.
4. Tenderness.

Treatment

1. Place the patient in a comfortable position.
2. Immobilize the area.
3. Steady and support the injured part.
4. Elevate the injured limb.
5. Apply cold compress, if it is of recent origin.
6. Treat the patient as fractured patient.
7. Shift the patient to the hospital as soon as possible

TRANSPORTATION OF THE INJURED

Transporting of injured people is one of the major responsibilities and aims of first aid treatment. After rendering first aid to an injured person, he should be transported from scene of accident to a hospital or to his home, depending upon the condition.

General Principles of Transportation and Handling

1. Do not move an injured casualty unless it is absolutely necessary and till the assistance is available.
2. Do reassure the casualty.
3. Provide first aid on the spot and send for help.
4. Keep the dangerous substances away from the casualty.
5. Explain the casualty what you are going to do so as to get full co-operation. 6. Only one person should be the leader to command.
7. The method of transportation depends upon:

a. Facilities available
b. The nature and severity of injury
c. The build of casualty
d. Route to be travelled
e. Distance to be covered. .

8. Position of casualty should not be changed during journey and the general condition should be watched carefully after every 10 minutes.

Methods of Transportation

Manual Lift and Carries

Following rules must be used to lift the casualty by manual method

1. Carries by one first aider

a. Human crutch:

Aim:

This is used to support a conscious casualty who is able to walk with assistance. In case of upper limb injury, this method is not used.

Steps:

- Stand on injured side of Casualty
- Put your arm around his waist
- Grasp the clothes at his hips
- Place his arm around your neck
- Hold his hand with your free hand

Figure 1human crutch

b. Drag method:

This method is used when the injured casualty is unable to stand and need to be moved quickly from source of danger.

Figure 2 drag method

Steps:

- Keep the casualty's arm across his chest
- Sit at the head end of casualty
- Grasp the arm pits and cradle the casualty's head on your forearms
- Pull the casualty along the ground without lifting

c. Cradle method: This method is used when casualty is light weight or child.

Steps:

Carry the casualty by passing one of arms will beneath casualty's two knees and the other round his back.

Figure 3 cradle method

d. Pick a back:

This method is used when the casualty is small, light and fully conscious and able to hold arm. He may be carried in ordinary pick a back fashion.

d. Fireman's lift and carry:

Steps:

- Help the casualty to rise to upright position
- Grasp his right wrist with your left hand
- Bend down with your head under his extended right arm
- Place your right arm around his legs
- Rise to correct position taking his weight on your right shoulder
- Pull the casualty across both shoulders and transfer his right waist to your right hand
- Keep your left hand free

Figure 4 pick a back method
Figure 5 fireman's lift

2. Carries by two first aiders:

Four handed seats

Steps:

- Stand facing each other behind casualty
- Make a seat by grasping your left waist by your right hand
- Grasp your partner's right waist with your free hand
- Instruct the casualty to place an arm around each of your neck and sit back on to your arm
- Rise together slowly keeping your back straight and move together in same pace

Two handed seats:

Steps:

- Square facing each other on either side of casually
- Cross arms behind the casualty's back and grasp each other wrist or the casualty's clothing around waist
- Pass the other hand under casualty's knee and grasp each
- Rise together slowly keeping your beck straight and move off together with cross over steps and walk with ordinary paces

Fore and aft method:

One bearer stands between the legs of casualty facing feet, bend down and grasp casualty under his knees

Other bearer stands behind casualty, after raising his trunk passes his hand under armpits of casualty and grasp his own waist on casualty's chest

Casualty is then lifted and bearer walks in steps

Carry Chairs

The casualty is made to sit on a chair and bearer walk instep by carrying the patient in a chair.

Blanket Lift In this, four bearers are required.

Steps:

- Place the folded blanket length wise alongside the casualty against her back
- Turn the casualty and support the casualty on other side
- Unroll the blanket or width of her body

- Place causality in supine position and tightly roll the pen ends of blanket lengthwise towards casualty
- Assign two bearers on either side of casualty
- Keep your back straight in squatting position and prepare to lift together
- Support the casualty at head and waist, hip and ankle by holding the rolls of blanket firmly
- On command, all four bearers are to lift the casualty together
- Pay attention to site of injury

Stretcher

Stretchers are used to carry seriously ill or injured causalities to an ambulance or to a shelter.

Types

1. Standard stretcher
2. Pole and canvas stretches
3. Improvised stretcher
4. Trolley cot.

1. Standard stretcher: It consist of a canvas or plastic sheet attached to carrying poles with stand on underside; which is tied transverse which folds in same direction to keep stretcher open.

2. Pole and canvas stretcher: It is the most commonly used stretcher for lifting a casualty from one to another stretcher or from a stretcher to a trolley. It consists of canvas or plastic sheet with handles and side sleeves and a pair of carrying poles. Spready bars are inserted over the ends of poles to keep them apart and to make stretcher firm and rigid.

3. Improvised stretcher: These are used in case of emergency when proper stretcher is not available. For this, we need a rigid surface such as doors, hurdle, advertising board, etc. Besides inserting e poles through the sleeves of a jacket and check the strength of improvised stretcher to ensure the safety of casualty,

4. Trolley cot: These are fully adjustable stretcher beds on wheels. In this, trolley height, tilt knee and back rest can be adjusted to suit casualty's condition.

Preparing Stretcher

To keep the casualty warm and to protect him from any bump or jerk, blankets and sheets are used to prepare.

1. One blanket or sheet can be used to wrap stretcher.
2. Two blankets or sheets can be used to wrap.

<u>Loading a stretcher</u>

1. Blanket lift
2. Manual lift

1. Blanket lift:

4 bearers are required

Place the folded blanket lengthwise along the side of casualty

Turn the Casualty and support hive: Unroll the blanket to width of his body

Place casualty in supine position

Assign two bearers in either side of casualty

Keep your back straight in square position and prepare to lift together
Support the causality at the head and waist by holding the rolls firmly
2. Manual lift:
It is done when blankets or sheets are not available.
Wheeled Transport (ambulance, bus, car).
Loading
1. One bearer should stand inside the ambulance, ready to guide the stretcher.
2. Two bearers should stand, one on either side of stretcher and one on the rear end, ready to lift.

Unloading

1. Two bearers should hold the handles at each end and gently withdraw the stretcher.
2. Two more bearers may hold of handles at head and two at ends,
3. Take the weight, lower it and with fully extended arms, move with side paces.
4. Carry the stretcher and clear the wheeled transport and lower it to ground.

RESPIRATORY EMERGENCIES

Drowning

Introduction

Accidental fall into a well, pond, canal or river and inability to swim results in drowning. There is a complete immersion of nose and mouth in water.

Definition

The term "drowning" is used if the individual dies within 24 hours of submersion in water whereas the term "near drowning" is used if the individual survives after submersion for more than 24 hours. Pathophysiology Series of involuntarily coughing and swallowing actions, and victim involuntarily inhales and swallows more water. Water flows past the epiglottis triggers.

A reflex spasm of larynx

This spasm seals the airway so effectively that no more than a small amount of water reaches the lungs. Unconsciousness soon result from hypoxia

Effects of Drowning

1. Asphyxia
2. Injuries to head and neck
3. Congestion of lungs
4. Airway obstruction
5. Internal injuries:
   a. Fractures
   b. Soft tissues injures
   c. Internal bleeding
6. Hypothermia

Sign and Symptoms

1. Dyspnea
2. Noisy, snoring and gurgling breath
3. Frothing from mouth

4. Cyanosis
5. Confusion
6. Loss of level of consciousness
7. Breathing may stop.

Rescue of Drowned Person

1. Most drowning occurs only a few feet from shore, or from a float, or from water of standing depth. If the victim is near enough, extend a pole, branch, or oar to him.
2. If you cannot extend an object to the victim, throw to him something that will float.
3. A good way to aid a drowning person is to use a boat if one is handy. The procedure use to rescue Is:
4. The best way to approach a drowning person is to back the stern of boat within his reach and allow him to climb in from there if he can, or to hold on while you row him to shore.

First Aid

Aim: The main aim of first aid is to drain out water from the body.

1. Very quickly put the victim in prone position and make sure his air passage is not obstructed :
    a. Loosen his collar.
    b. Put finger down the throat to scoop out seaweed of other foreign material.
    c. Remove false teeth.
    d. Pull tongue forward.
2. Raise middle part of the body with your hands round the belly.
3. Do not attempt to force water out from stomach.
4. Give artificial respiration until breathing comes back to normal. This may have to go for as long as 2 hours.
5. Remove wet clothing. Keep body warm, cover with blankets, provide hot drinks.
6. Do not allow him to sit up.
7. During artificial respiration ask helpers to send for doctor and ambulance.
8 The casualty should always receive medical attention, even if he appears to recover rapidly.

Asphyxia

Definition

It is a condition in which the lungs do not get sufficient supply of air for breathing.

Causes

1. Choking
2. Drowning
3. Irritant gases, e.g. coal gas, motor exhaust fumes, etc.
4. Obstruction by falling back of tongue in unconscious patient.
5. Injury, burns, infection.
6. Strangulation.
7. Injury to chest, lung wall.
8. Epilepsy, tetanus, rabies.
9. Electrical injury.

10. Poisoning.

Signs and Symptoms

1. Difficulty in breathing.
2. Noisy breathing.
3. Cyanosis.
4. Increased pulse rate.
5. Frothing from mouth or nostril.
6. Unconsciousness.
7. Fits.
8. Breathing may stop.
9. Dark spots in front of eyes and loss of vision.
10. Veins of neck get engorged.
11. Casualty opens his mouth to acquire more air.

First Aid Treatment

1. Remove the cause, if possible.
2. Very quickly, make sure that air passage is not obstructed.

a. Loosen his collar.

b. Put finger down the throat to scoop out seaweed or any foreign material.

c. Remove false teeth.

d. Pull tongue forward.

3. Place the individual on his back. Support the nape of neck on your palm and press the head backwards.
4. After that press the angle of jaw forward from behind. This will extend the head on neck and lift the tongue to clear the airway.
5. Give artificial respiration to ensure prompt ventilation of lungs and if necessary, do external cardiac massage.
6. During artificial respiration, ask helpers to call the doctor and also ask him to cover the casualty with blanket.
7. Continue artificial breathing until natural respiration is resumed.
8. After breathing is restored, keep the victim at rest and arrange for medical help.

Hanging

Hanging is suspension of the body by a rope around the neck by a noose, or ther constricting band tightened with weight of the body which will exert the pressure on the outside of the neck.

Signs and Symptoms

- Difficulty in breathing
- Breathing may become noisy with shoring or gurgling
- Asphyxia
- Congestion of face and neck with prominent vein
- Constriction mark may be visible around the neck.

First Aid

- Remove the constriction around the neck immediately.
- Place in recovery position.
- If breathing is difficult start CPR
- Shift the casualty to the hospital as soon as possible
- Do not wait for policeman.

CARDIOPULMONARY RESUSCITATION

Introduction

Cardiopulmonary resuscitation (CPR) is a life saving technique useful in many emergencies, including heart attack or near drowning, in which someone's breathing or heartbeat has stopped.

Definition

Cardiopulmonary resuscitation is a technique of basic life support for oxygenating the brain and heart until appropriate, definitive medical treatment can restore normal heart and ventilatory action.

Purpose of CPR

To maintain blood circulation by external cardiac massages (C)

To maintain an open and clear airway (A)

to maintain breathing by external ventilation (B)

To save life of the patient

To provide basic life support till medical and advanced life support arrives

CPR Procedure

Sequences of procedures performed to restore the circulation of oxygenated blood after a sudden cardiac pulmonary or arrest

Chest compressions and pulmonary ventilation performed by anyone who knows how to do it anywhere, immediately, without any other equipment

Steps to CPR

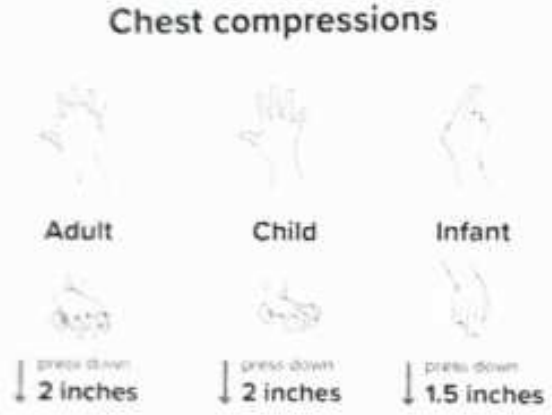
- Check for hazards (fire/ gas/glass/ water/ electricity etc)
- Pinch or shout (are you okay?)
- Call for HELP!
- Check for pulse (if no pulse)
- Landmark (nipple line or two fingers above where ribs meet)
- Chest compression (30 compression and 2 breaths)
- After 4 cycles, check for pulse again
- Check for danger
- Shout for help
- Call 911 or ask any person to call for ambulance/ medical help
- Check for pulse and breathing
- Carotid pulse only onside of the trachea for 10 seconds
- By that time look, feel, listen for normal breathing
- Do not confuse Agonal breathing with normal breath

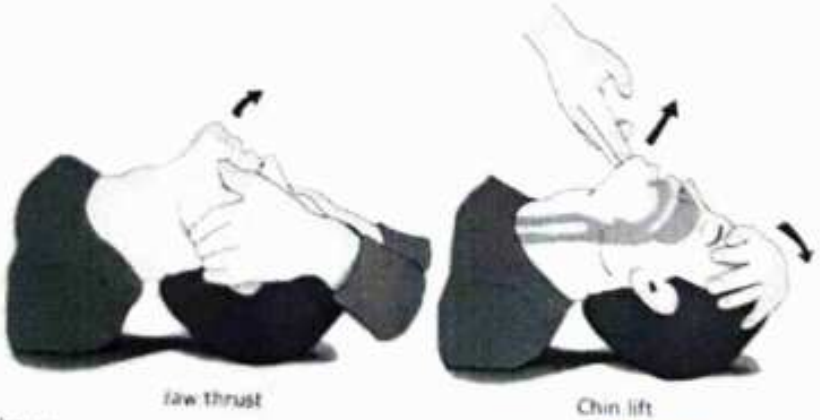
Agonal breathing

- Occurs shortly after the heart stops in upto 40% of cardiac arrests
- Barely, heavy, noisy or gasping breathing
- Recognize as a sign of cardiac arrest

Chest compressions

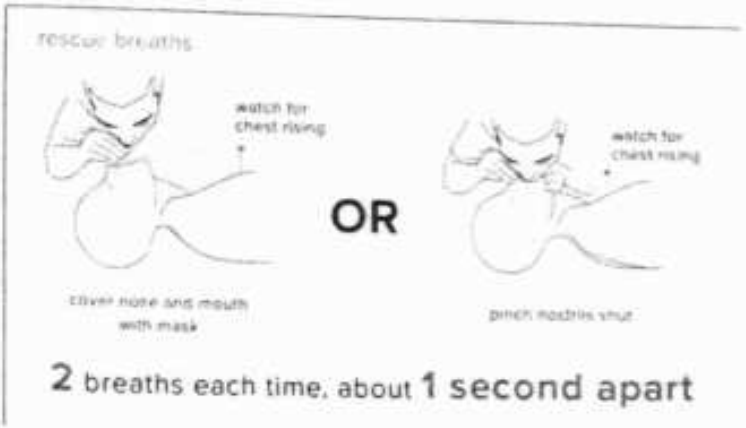
- Place the heel of the one hand in the center of the chest
- Place other hand on top
- Interlock fingers
- Compress the chest
- Rate 100/ min
- Depth 4-5 cm (1.5- 2 inch)
- Equal compression and relaxation
- When possible change CPR operator every 2 min





Open airway

- Head tilt and chin lift
- If cervical spinal injury suspects jaw thrust
- No need for finger sweeps until solid material can be seen in airway seen



2 rescue breaths

- Pinch the nose
- Take a normal breath
- Place lips over mouth
- Blow until the chest rises
- Take about one second
- Allow chest to fall
- Repeat
- Check for pulse after 2 min
- If no pulse start the cycle again until the medical team arrives
- If pulse returns then make the person in recovery position

Recovery position

- Kneel by causality's waist
- Place the hand nearest you at right angles
- Grasp the hand fullest to you place the back of their hand against their cheek closest to you
- Lift the leg fullest away from you at the knee and place their foot on the floor
- Use their knee as a lever pull the person onto their side
- Ensure their still tilted back and they are on their side

The Recovery Position

UNCONSCIOUSNESS

Unconsciousness is a state in which a patient is totally unaware of both self and external surroundings, and unable to respond meaningfully to external stimuli

Fainting or syncope

- A faint is a temporary loss of consciousness
- Fainting occur when there is deficient blood flowing to the brain
- The victim becomes unconscious, and the unconsciousness state is brief

Causes of fainting

- Emotional or physical shock
- Dehydration
- Pain
- Overexertion
- Heart diseases
- Sudden changes in body position (most common in elderly)
- Insufficient fluid and food intake

Signs and symptoms of fainting

- Dizziness and weakness
- Sweating
- Blurred vision, seeing spots
- Headache
- Sensation that the room is moving
- Ringing in the ears
- Nausea, vomiting
- Paleness of the face
- Tingling or numbness of fingertips and around lips

Assessment of Fainting:

- Was the victim injured when they fell(wounds)
- Is the victim showing any signs of shock
- Has the victim had a recent head injury
- Has he/she fainted recently
- Is she pregnant
- Is she/he breathing correctly/normally
- Does she/he has a history of heart disease
- Is the victim properly fed and hydrated

First aid of Fainting:

1. Check for safety
2. Assess the victims' pulse, If absent call 911 then start CPR.
3. Call 911 if the victim:
   - Has blue lips or face
   - An irregular or slow heartbeat

- Chest pain
- Experiences unusual symptoms, such as
- Is difficult to awaken
- Is old
- Hit his or her head when fainting
- Faints more than once in a month
- Is pregnant
- Has a heart condition
- First aid of Fainting:4

4. If you suspect a head, neck, or spinal injury get medical help as soon (call 911) as possible and do not move the victim unless there is threat to safety.
5. Lay the victim flat on his or her back and elevate the victim's legs above the heart level (12 inches above from floor) to restore blood flow to the brain.

Or has the victim sit with her/his head placed down between her/his knees.

- First aid of Fainting:

6. Loosen any tight clothing and jewelry.
7. Turn the victim onto her/his side.
8. Do not give the victim anything to eat or drink
9. If the victim does not regain consciousness within 2 minutes call 911 or drive her/him to the emergency
10. Stay with the victim until the victim is fully recovered.

Causes of unconsciousness

- Shock
- Asphyxia
- Poisoning
- Head injury
- Cerebrovascular accidents (CVA or Stroke)
- Epilepsy
- Hysteria
- Infantile convulsions
- Hypothermia or Hyperthermia

Levels of unconsciousness

1. Alertness, oriented: opens eyes spontaneously, responds to stimuli appropriately
2. Lethargy, sleepy: slow to respond but appropriate response, opens eyes to stimuli
3. Stupor: never fully awake, confused, unclear conversations
4. Semi coma state: moves in response to painful stimuli, pupillary reflex present
5. Coma: unresponsive except to severe pain, no protective reflexes, fixed pupils, no voluntary movement

Signs and symptoms of unconsciousness

- Severe fatigue

- Headache
- Confusion
- Rapid heartbeat
- Inability to speak or move parts of his or her body
- Loss of bowel and bladder control
- Loss of consciousness
- The person will be unresponsive (does not respond to activity, touch, sound, or other stimulation)

First aid in unconscious

- If you find an unconscious person, try to determine what caused the loss of consciousness.
- Check to see if he/she is wearing a medical alert tag.
- If you can determine what caused the loss of consciousness, call emergency medical services and give first aid for that illness or injury until they arrive.
- If you cannot determine what caused the loss of consciousness, give first aid for general unconsciousness and call emergency medical services if the person does not revive promptly (i.e, within a couple minutes).
- Check the person's airway, breathing, and circulation and treat them first Provide CPR if necessary
- If you do not think there is a spinal injury, put the person in the recovery position:
  - Position the person lying face up.
  - Turn the person's face toward you.
  - Take the person's arm that is closest to you, and place it to his/her side, tucking it under the buttock.
  - Take the person's other arm, and place it across his/her chest.
  - Cross the person's ankles by placing his/her far leg over the near leg.
  - Supporting the person's head with one hand, pull his/her clothing at the hip, rolling toward you. The person will be on his/her stomach, facing you.
  - Bend one arm up and one arm down, to support the upper and lower body.
  - Tilt the person's head back to allow air to move freely in and out of the mouth.
- If you do think there is a possible spinal injury, leave the person as you found him/her (as long as breathing continues).
- If the person vomits or bleeds out of his/her mouth, roll his/her entire body at one time to the side.
- Be sure to support the person's neck and back to keep the head and body in the same position while you roll him/her.
- Sponge the patient's face with water and soft cloth
- First aid in unconscious
- Keep the person warm until emergency medical help arrives.

Note: If the person awakens during the above self-care measures and he/she becomes restless or agitated, attempt to gently restrain him/her.

- Reassure the causality and family members
- First aid in unconscious

The following should be avoided in the case of loss of consciousness:

- Do not give an unconscious person anything by mouth; even if he/she regains consciousness, do not give anything until consulting a physician.
- Do not attempt to wake an unconscious person by slapping him/her or by putting cold water on the person.
- Do not put a pillow under the head of an unconscious person, as this could block his/her airway

FOREIGN BODIES

Definition

Foreign body is the small particles which enters in person's skin from the environment and injuries the skin usually causing minor pain with little or no bleeding foreign bodies enter through openings like nose, eyes, ears, etc

Foreign bodies in the eye

Particles of dust or grit or loose eyelashes are the most common foreign bodies found in eyes. They stick to outer surface of eyelid, upper lid, causing discomfort and inflammation

First Aid Treatment

The foreign body in eye may be dust particle, insect, wood, gross, etc.

1. Make the patient sit on chair.
2. Tell the patient not to rub the eyes.
3. Wait for sometimes, may be foreign body comes out with tears.
4. Tell the patient to open the eyes and see if the foreign body is visible, e.g. insect then remove it with the help of clean cloth.
5. Tell the patient to wash his eyes with cold water, may be foreign body come out this way.
6. Do not attempt to remove a foreign body lodged in eye ball, especially on cornea.
7. Do not remove the foreign body with sharp instrument.
8. Put a drop of liquid paraffin in eye, bandage over a pad of cotton wool and take the patient to doctor as soon as possible, prefer it.
9. If the chemical splash into the eye, then wash the eye with warm.
10. Seek the medical attention.

Foreign body in the ear

Foreign body in the ear is usually an insect of very small size. Foreign body should not be poked out with match stick, tweezers, hairpins or forceps.

First Aid Treatment

1. Reassure the casualty.
2. If you have seen the foreign body in ear, do not remove it with sharp instrument.
3. Use warm water and flood on casualty ear. The insect with float up and can be removed easily.
4. You can use oil % to 1 tea spoon by Luke warming it and then cooling it. And pour it in the ear. The insect will float up and can be removed easily.

5. If you are unable to remove, then take the casualty to the doctor and seek medical aid.

Foreign bodies in nose

There are usually encountered in very young children who try to insert various objects such as pebbles or marbles into their nose.

First Aid Treatment

1. If it is visible, pick up with a tweezer.
2. Do not make any attempt to search it.
3. Instruct the casualty, not to pack the nose.
4. Keep the casualty quiet.
5. Take him to the hospital as soon as possible, so that patient care gets medical aid.

Foreign bodies in throat

In throat generally coins, food particles like fish bone artificial teeth or other things can enter.

First Aid Treatment

1. Ask the casualty to cough, so that foreign body comes out
2. Give sharp blow at the back between shoulder blades.
3. If casualty is child, hold him upside down and put on back safety.
4. If the foreign body is small food particle and is not stuck in throat, then give sips of water to casualty.
5. If the foreign body is visible then put finger in mouth and allow the casualty to vomit out.
6. If you are unable to remove it, then take the casualty to the hospital.

Foreign bodies in stomach

The foreign body in stomach is mainly found in children because, they swallow anything like pebbles, coins, buttons, seeds, safety pins, etc.

First Aid Treatment

1. There is no need to panic; intestine will make adjustment to throw the foreign body out.
2. Watch foreign body in stool, over next 2-3 days.
3. Never give laxative to cause rapid movement of intestines.
4. Take casualty to doctor for his opinion.

BURNS AND SCALDS

Burns are form of traumatic injury caused by thermal, electrical, chemical or radioactive agents.

Types of Burn

Classification-I

1. Superficial burn: In this type of burn, only the epidermis is burnt. It is very painful since epidermis contains most of the nerve endings. Though, it is painful but it heals easily.
2. Deep burns: In deep burns, epidermis and dermis both are burnt. There is little or no pain but it takes longer time to heal and will leave a scar.

Classification- II

1. 1° burn: Superficial injury involves only epidermis.

Characteristics:

a. Redness

b. Swelling

c. Pain at site.

2. 2° burn: First layer of skin burned dermis get damage.

Characteristics:

a. Deep intense pain

b. Noticeable redness

c. Blisters

d. Spotted appearances

e. Swelling.

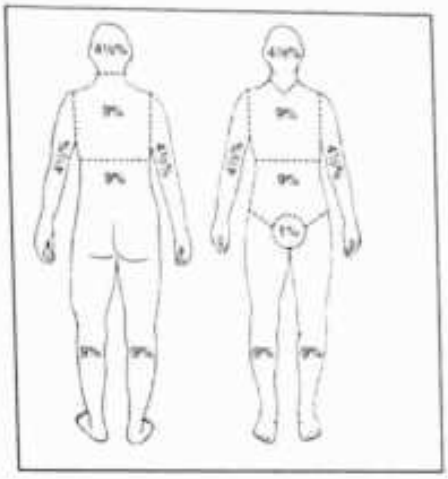
3. 3° burn: Full thickness burn.

Characteristics:

a. Severe pain

b. Charred black or dry and white area

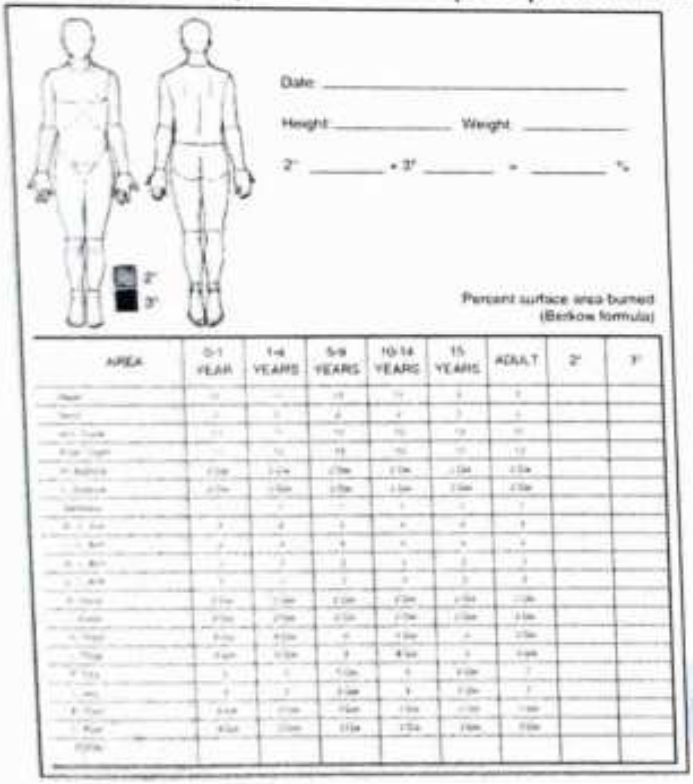
c. Infection.



Classification-III

The size of burn is determined by two methods :

1. Rule of nines: The basis of this rule is that body is divided into anatomical sections, each of which represents a percents or a multiple of percent of TBSA (Total body surface area).



2. The Lund and Browder method: It modifies the percentage for body segments according to age and provides a more accurate estimate of bum size.

Principles

1. The first and foremost principle is remove the cause that is the casualty should be kept away from source of bum.
2. Do not remove clothing stuck to the skin.
3. Cut around the areas where clothing sticks to skin.
4. Do not pull on stuck clothing; pulling will further damage the skin.
5. Do not forget to remove jewellery as soon as possible; swelling could make jewellery difficult to remove later.
6. Do not apply cold to more than 20% of any adult's body surface (10% for children), widespread cooling can cause hypothermia.
7. Do not leave wet packs on wound for long time.
8. Do not use an icepack unless it is the only source of cold.
9. If you use one, apply it for 10-15 min, frostbite and hypothermia can develop.
10. Do not apply ointment, grease, and butter, cream, spray, Colgate, nail polish, or any other coating on burn, because these are unsterile and can cause infection.
11. Never cover first degree burn.
21. Do not use anesthetic and sprays.
13. Always rinse chemical burn with water so that chemicals can be removed.

First Aid Measures

Chemical burn

If dry chemical

- Brush off before washing with water
- Do not allow casualty to rub his eye
- Reassure the casualty
- Wash with water by holding the affected side of casualty under gentle cold water
- Remove clothing and jewellery
- Do not try to neutralize
- Seek medical attention

If acid or alkali compounds

- Wash immediately with water for 20 min
- Remove clothing and jewellery
- Do not try to neutralize
- Seek medical attention

Electrical burn

See the victim is in contact with the electricity

If yes and he is inside any building home etc

- Turn off electricity at fuse box, circuit breaker or unplug appliances

If on the open space

- Call power company to turn off electricity or cut wire
- Do not touch power lanes or victim
- Keep people away

When danger is kept away

- Check ABCs and treat accordingly
- Treat for shock
- Place a sterile dressing pad, non flutty material on burn. Secure with bandage
- Do not break blister or loose skin
- Do not apply lotion or ointment
- Seek medical help

Sun burn

- Place the casualty in the side
- Cool skin by sponging gently with cold water
- Treat for general effect of over heating
- Give him sips of cold water at frequent intervals
- Cover the burn area

Scalds

These are defined as injuries that results from moist heat or wet heat. e.g. steam, hot oil or tar.

Types of scalds

- Immersion burns
- Spill burns

Immersion Burn

It occurs when an area of body is fully immersed in hot liquid. It is often deep burn and is full thickness. This type of injury is generally caused by abuse and is seen most often in children.

Spill Burn

It occurs when a liquid spills, drops or is thrown on person. It is always irregular. It is not deep. It is generally caused by neglect and non-supervision of children.

Superficial burn (first degree burn)

- Apply cold until pain stops (10-40 min)
- Apply Aloevera or other moisturizer
- Check burn severity table as a guide about seeking medical attention

Partial thickness or full thickness

Large area or 3 degree burn

- Check ABC and treat accordingly
- Treat shock
- Remove clothing and jewellery from burned area
- Do not pull off the clothing around the burn area
- Cut the clothing around the burn area

- Apply sterile dressing or clean cloth
- Elevate burned of arms/legs
- Seek medical attention

I degree or II degree burn

- Remove clothing and jewellery from burned area
- Apply cold until pain stops (10-40 min)
- Apply Bacitracin ointment
- Cover with nonsterile dressing
- Check burn severity table as a guide about seeking medical attention

POISONING: INGESTION, INHALATION, BITES AND STINGS

Definition

Poison is any substance which when taken into the body, produces serious effects of death. The majority of medicines if taken in excessive dose act as poison.

Poisoning is a condition, caused by introduction of harmful substances or chemicals into the body either by injection, inhalation or ingestion.

Methods of Poisoning

1. Ingestion, i.e. swallowing.
2. Inhalation, i.e. inhalation of gases.
3. Injection by means of syringe and needle.

Causes

1. Deliberate intake to commit suicide.
2. Accidental intake.
3. Give to persons by enemies.

Sources

1. Swallowed poisons includes: Acids, Alkalies, Poisonous fungi, Berries & Metallic poisons, Alcoholic drink, Sleeping pills, Pain killers, Cannabis, Heroin.
2. Poisoning by gases: Fumes from charcoal stores, Household gas, Motor exhausts, Smoke from explosions, Gas leaks from factories
3. Injections: Poisoning by injections include bites of poisonous snakes, Rabid dogs, Stings of Scorpions, Self medication.

Signs and Symptoms

1. Burning pain
2. Feeling of thirst Blood stained vomit Diarrhea
3. Diminished urine output Cyanosis
4. Cold skin
5. Pulse fast and feeble Difficulty in breathing Perspiration Convulsions
6. Unconsciousness.

First Aid Treatment

1. Casualty must be taken to hospital at once or doctor be sent for, with findings and if possible, the name of poison must be written on slip and sent to doctor.

2. Preserve all packets or bottles which first aider suspects to be poison and also preserve any vomitus, sputum, stool for doctor to examine.
3. Aid vomiting by tickling the back of throat, by inserting two fingers in throat or make him drink tepid water mixed with 2 tablespoons of common salt to glass of water.
4. Do not induce vomiting if the poison was corrosive in nature.
5. If the victim's mouth is burnt, dilute the poison with water or milk to neutralize its corrosive effect.
6. Treat any pain caused by corrosion with something soothing such as ice-creams or olive oil.
7. If the casualty is unconscious, do not induce vomiting.
8. Make casualty lie on his back on flat hard bed without any pillow and turn head to one side.
9. Give artificial respiration, if needed. Factories which use certain poisons should have respective antidotes ready and displayed in an easily available place.
10. Seek medical attention by taking patient to hospital.

BITES AND STINGS

Snake bite

There are more than 3,000 varieties of snakes, but all snake bites are not fatal.

Sign and Symptoms

1. Burning sensation and numbness at the site.
2. Swelling.
3. Teeth marks can be seen.
4. Drowsiness.
5. Breathing difficulty.
6. Signs of paralysis.

First Aid Treatment

1. Reassure the casualty and relatives.
2. Lay the casualty flat on bed, give him complete rest and never make him walk.
3. Look for fang marks left by snake and wash affected part with lot of water and soap.
4. Cover the wound with sterilized dressing.
5. If the bite is on arm or legs, apply a constrictive bandage or tourniquet on heart side, it should be tight enough to stop the flow of venom to all parts of body.
6. Immobilize the part with a splint
7. Get medical aid or send the person to hospital as lying case at the earliest.

Dog Bite

Dog bites are always dangerous because it may cause rabies, A person bitten by rabied dog develops rabies.

Sign and Symptoms

1. History of dog bite
2. Open wound with bleeding
3. Pain
4. Discomfort.

Management

1. Clean the wound to remove saliva.
2. Wash wound with plenty of soap and water.
3. Cover the wound with sterilize of dressing.
4. Do not apply any medicine or ointment at bite site. 5. Send the casualty to the hospital for treatment.
6. Advice the casualty to take complete treatment.

Bites of Mites, Ticks and Leeches

Mites, ticks and leeches attach themselves firmly to the skin. Mites and ticks may carry typhus and transmit to persons. Leeches suck blood from casualty.

First Aid Measurement

1. Reassure the casualty.
2. Never attempt to remove the casualty manually as their mouth parts may still be lodged in skin causing infection.
3. Touch the body of ticks with burning ends of cigarette they will fall off, application of salt results in leech drooping off, mites are too small to be seen or removed.
4. Clean the area with Methylene blue spirit.
5. Apply weak ammonia or bicarbonate soda or antihistamine ointment on wound to reduce irritation.

Stings of Bees, Wasps, Fleas and Hornets

Stings of bees and wasps cause severe pain and swelling on that area. Some individual with high sensitivity may suffer from shock.

First Aid Treatment

1. Reassure the casualty.
2. Remove the sting from bite with pair of tweezers.
3. Rinse the wound with a solution of bicarbonate soda.
4. Apply calamine lotion for soothing effect.
5. Apply ice packs, if more swelling is there.
6. Treat for shock, if any.
7. Apply antihistamine ointment.
8. Transfer him to the hospital, if conditions worsen.

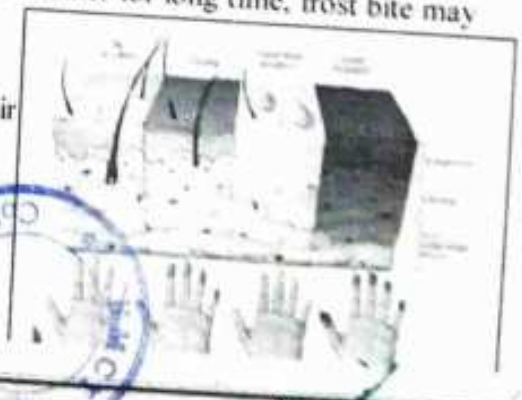
FROST BITE, HEAT STROKE, FEVER, HYPOTHERMIA

Frost bite

When the body is exposed to very cold wind in cold weather for long time, frost bite may result.

Signs and Symptoms

1. Exposed area, i.e. ears, nose, chin, fingers, toes lose their sensation and movement.
2. Affected part becomes very stiff, numb and painful.
3. Casualty feels severe cold.



4. Sometimes affected part is paralyzed.
5. Cyanosis.
6. Gangrene.

First Aid Treatment

1. Casualty should be moved to a warmer place of lesser altitudes.
2. Put casualty to bed.
3. Remove rings, tight boots, gloves, socks and belt which may constrict circulation.
4. Do not apply heat by local means, i.e. hot water bottles, fire or friction.
5. Cover the affected area to keep warm.
6. Give sips of coffee, tea, whisky to keep individual warm.
7. Shift the casualty to a hospital as soon as possible.

Heat stroke

Definition

Heat stroke is the most severe form of heat illness wherein the body overheats and cannot cool down by sweating because of dehydration. It can cause death or permanent disability if emergency treatment is not provided.

Symptoms

- Dizziness or fainting
- Hot and dry skin
- Very high core body temperature of 104^0F or more
- Lack of sweating
- Throbbing headache
- Behavioral changes such as confusion or disorientation
- Muscle weakness or cramps
- Nausea and vomiting
- Rapid heartbeat
- Rapid shallow breathing
- Seizure
- Unconsciousness or coma

First aid

- Move the person to a shady spot or indoors
- Call 911 or emergency medical help. Continue to the next stops while waiting for professional help to arrive
- Have the person lie down with the feet elevated
- If still conscious, have him sit cool water
- Remove his cloths
- Cool the person by spraying with cool water
- Apply damp sheets towels sponges ice packs to the armpits wrists ankles and groin
- Use fan to direct air onto the body

Fever

Definition

An abnormally high blood temperature usually accompanied by shivering headache and in severeinstances delirium. A temperature increases above 98.6 ^{0} F which is normal

First aid

- Check the temperature
- Give antipyretics
- Remove excess cloths
- Avoid exposure to smoke
- Keep the child hydrated
- Feed the child at regular intervals
- Give a sponge bath or warm bath

Hypothermia

Definition

Hypothermia occurs when the body temperature drops below 36.5 degree Celsius (97.7 degree F). Most common cause isprolonged exposure to cold.

Sign and symptoms

- Shivering
- Slurred speech or mumbling
- Slow shallow breathing
- Weak pulse
- Clumsiness or lack of coordination
- Drowsiness or very low energy
- Confusion or memory loss
- Loss of consciousness
- Bright red cold skin (in infants)

First aid

- Moving the person, to warm and dry area
- If the person is immobilized, do your best to shelter them from the cold
- Us blankets or other thermally resistant items to warm them up
- Elevate them if the ground is cold or wet
- If the affected person is conscious offer warm non-alcoholic drinks
- Apply dry warm compresses like a water bottle or warmed towels
- If appropriate partially or fully undress and huddle with the affected person to share body heat

COMMUNITY EMERGENCIES/ DISASTER

It is any sudden event of calamity which causes great effect on human population, plants, animals and property.

Aims of Disaster Management

To save as many lives as possible by providing best possible medical care under those circumstances.

Phase of Disaster

1. Warning phase: Some disasters give warning of their approach. In this, certain precautionary measures are undertaken to handle the disaster situation efficiently and effectively.
2. Threat phase: This is critical decision making period. When one's activity is directed towards survival actions.

3. Impact phase: When disaster strikes, people may at first, be stunned. Then they, begin to realize magnitude of effect of disaster such as injury, death, destruction, etc.
4. Inventory phase: During this phase, one tries to find out what has actually happened to him. Victims may exhibit fear, anger, sorrow, depression, etc.
5. Rescue phase: Victims help each other to cope and begin to help with rescue.
6. Remedy phase: They work together with rescue personnel to get the community back on its feet.
7. Restoration period: In this phase, individuals regain the stability that they enjoyed prior to the disaster.

Steps of Management

1. Disaster prevention:

It is described as the measures designed to prevent natural phenomenon from causing or resulting in disaster or other emergency situations. It includes:

a. Formulation and implementation of long range policies and programmes to prevent occurrence of disaster.

b. Enactment of legislation and regulatory measures pertaining to physical and urban planning, public works and building.

2. Disaster preparedness:

a. Preparedness is concerned with forecasting and working, education and training of population, organization for and management of disaster including preparation of operational plan, supplies and necessary funds.

3. Disaster mitigation:

Mitigation refers to reduction of actual or probable effects of the extreme hazards on man and his environment through extraordinary mobilization of emergency services, counseling and rehabilitation measures.

Types

Community emergencies are of two types:

1. Natural disaster – drought, Earthquakes, Famines, Forest fires
2. Man-made disaster - Blasts, Floods, Nuclear bombs, Explosions, War

Fires

Rescue from fire:

1. If you are caught amidst fire in a house or building, do not lose your patience.
2. Take decision calmly and quickly.
3. Try to find the emergency exit which is usually present in all modern constructions.
4. Before opening any door or window, make sure that it does not feel very hot or touch.
5. Do not jump down from windows but try to seek help from person standing below.
6. Never walk erect but crawl along the fire.
7. The casualty must be prevented from panicking and rushing outside, any movement or breeze may aggravate flames.
8. Lay the casualty down with burning side uppermost and extinguish flames by dousing the victim with coater or other non-inflammable liquid.
9. Wrap the casualty tightly in coat, curtain, blanket, rug or other heavy fabric and lay him on the ground. This will stop the flames.
10. Over accidental fires of ghee, oil and petroleum substances do not pour water. It only aggravates the fire. Such fires can only be extinguished by sand, mud or soda.
11. All petrol pumps should have provision of sand filled buckets for any such emergency.

Fire explosions

This is one of the disasters seen in the community. The fire explosions wither due to electrical leakage or blasts can cause considerable damage to the buildings and surroundings where the people are dwelling.

There are three fundamental types: Mechanical, Nuclear, and Chemical

A mechanical explosive is one that depends on a physical reaction, such as overloading a contai with compressed air

A nuclear explosive is one in which a sustained nuclear reaction

Chemical explosives are of two types:

(1) Detonating or high explosives

(2) Deflagrating or low explosives

During the disaster, the first aider should attend to the following needs:

1. Put off the main electrical line of fire is caused due to electrically.
2. Evacuate the victims from the house/building as early as possible.
3. If the victims are suffocated treat them accordingly.

4. Attend to the minor burns. 5. In case of major burns, treat for shock if any, first and send or accompany the victims to the nearby hospital for further treatment.
6. Inform legal authorities regarding the type and occurrence of fire-explosions.
7. In case of explosion is of greater nature call for help from fire lighting service who can help you in evacuating the victim from the place of fire-explosion.

Floods

Floods occur when water covers land which is normally dry. They may result from prolonged or very heavy rainfall, severe thunderstorms or tropical cyclones.

Types

1. Slow onset floods: Flooding of rivers in vast flat areas of India, specially lying across major rivers, e.g. Brahmaputra, Ganga, Narmada are more prone to flooding. Floods in this area can lead to major losses of livestock and crops, rural towns, roads and rail links.
2. Rapid onset floods: Flooding can occur more quickly in the mountain. Head water areas of these larger rivers as well in the river draining to coast. There floods are more damaging and pose a greater risk to loss of life and property.
3. Flash floods: These results from relatively short, intense burst of rainfall mostly during monsoons. These can result in loss of property and major social disruption.

Management of Floods

1. Preparedness of Disaster Floods:

Emergency kit:

a. Portable radio and torch with fresh batteries, candles and waterproof matches.
b. Reasonable stock of fresh water, tinned food, strong shoes, rubber gloves.
c. First aid kit and first aid knowledge and good supply of essential medicines.

Actions to be taken on flood warnings:

a. Listen to your local radio for information. Check that your neighbors know the warning.
b. Stack your furniture.
c. Board up windows.
d. Move garbage, chemicals, poisons, fuel, etc. to a high, secure place.
e. Disconnect utilities which are not absolutely essential.
f. Assist disable person and follow instructions of emergency preparedness personnel.

g. Store drinking water in clean receptacles

2. *Mitigation for Disaster of Floods:*

a. Keep your emergency kit safe and dry.

b. Do not eat food which has been in contact with flood water.

c. Do not use gas or electrical appliances which have been flood affected.

d. Beware of snakes and spiders.

e. Wear solid rubber shoes and gloves while enters flooded water.

f. Do not enter water without checking depth and current.

g. Keep listening to local radio and TV stations and heed all warnings and advice.

a) Slow onset

b) rapid onset

c) Flash flood

Earthquakes

These are considered highly destructive natural hazards, occurring suddenly with so little warning that is impossible to make preparations against damages to properly and life. About 50-60% of India is vulnerable to earthquakes.

Definition

It is the violent shaking of earth's surface caused by individual plates moving against each other. These plates make up the outermost shell of earth's crust and move relative to each other.

Measurement The intensity of earthquake can be measured by Richter scale.

1. Prevention of disaster earthquake:

a. Family earthquake drills (prior planning of safe methods):

i. Identify the safe spots in each room.

ii. Beware of danger zones.

iii. Practice quick and safe actions.

iv. Discuss what to expect following damaging earthquake.

v. Be prepare to sustain your family for minimum 72 hours.

b. Identify safe places:

1. under sturdy furniture such as heavy desk or table.
2. Against an inside wall.
3. Away from where glass could shatter around windows, mirrors, pictures, etc.
4. Locate safe place outdoors, in open, away from building, trees, telephones, electrical lines, etc.
5. Make sure, all family members know how to respond after earthquake.
6. Teach all members how and when to turn of gas, electricity and water.
7. Teach children how to call police, fire department, etc.

2. Mitigation during earthquake:

Protective measures to be taken during earthquake: The method use to stay protect is:

a. Duck cover hold: Whether at home, school, work, outside, inside of building, one should use following measures:

i. when the shaking first starts. Duck or drop to floor.

ii. Stay inside.

iii. Take cover under sturdy desk, table or furniture.

iv. If there is nothing available, crouch against interior wall and protect your head and neck with arms.

v. Stay away from danger spots like window, hanging objects, mirror, etc.

vi. It seeking covers under furniture, hold on to it and be prepared to move with it during quake.

b. Move to clear area, from trees, signs, buildings, electrical wires and poles.

c. If you are in a car, then pull over to a side of road and stop. Avoid overpasses, power lines, and other hazards. Stay inside until shaking is stop.

d. If you are in public places, do not rush or panic. Just move away from things that may fall.

e. If you are in kitchen, stay away from refrigerator, store and cupboards.

After Earthquake

b. Check for injuries.
c. Do not attempt to move a seriously injured person.
d. Do not enter a collapsed or damaged building.
e. Avoid electrical wiring, indoors and outdoors.
f. Shunt off electrical power.
g. Check home for fire or fire hazards.

h. Turn off main gas valve, if leakage is suspected.
i. Use telephone only for emergencies.
j. Check neighbor, if they need assistance.
k. Cooperate with all public officials.
l. Check your home for signs of structural damage.

Famines

Famine is a widespread condition in which a large percentage of population of a region or a country has little or no access to adequate food supplies so undernourished and death by starvation becomes increasingly common. Famine has multiple causes associated with naturally occurring crop failure, low food production resulting from drought, floods, war or population imbalance.

Prevention of Famine

A major way to prevent famine is by supporting humanitarian relief efforts. In addition, many groups support the funding of programs to help local communities survive times of drought and other causes of food scarcity.

The primary purpose of relief operations during famine is to provide food to inhibit the occurrence of malnutrition. The provision of food assistance to disaster victims is accompanied by public health programs, particularly immunization campaigns and primary health care services.

Supplementary feeding programs are designed to protect vulnerable groups against malnutrition and to rehabilitate those individuals currently suffering from moderate protein-energy malnutrition (PEM).

ROLE OF NURSES IN DISASTER

Immediate Roles The nurse must act quickly, calmly and correctly in order to preserve life, prevent deterioration in casualty's condition and promote recovery. These objectives are achieved by:

1. Rapid but calm approach.
2. Quick assessment of casualty.
3. Immediate and appropriate treatment of any condition. If necessary, call physician.

Role-1: Determine Priorities of Treatment

In order to determine the condition of casualty, perform the following measures immediately:

Airway and breathing: Immediately, check the airway is open and whether the casualty is breathing, if not, start artificial respiration.

Pulse and circulation: Immediately, check pulse and heart beat, if not, start external cardiac massage.

Bleeding: Check the casualty for any severe bleeding and control, if present.

Unconsciousness: Place the unconscious casualty in recovery position and establish level of responsiveness.

Shock: Keep the casualty warm, quiet, treat for shock.

Highest priority condition: It is the immediate role of nurse to heart those patient's first who fall in highest priority as per the triage

Role-2: Patient's Assessment

A nurse should know the vital signs of patient for proper treatment, Check the:

Breathing rate

Pulse rate

Pupil reaction

Level of consciousness

Skin temperature

Skin color

Ability to move

Reactions to pain.

1. Breathing rate:

Count the number of respiration observed for one minute using a watch. Usually, the ratio between pulse and respiration is 1:4. Respiration may be normal, rapid or slow.

Types of breathing and cause are the following:

a. Rapid, shallow: In shock, heart problems, heat exhaustion, heart failure, etc.

b. Deep, gasping and labored: In airway obstruction, heart failure, heart attack, lung disease, chest injury, etc.

c. Snoring: In case of stroke, fractured skull, drug, alcohol abuse.

d. Crowing: In case of airway obstruction, airway injury.

e. Gurgling: In case of airway obstruction, lung disease, lung injury due to heat.

f. Coughing blood: Chest wound, fractured mob, punctured lung, internal injuries.

2. Pulse rate:

Radial artery at wrist is palpated. However, the others arteries like carotid, brachial, popliteal, posterior tibial pulse can also be felt. The type of pulse and its diagnostic consequences are as follows:

a. Rapid and full: Fear, over exertion, heart stroke, high B.P., etc.

b. Slow and full: Stroke, skull fracture.

c. No pulse: In case of cardiac arrest.

3. Pupil Reaction:

Check the pupil of eye for equality of size, reaction to light whether the pupils are dilated, unresponsive, constricted, unequal pupils:

4. Blood pressure:

Normal B.P 140 ~ 100 /90 - 60 mm of Hg. b. High B.P: Is seen in chronic hypertension, head injury, severe pain, etc. c. Low B.P: Shock, internal bleeding, chest injury.

5. Level of consciousness:

This helps to provide many clues for type of injury.

a. Alert: Brain is functioning normally, if Casualty is alert.

b. Restlessness: Worried, pain hemorrhage, head injury.

c. Confusion: Anxiety, illness, head injury, drug abuse, alcoholism, epilepsy.

d. Coma: Seen in stroke, anaphylactic shock, head injury, heat stroke, etc.

6. Skin temperature:

Normal temperature is 97.4°F - 99°F

a. Collapse: Below 95°F

b. Subnormal: 95 - 97°F

c. Normal: 97.4 - 99°F

d. Pyrexia: Above 99°F

e. Hyperpyrexia: Above 107°F

7. Diagnostic signs:

a. Cool, moist skin: Shock, bleeding, loss of body heat, heat exhaustion.

b. Cool, dry skin: Exposure to cold.

c. Cool, clammy skin: Shock.

d Hot, dry skin: High fever, heat stroke.

e. Hot, moist skin: Infection.

8. Skin color:

It provides clues regarding circulation of blood in body

a. Red skin: High B.P, heart attack, heart stroke, coma

b. Cherry red skin: Carbon monoxide poisoning.

c. Ashed skin: Shock, heart attack, bleeding, insulin shock.

d. Blue skin: Heart failure, airway problems, lung

9. Reaction to pain:

a. Localized pain: Fracture

b. General pain: Body injury

c. No feeling of pain: Shock hysteria, alcohol, drug abuse.

d Severe pain: Occlusion of main artery.

e. Numbness or tingling: Injury to spinal cord.

Role-3: Observe Signs of Death

1. Absence of breathing for at least 20 minutes.
2. Absence of heart beat for at least 20 minutes.
3. Come a becomes milky or cloudy.
4. Drop in body temperature.
5. Stiffness of muscles.
6. Dislocation of skin where the body rests.

Role-4: Provide Basic Life Support

When necessary, the basic life support should be provided.

1. ABC should be checked.
2. Provide CPR to the patients who needed.

Late Role of Nurses

After the initial life, saving activities, a nurse has to perform a number of other activities during the treatment of casualties.

1. Care of casualties with second priority as per triage:

a. Severe burns:

i. Cover the burn wound with sterile dressing.

ii. Immobilize the burnt limb.

iii. Treat shock. iv. If unconscious, place him in recovery position.

v. If conscious, give sips of cold water frequently.

b. Spinal injury:

i. Immobilize the casualty.

ii. Treat shock.

iii. Reassure him till the proper treatment begins.

c. Moderate bleeding:

i. Control the bleeding by applying direct pressure.

ii. Cover the wound with sterile dressing.

d. Conscious patients with head injury:

i. Control the bleeding from scalp wounds.

ii. Treat the shock.

iii. Check level of responsiveness.

iv. Check ABCs.

e. Multiple fractures:

i. Control bleeding from open fracture and then their dressing using sterile dressing and bandaging by placing a ring pad over the protruding bone.

ii. Immobilize and stabilize the fractured limb using bandage and splints.

2. Care of casualties with lowest priority:

a. Minor bleeding: Wounds with minor bleeding are covered with sterile dressing and bandaging.

b. Minor fractures: Immobilize the fractured limb by using splints and bandages.

c. Moderate/minor burns: Do not break blisters. Dress the burns by covering with sterile dressing.

Others

The other responsibilities of nurses are:

1. Reassure the casualties and their relatives time to time.
2. Administer the medicines, as per the physician prescribe.
3. Some patients may need ice-caps to reduce high fever or local inflammation.
4. Some patients may need steam inhalation to relieve inflammation and congestion.
5. Keep the record of each patient

KMCT COLLEGE OF NURSING, MANASSERY, KOZHIKODE

HEALTH ASSESSMENT MODULE

Signature of the student

20/1/23

Signature of the subject coordinator

HEALTH ASSESSMENT

INTRODUCTION

Health assessment is the evaluation of the health status by performing a physical examination after taking a health history. Successful assessment requires a practical understanding of what is involved, the time and resources necessary to undertake assessment, and sufficient integration of findings into planning and implementation of treatment and care.

Purposes of Health Assessment

- To identify the patient's response to health and illness
- To determine the nursing care needs of the patient
- To evaluate outcomes of health care and patient progress
- To screen for presence of risk factors.

Preparation for Health Assessment (infection control, preparation of equipment, environment and patient)

- *Infection control*
  - Use standard precautions as appropriate
  - Use personal protective equipment (gloves, mask, etc.)
  - Perform hand hygiene
  - Utilize clean instruments.
- *Preparation of environment*
  - Ensure adequate lighting is available
  - Use sound proof room or minimize noise
  - Use special examination tables as needed
  - Provide ideal room temperature
  - Ensure adequate privacy (curtains)
  - Provide safety and prevent falls.
- *Preparation of equipment*
  - Collect and arrange all equipment for easy access
  - Check functioning of all equipment (change batteries if needed)
  - Warm equipment before use, if required
  - Equipment usually collected are Sphygmomanometer, stethoscope, thermometer, cotton balls, tongue depressor, reflex hammer, swab stick, k-basin, tuning fork, etc.

Preparation of the patient

- *Physical preparation of the patient*
  - Ensure physical comfort
  - Position patient as required
  - Dress and drape patient appropriately
  - Keep patient warm
  - Assist patient to restroom prior to examination and collect samples (urine/stool) if required.
- *Psychological preparation of the patient*
  - Explain the procedure and its need to the patient. Clarify doubts to reduce anxiety
  - Maintain a calm, open and professional approach
  - Provide chaperone when the patient is of the opposite gender of the nurse
  - Look for verbal and non-verbal cues to identify patient's discomfort and stop or postpone the examination if needed.

Methods of Physical Assessment

1. *Inspection:* It is the use of vision and hearing to detect normal and abnormal findings. Adequate lighting should be ensured with paying attention to detail. The same area on the opposite side should be compared whenever applicable. Inspection is done to assess moisture, color, and texture of body surface as well as shape, position, size, and symmetry of the body parts.

2. *Palpation:* It is the use of the hands and the sense of touch to gather data. The pads of the fingers are used. Different parts of the hand are best suited for specific purposes. For example, the dorsal aspect of the hand is best for assessing temperature changes. Hand hygiene is to be ensured.

   Types of palpation: Light palpation (<1 cm), Moderate palpation (1-2 cm) & Deep palpation (2 cm) and Bimanual Palpation & palpation with single hand.

   The purpose is to assess the texture, temperature, tenderness, moisture, size, distention, pulsation, and mobility of organs or masses

3. *Percussion*. It means tapping of various body organs and structures to produce vibration and sound. It is the act of striking the body surface to elicit sounds that can be heard or vibration that can be felt.

   Types of percussion: Direct percussion and Indirect (use of plexor & pleximeter) percussion.

   The purpose is to determine the location, size and density of underlying tissue structures and if tissue is fluid filled, air filled or solid.

   Sounds heard: Flatness (muscle or bone), dullness (organs), resonance (lungs filled with air), hyper resonance (emphysematous lung), tympany (air filled stomach).

4. *Auscultation*: The act of listening to sounds within the body to evaluate the condition of body organs (stethoscope) can be performed with unaided ear or stethoscope. Sounds are described according to their

   a. Pitch: The frequency of the vibrations (ranging from high to low)
   b. Intensity: The loudness or softness of a sound
   c. Duration: The sound length (short, medium, or long)
   d. Quality: Subjective description of sounds (gurgling, swishing)

5. *Olfaction*: It is the use of sense of smell to perceive and differentiate odors.

   Example: Acetone breath in Diabetic Keto Acidosis

A. COMPREHENSIVE HEALTH ASSESSMENT

A comprehensive health assessment includes:

I. Nursing Health History

- A general survey - Demographic data, Physical environmental history, Biological environmental history
- Health history - Family and Personal health history
- A complete medical history-past and present medical history

II. Physical Assessment

1. General appearance, mental status, anthropometric measurements and vital signs

General appearance and mental status: Physical assessment begins with observation of the patient's general appearance, level of comfort, and mental status.

Anthropometric measurements: Measurement of height, weight and BMI follows next.

Vital signs: The pulse, blood pressure, bodily temperature and respiratory rate are measured and documented.

2. Assessment of the Integumentary System (Hair, Skin and Nails)

Inspection: The color of the skin, the quality, distribution and condition of the bodily hair, the size, the location, color and type of any skin lesions are assessed and documented, the color of the nail beds, and the angle of curvature where the nails meet the skin of the fingers are also inspected.

Palpation: The temperature, level of moisture, turgor and the presence or absence of any edema or swelling on the skin are assessed.

3. Assessment of the Head& Neck (The Face and Skull, Eyes, Ears, Nose, Mouth, Throat, Neck)

3.1 Face and Skull

Inspection: The size, shape and symmetry of the face and skull, facial movements and symmetry are inspected.

Palpation: The presence of any lumps, soreness, and masses are assessed.

3.2 Eyes

Inspection: Pupils in reference to their bilateral equality, reaction to light and accommodation, the presence of any discharge, irritation, redness and abnormal eye movement are assessed.

Standardized Testing: The Snellen chart for visual acuity

3.3 Ears

Inspection: The auricles are inspected in terms of color, symmetry, elasticity and any tenderness or lesions; the external ear canal is inspected for color and the presence of any drainage and ear wax; and the tympanic membrane in terms of color, integrity and the lack of any bulging is also assessed.

Standardized Testing: The Rinne test and the Weber test for the assessment of hearing can be done using a tuning fork.

3.4 Nose

Inspection: The color, size, shape, symmetry, and any presence of drainage, flaring, tenderness, and masses are assessed; the nasal passages are assessed visually using an otoscope of the correct size for an infant, child and adult; the sense of smell is also assessed.

Palpation: The sinuses are assessed for any signs of tenderness and infection.

3.5 Mouth and Throat

Inspection: The lips are visualized for their symmetry and color; the buccal membranes, the gums and the tongue are inspected for color, any lesions and their level of dryness or moisture; the tongue is inspected for symmetry of movement; teeth are inspected for the presence of any loose or missing teeth; the uvula is assessed for movement, position, size and color; the salivary glands are examined for signs of inflammation or redness; the oropharynx, tonsils, hard and soft palates are also inspected for color, redness and any lesions. Lastly, the gag reflex is assessed. The mouth and the throat are assessed using a tongue blade and a light source.

3.6 Neck

Inspection: The neck and head movement is visualized; the thyroid gland is inspected for any swelling and also for normal movement during swallowing.

Palpation: The neck, the lymph nodes, and trachea are palpated for size and any irregularities.

4. Assessment of the Breast and Axillae

Inspection: The breasts are visualized to assess the size, shape, symmetry, color and the presence of any dimpling, lesions, swelling, edema, visible lumps and nipple retractions. The nipples are also assessed for the presence of any discharge, which is not normal for either gender except when the female is pregnant or lactating.

Palpation: The nurse performs a complete breast examination using the finger tips to determine if any lumps are felt. The lymph nodes in the axillary areas are also palpated for any enlargement or swelling.

5. Assessment of Respiratory System (Thorax and Lungs)

5.1 Assessment of the Thorax

Inspection: The anterior and posterior thorax is inspected for size, symmetry, shape and for the presence of any skin lesions and/or misalignment of the spine; chest movements are observed for the normal movement of the diaphragm during respirations.

Palpation: The posterior thorax is assessed for respiratory excursion and fremitus.

Percussion: It is done to assess normal and abnormal sounds over the thorax

5.2 Assessment of the Lungs

Auscultation: The assessment of normal and adventitious breath sounds.

Percussion: It is done to identify for normal and abnormal sounds. Normal breath sounds like vesicular breath sounds, bronchial breath sounds, bronchovesicular breath sounds are auscultated and assessed in the same manner that adventitious breath sounds like rales, wheezes, friction rubs, rhonchi, and abnormal bronchophony, egophony, and whispered pectoriloquy are auscultated, assessed and documented.

6. Assessment of the Cardiovascular System (Heart)

Inspection: Pulsations indicating the possibility of an aortic aneurysm are identified by inspection.

Auscultation: Listening to systolic heart sounds like the normal S_1 heart sound and abnormal clicks, the diastolic heart sounds of S_2, S_3, S_4, diastolic knocks and mitral valve sounds, all of which are abnormal with the exception of S_2 which can be normal among patients less than 40 years of age.

7. Assessment of the Abdomen

Inspection: The abdomen is visualized to determine its size, contour, symmetry and the presence of any lesions. As previously mentioned, the abdomen is also inspected to determine the presence of any pulsations that could indicate the possible presence of an abdominal aortic aneurysm.

Auscultation: The bowel sounds are assessed in all four quadrants which are the upper right quadrant, the upper left quadrant, the lower right quadrant and the lower left quadrant.

Palpation: Light palpation, which is then followed with deep palpation, is done to assess for the presence of any masses, tenderness, and pain, guarding and rebound tenderness.

8. Assessment of the Male and Female Genitalia

Inspection: The skin and the pubic hair are inspected. The labia, clitoris, vagina and urethral opening are inspected among female patients. The penis, urethral meatus, and the scrotum are inspected among male patients.

Palpation: The inguinal lymph nodes are palpated for the presence of any tenderness, swelling or enlargements. A testicular examination is done for male patients.

9. Assessment of the Rectum and Anus

Inspection: The rectum, anus and the surrounding area are examined for any abnormalities.

Palpation: With a gloved hand, the rectal sphincter is palpated for muscular tone, and the presence of any blood, tenderness, pain or nodules.

10. Assessment of the Musculoskeletal System

Inspection: The major muscles of the body are inspected by the nurse to determine their size, and strength, and the presence of any tremors, contractures, muscular weakness and/or paralysis. All joints are assessed for their full range of motion. The areas around the bones and the major muscle groups are also inspected to determine any areas of deformity, swelling and/or tenderness.

Palpation: The muscles are palpated to determine the presence of any spasticity, flaccidity, pain, tenderness, and tremors.

11. Assessment of the Peripheral Vascular System

Inspection: The extremities are inspected for any abnormal color and any signs of poor perfusion to the extremities, particularly the lower extremities. While the patient is in a supine position, the nurse also assesses the jugular veins for any bulging pulsations or distention.

Auscultation: The nurse assesses the carotids for the presence of any abnormal bruits.

Palpation: The peripheral veins are gently touched to determine the temperature of the skin, the presence of any tenderness and swelling.

The peripheral vein pulses are also palpated bilaterally to determine regularity, number of beats, volume and bilateral equality in terms of these characteristics.

12. Assessment of the Neurological System

Of all of the bodily systems that are assessed, the neurological system is perhaps the most extensive and complex.

The neurological system is assessed with:

Inspection

Balance, gait, gross motor function, fine motor function and coordination, sensory functioning, temperature sensory functioning, kinesthetic sensations and tactile sensory motor functioning, as well as all of the cranial nerves are assessed.

Some of the terms and terminology relating to the neurological system and neurological system disorders are given in **Annexure I.**

B. GUIDE IN PERFORMING A HEAD-TO-TOE PHYSICAL ASSESSMENT

1. Integumentary System (Hair, Skin and Nails)

Inspection: The color of the skin, the quality, distribution and condition of the bodily hair, the size, the location, color and type of any skin lesions are assessed and documented, the color of the nail beds, and the angle of curvature where the nails meet the skin of the fingers are also inspected.

Palpation: The temperature, level of moisture, turgor and the presence or absence of any edema or swelling on the skin are assessed.

2. Head & Neck (Skull, Scalp, Hair, Face, Eyes, Ears, Nose, Mouth, Throat, Neck)

- Observe the size, shape and contour of the skull.
- Observe scalp in several areas by separating the hair at various locations; inquire about any injuries. Note presence of lice, nits, dandruff or lesions.
- Palpate the head by running the pads of the fingers over the entire surface of skull; inquire about tenderness upon doing so. (wear gloves if necessary)
- Observe and feel the hair condition.

Normal Findings:

2.1 Skull

- Generally round, with prominences in the frontal and occipital area (Normocephalic).
- No tenderness noted upon palpation.

2.2 Scalp

- Lighter in color than the complexion.
- Can be moist or oily.
- No scars noted.
- Free from lice, nits and dandruff.
- No lesions should be noted.
- No tenderness or masses on palpation.

2.3 Hair

- Can be black, brown or blonde depending on the race.
- Evenly distributed, covers the whole scalp.
- No evidences of Alopecia.
- Maybe thick or thin, coarse or smooth.
- Neither brittle nor dry.

2.4 Face

- Observe the face for shape.
- Inspect for Symmetry.
  - Inspect for the palpebral fissure (distance between the eye lids of each eye); should be equal in both eyes.
  - Ask the patient to smile, There should be bilateral Nasolabial fold (creases extending from the angle of the corner of the mouth). Slight asymmetry in the fold is normal.
  - If both are met, then the Face is symmetrical
- Test the functioning of Cranial Nerves that innervates the facial structures

2.5 Eyes

Eyebrows, Eyes and Eyelashes

- All three structures are assessed using the modality of inspection.

Normal findings

Eyebrows

- Symmetrical and in line with each other.
- Maybe black, brown or blond depending on race.
- Evenly distributed.

Severe exophthalmos

Eyes

- Evenly placed and in line with each other.
- None protruding.
- Equal palpebral fissure.

Eyelashes

- Color dependent on race.
- Evenly distributed.
- Turned outward.

Eyelids and Lacrimal Apparatus

- Inspect the eyelids for position and symmetry.
- Palpate the eyelids for the lacrimal glands.
  - To examine the lacrimal gland, the examiner, lightly slides the pad of the index finger against the client's upper orbital rim.
  - Inquire for any pain or tenderness.
- Palpate for the nasolacrimal duct to check for obstruction.
  - To assess the nasolacrimal duct, the examiner presses with the index finger against the client's lower inner orbital rim, at the lacrimal sac, **NOT AGAINST THE NOSE.**
  - In the presence of blockage, this will cause regurgitation of fluid in the puncta.

Normal Findings

Eyelids

- Upper eyelids cover the small portion of the iris, cornea, and sclera when eyes are open.
- No PTOSIS noted. (Drooping of upper eyelids).
- Meets completely when eyes are closed.
- Symmetrical.

Lacrimal Apparatus

- Lacrimal gland is normally non palpable.
- No tenderness on palpation.
- No regurgitation from the nasolacrimal duct.

Conjunctivae

- The bulbar and palpebral conjunctivae are examined by separating the eyelids widely and having the client look up, down and to each side. When separating the lids, the examiner should exert NO PRESSURE against the eyeball; rather, the examiner should hold the lids against the ridges of the bony orbit surrounding the eye.

In examining the palpebral conjunctiva, everting the upper eyelid in necessary and is done as follow:

1. Ask the client to look down but keep his eyes slightly open. This relaxes the levator muscles, whereas closing the eyes contracts the orbicularis muscle, preventing lid eversion.
2. Gently grasp the upper eyelashes and pull gently downward. Do not pull the lashes outward or upward; this, too, causes muscles contraction.
3. Place a cotton tip application about 1cm above the lid margin and push gently downward with the applicator while still holding the lashes. This everts the lid.
4. Hold the lashes of the everted lid against the upper ridge of the bony orbit, just beneath the eyebrow, never pushing against the eyeball.
5. Examine the lid for swelling, infection, and presence of foreign objects.
6. To return the lid to its normal position, move the lid slightly forward and ask the client to look up and to blink. The lid returns easily to its normal position.

Normal Findings

- Both conjunctivae are pinkish or red in color.
- With presence of many minute capillaries.
- Moist
- No ulcers
- No foreign objects

Sclerae

- The sclerae is easily inspected during the assessment of the conjunctivae.

Normal Findings

- Sclerae is white in color (anicteric sclera)
- No yellowish discoloration (icteric sclera).
- Some capillaries maybe visible.
- Some people may have pigmented sclera.

Cornea

- The cornea is best inspected by directing penlight obliquely from several positions.

Normal findings

- There should be no irregularities on the surface.
- Looks smooth.
- The cornea is clear or transparent. The features of the iris should be fully visible through the cornea.
- There is a positive corneal reflex.

Anterior Chamber and Iris

- The anterior chamber and the iris are easily inspected in conjunction with the cornea. The technique of oblique illumination is also useful in assessing the anterior chamber.

Normal Findings

- The anterior chamber is transparent.
- No noted visible materials.
- Color of the iris depends on the person's race (black, blue, brown or green).
- From the side view, the iris should appear flat and should not be bulging forward. There should be NO crescent shadow casted on the other side when illuminated from one side.

Pupils

- Examination of the pupils involves several inspections, including assessment of the size, shape reaction to light is directed is observed for direct response of constriction. Simultaneously, the other eye is observed for consensual response of constriction.
- The test for papillary accommodation is the examination for the change in pupillary size as it is switched from a distant to a near object.
- Ask the client to stare at the objects across room.
- Then ask the client to fix his gaze on the examiner's index fingers, which is placed 5 inches from the client's nose.
- Visualization of distant objects normally causes pupillary dilation and visualization of nearer objects causes pupillary constriction and convergence of the eye.

Normal Findings

- Pupillary size ranges from 3-7 mm, and are equal in size.
- Equally round.
- Constrict briskly/sluggishly when light is directed to the eye, both directly and consensual.
- Pupils dilate when looking at distant objects, and constrict when looking at nearer objects.
- If all of which are met, we document the findings using the notation PERRLA, pupils equally round, reactive to light, and accommodation.

A Snellen chart

- The optic nerve (Cranial Nerve II) is assessed by testing for visual acuity and peripheral vision.
- Visual acuity is tested using a Snellen chart, for those who are illiterate and unfamiliar with the western alphabet, the illiterate E chart, in which the letter E faces in different directions, maybe used.
- The chart has a standardized number at the end of each line of letters; these numbers indicates the degree of visual acuity when measured at a distance of 20 feet.

- The numerator 20 is the distance in feet between the chart and the client, or the standard testing distance. The denominator 20 is the distance from which the normal eye can read the lettering, which correspond to the number at the end of each letter line; therefore the larger the denominator the poorer the version.
- Measurement of 20/20 vision is an indication of either refractive error or some other optic disorder.
- In testing for visual acuity you may refer to the following:
  - The room used for this test should be well lighted.
  - A person who wears corrective lenses should be tested with and without them to check for the adequacy of correction.
  - Only one eye should be tested at a time; the other eye should be covered by an opaque card or eye cover, not with client's finger.
  - Make the client read the chart by pointing at a letter randomly at each line; maybe started from largest to smallest or vice versa.
  - A person who can read the largest letter on the chart (20/200) should be checked if they can perceive hand movement about 12 inches from their eyes, or if they can perceive the light of the penlight directed to their yes.

Peripheral vision or visual fields

- The assessment of visual acuity is indicative of the functioning of the macular area, the area of central vision. However, it does not test the sensitivity of the other areas of the retina which perceive the more peripheral stimuli. The Visual field confrontation test, provide a rather gross measurement of peripheral vision.
- The performance of this test assumes that the examiner has normal visual fields, since that client's visual fields are to be compared with the examiners.

Follow the steps on conducting the test:

- The examiner and the client sit or stand opposite each other, with the eyes at the same, horizontal level with the distance of 1.5 – 2 feet apart.
- The client covers the eye with opaque card, and the examiner covers the eye that is opposite to the client covered eye.
- Instruct the client to stare directly at the examiner's eye, while the examiner stares at the client's open eye. Neither looks out at the object approaching from the periphery.
- The examiner holds an object such as pencil or penlight, in his hand and gradually moves it in from the periphery of both directions horizontally and from above and below.
- Normally the client should see the same time the examiners sees it. The normal visual field is 180 degrees.

2.6 Ears

- Inspect the auricles of the ears for parallelism, size position, appearance and skin color.
- Palpate the auricles and the mastoid process for firmness of the cartilage of the auricles, tenderness when manipulating the auricles and the mastoid process.
- Inspect the auditory meatus or the ear canal for color, presence of cerumen, discharges, and foreign bodies.
- For adult pull the pinna upward and backward to straighten the canal.
- For children pull the pinna downward and backward to straighten the canal
- Perform otoscopic examination of the tympanic membrane, noting the color and landmarks.

Normal Findings

- The ear lobes are bean shaped, parallel, and symmetrical.
- The upper connection of the ear lobe is parallel with the outer canthus of the eye.
- Skin is same in color as in the complexion.
- No lesions noted on inspection.
- The auricles are has a firm cartilage on palpation.
- The pinna recoils when folded.
- There is no pain or tenderness on the palpation of the auricles and mastoid process.
- The ear canal has normally some cerumen of inspection.
- No discharges or lesions noted at the ear canal.
- On otoscopic examination the tympanic membrane appears flat, translucent and pearly gray in color.

2.7 Nose and Paranasal Sinuses

- The external portion of the nose is inspected for the following:
  - Placement and symmetry.
  - Patency of nares (done by occluding a nostril one at a time, and noting for difficulty in breathing)

- Flaring of alae nasi
- Discharge

- The external nares are palpated for:
  - Displacement of bone and cartilage.
  - For tenderness and masses
  - The internal nares are inspected by hyper extending the neck of the client, the ulnar aspect of the examiners hard over the fore head of the client, and using the thumb to push the tip of the nose upward while shining a light into the nares.

- Inspect for the following:
  - Position of the septum.
  - Check septum for perforation. (Can also be checked by directing the lighted penlight on the side of the nose, illumination at the other side suggests perforation).
  - The nasal mucosa (turbinates) for swelling, exudates and change in color.

Paranasal Sinuses

- Examination of the paranasal sinuses is indirectly. Information about their condition is gained by inspection and palpation of the overlying tissues. Only frontal and maxillary sinuses are accessible for examination.
- By palpating both cheeks simultaneously, one can determine tenderness of the maxillary sinusitis, and pressing the thumb just below the eyebrows, we can determine tenderness of the frontal sinuses.

Normal Findings

- Nose in the midline
- No Discharges.
- No flaring alae nasi.
- Both nares are patent.
- No bone and cartilage deviation noted on palpation.
- No tenderness noted on palpation.
- Nasal septum in the mid line and not perforated.
- The nasal mucosa is pinkish to red in color. (Increased redness turbinates are typical of allergy).
- No tenderness noted on palpation of the paranasal sinuses.

2.8 Mouth and Oropharynx, Lips

Inspected for:

- Symmetry and surface abnormalities
- Color
- Edema

Normal Findings

- With visible margin
- Symmetrical in appearance and movement
- Pinkish in color
- No edema

Temporomandibular Joint

- Palpate while the mouth is opened wide and then closed for:
  - Crepitus
  - Deviations
  - Tenderness

Normal Findings

- Moves smoothly no crepitus.
- No deviations noted
- No pain or tenderness on palpation and jaw movement.

Gums

Inspected for:

- Color
- Bleeding
- Retraction of gums.

Normal Findings

- Pinkish in color
- No gum bleeding
- No receding gums

Teeth

Inspected for:

- Number
- Color
- Dental carries
- Dental fillings
- Alignment and malocclusions (2 teeth in the space for 1, or overlapping teeth)
- Tooth loss
- Breath should also be assessed during the process.

Normal Findings

- 28 for children and 32 for adults.
- White to yellowish in color
- With or without dental carries and/or dental fillings.
- With or without malocclusions.
- No halitosis.

Tongue

Palpated for:

- Texture

Normal Findings

- Pinkish with white taste buds on the surface.
- No lesions noted.
- No varicosities on ventral surface.
- Frenulum is thin attaches to the posterior 1/3 of the ventral aspect of the tongue.
- Gag reflex is present.
- Able to move the tongue freely and with strength.
- Surface of the tongue is rough.

Uvula

Inspected for:

- Position
- Color
- Cranial Nerve X (Vagus nerve) - Tested by asking the client to say "Ah" note that the uvula will move upward and forward.

Normal Findings

- Positioned in the mid line.
- Pinkish to red in color.
- No swelling or lesion noted.
- Moves upward and backwards when asked to say "ah"

Throat

Tonsils

Inspected for:

- Inflammation
- Size
- A Grading system used to describe the size of the tonsils can be used.
  - Grade 1 – Tonsils behind the pillar.
  - Grade 2 – Between pillar and uvula.
  - Grade 3 – Touching the uvula
  - Grade 4 – In the midline.

2.9 Neck

- The neck is inspected for position symmetry and obvious lumps visibility of the thyroid gland and Jugular Venous Distension
- Check the Range of Movement of the neck.

Normal Findings

- The neck is straight.
- No visible mass or lumps.
- Symmetrical
- No jugular venous distension (suggestive of cardiac congestion).
- The neck is palpated just above the suprasternal note using the thumb and the index finger.

Normal Findings

- The trachea is palpable.
- It is positioned in the line and straight.
- Lymph nodes are palpated using palmar tips of the fingers via systemic circular movements. Describe lymph nodes in terms of size, regularity, consistency, tenderness and fixation to surrounding tissues.

Normal Findings

- May not be palpable. Maybe normally palpable in thin patients.
- Non tender if palpable.
- Firm with smooth rounded surface.
- Slightly movable.
- About less than 1 cm in size.
- The thyroid is initially observed by standing in front of the patient and asking the patient to swallow. Palpation of the thyroid can be done either by posterior or anterior approach.

Posterior Approach:

1. Let the patient sit on a chair while the examiner stands behind him.
2. In examining the isthmus of the thyroid, locate the cricoid cartilage and directly below that is the isthmus.
3. Ask the patient to swallow while feeling for any enlargement of the thyroid isthmus.
4. To facilitate examination of each lobe, the client is asked to turn his head slightly toward the side to be examined to displace the sternocleidomastoid, while the other hand of the examiner pushes the thyroid cartilage towards the side of the thyroid lobe to be examined.
5. Ask the patient to swallow as the procedure is being done.
6. The examiner may also palpate for thyroid enlargement by placing the thumb deep to and behind the sternocleidomastoid muscle, while the index and middle fingers are placed deep to and in front of the muscle.
7. Then the procedure is repeated on the other side.

Anterior approach:

1. The examiner stands in front of the patient and with the palmar surface of the middle and index fingers palpates below the cricoid cartilage.
2. Ask the patient to swallow while palpation is being done.
3. In palpating the lobes of the thyroid, similar procedure is done as in posterior approach. The patient is asked to turn his head slightly to one side and then the other of the lobe to be examined.
4. Again the examiner displaces the thyroid cartilage towards the side of the lobe to be examined.

5. Again, the examiner palpates the area and hooks thumb and fingers around the sternocleidomastoid muscle

Normal Findings

- Normally the thyroid is non palpable.
- Isthmus maybe visible in a thin neck.
- No nodules are palpable.
- Auscultation of the Thyroid is necessary when there is thyroid enlargement. The examiner may hear bruits, as a result of increased and turbulence in blood flow in an enlarged thyroid.

3. Anterior and Posterior Thorax (Breast & Axillae, Thorax, Lungs and Heart)

3.1 Breast and Axilla

Breast

Inspection of the Breast

- There are 4 major sitting position of the client used for clinical breast examination. Every patient should be examined in each position.
  - The patient is seated with her arms on her side
  - The patient is seated with her arms abducted over the head.
  - The patient is seated and is pushing her hands into her hips, simultaneously eliciting contraction of the pectoral muscles.
  - The patient is seated and is learning over while the examiner assists in supporting and balancing her.
- While the patient is performing these manoeuvres, the breasts are carefully observed for symmetry, bulging, retraction, and fixation.
- An abnormality may not be apparent in the breasts at rest a mass may cause the breasts, through invasion of the suspensory ligaments, to fix, preventing them from upward movement in position 2 and 4.
- Position 3 specifically assists in eliciting dimpling if a mass has infiltrated and shortened suspensory ligaments.

Normal Findings

- The overlying the breast should be even.
- May or may not be completely symmetrical at rest
- The areola is rounded or oval, with same color, (Color varies form light pink to dark brown depending on race).
- Nipples are rounded, everted, same size and equal in color.
- No "orange peel" skin is noted which is present in edema.
- The veins maybe visible but not engorge and prominent.

- No obvious mass noted.
- Not fixated and moves bilaterally when hands are abducted over the head, or is learning forward.
- No retractions or dimpling.

Palpation of the Breast

- Palpate the breast along imaginary concentric circles, following a clockwise rotary motion, from the periphery to the center going to the nipples. Be sure that the breast is adequately surveyed. Breast examination is best done 1 week post menses.
- Each areolar areas are carefully palpated to determine the presence of underlying masses.
- Each nipple is gently compressed to assess for the presence of masses or discharge.

Normal Findings

- No lumps or masses are palpable.
- No tenderness upon palpation.
- No discharges from the nipples.
- NOTE: The male breasts are observed by adapting the techniques used for female clients. However, the various sitting position used for woman is unnecessary.

Axillae

The lymph nodes in the axillary areas are also palpated for any enlargement or swelling.

3.2 Thorax

Inspection: The anterior and posterior thorax is inspected for size, symmetry, shape and for the presence of any skin lesions and/or misalignment of the spine; chest movements are observed for the normal movement of the diaphragm during respirations.

Palpation: The posterior thorax is assessed for respiratory excursion and fremitus.

Percussion: It is done to identify normal and abnormal sounds over the thorax.

3.3 Lungs

Auscultation: The assessment of normal and adventitious breath sounds is done by auscultation.

Percussion: It is done to assess normal and abnormal sounds. Normal breath sounds like vesicular breath sounds, bronchial breath sounds, bronchovesicular breath sounds are auscultated and assessed in the same manner that adventitious breath sounds like rales, wheezes, friction rubs, rhonchi, and abnormal bronchophony, egophony, and whispered pectoriloquy are auscultated, assessed and documented.

3.4 Heart

Inspection of the Heart

- The chest wall and epigastrium is inspected while the client is in supine position. Observe for pulsation and heaves or lifts

Normal Findings

- Pulsation of the apical impulse maybe visible. (this can give us some indication of the cardiac size).
- There should be no lift or heaves.

Palpation of the Heart

- The entire precordium is palpated methodically using the palms and the fingers, beginning at the apex, moving to the left sternal border, and then to the base of the heart.

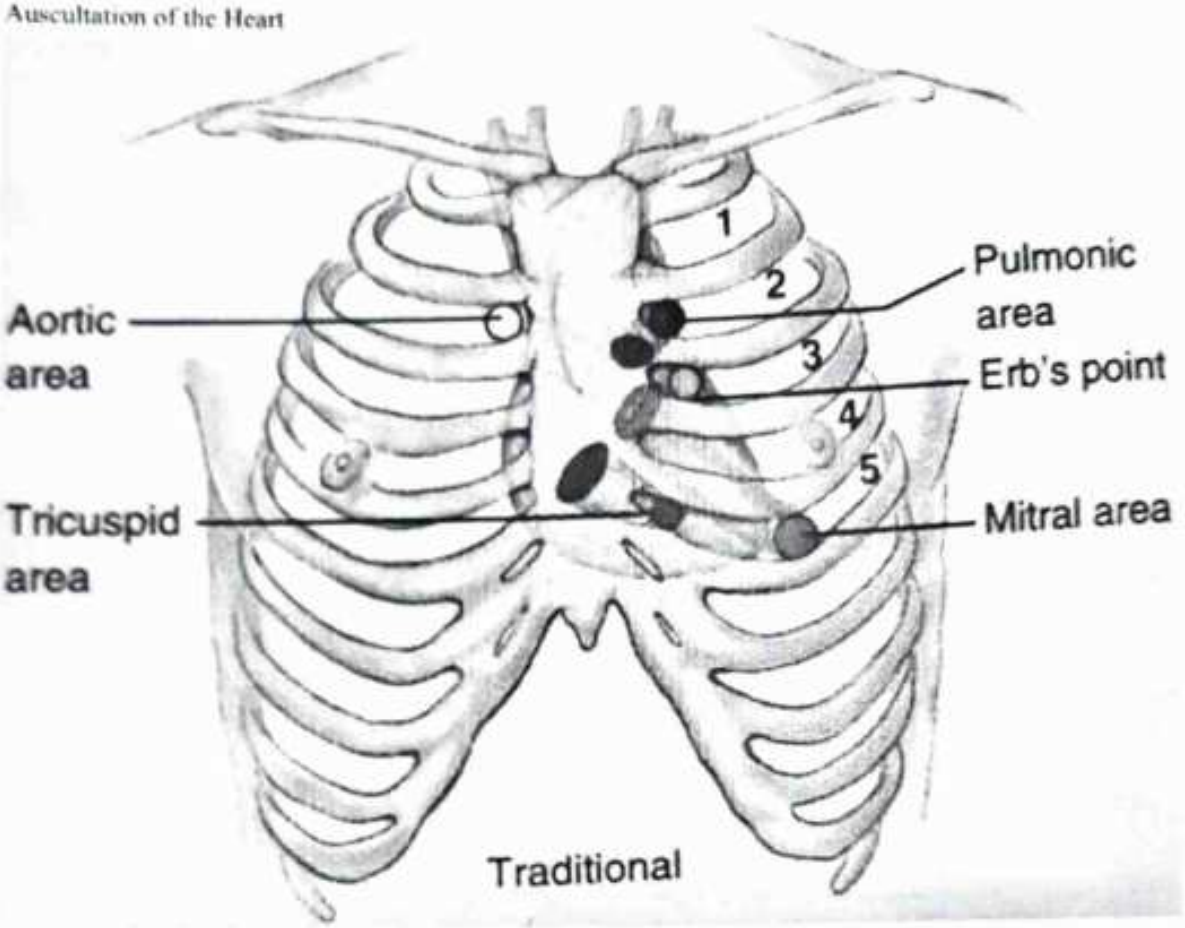
Normal Findings

- No, palpable pulsation over the aortic, pulmonic, and mitral valves.
- Apical pulsation can be felt on palpation.
- There should be no noted abnormal heaves, and thrills felt over the apex.

Percussion of the Heart

- The technique of percussion is of limited value in cardiac assessment. It can be used to determine borders of cardiac dullness.

Auscultation of the Heart



- Anatomic areas for auscultation of the heart:
  - Aortic valve – Right 2nd ICS sternal border.
  - Pulmonic Valve – Left 2nd ICS sternal border.
  - Tricuspid Valve – Left 5th ICS sternal border.
  - Mitral Valve – Left 5th ICS midclavicular line

Positioning the patient for auscultation:

1. If the heart sounds are faint or undetectable, try listening to them with the patient seated and learning forward, or lying on his left side, which brings the heart closer to the surface of the chest.
2. Having the patient seated and learning forward s best suited for hearing high-pitched sounds related to semilunar valves problem.
3. The left lateral recumbent position is best suited low-pitched sounds, such as mitral valve problems and extra heart sounds.

Auscultating the heart:

1. Auscultate the heart in all anatomic areas aortic, pulmonic, tricuspid and mitral
2. Listen for the S1 and S2 sounds (S1 closure of AV valves; S2 closure of semilunar valve). S1 sound is best heard over the mitral valve; S2 is best heard over the aortic valve.
3. Listen for abnormal heart sounds e.g. S3, S4, and Murmurs.
4. Count heart rate at the apical pulse for one full minute.

Auscultation of Heart Sounds

Normal Findings

- S1 & S2 can be heard at all anatomic site.
- No abnormal heart sounds is heard (e.g. Murmurs, S3 & S4).
- Cardiac rate ranges from 60-100 bpm.

4. Abdomen

In abdominal assessment, be sure that the client has emptied the bladder for comfort. Place the client in a supine position with the knees slightly flexed to relax abdominal muscles.

Inspection of the abdomen

- Inspect for skin integrity (Pigmentation, lesions, striae, scars, veins, and umbilicus).
- Contour (flat, rounded, scapold)
- Distension
- Respiratory movement
- Visible peristalsis
- Pulsations

Normal Findings

- Skin color is uniform, no lesions.
- Some patients may have striae or scar.
- No venous engorgement.
- Contour may be flat, rounded or scaphoid
- Thin patients may have visible peristalsis.
- Aortic pulsation maybe visible on thin clients.

Auscultation of the Abdomen

- This method precedes percussion because bowel motility, and thus bowel sounds, may be increased by palpation or percussion.
- The stethoscope and the hands should be warmed; if they are cold, they may initiate contraction of the abdominal muscles.
- Light pressure on the stethoscope is sufficient to detect bowel sounds and bruits. Intestinal sounds are relatively high-pitched; the bell may be used in exploring arterial murmurs and venous hum.

Peristaltic sounds

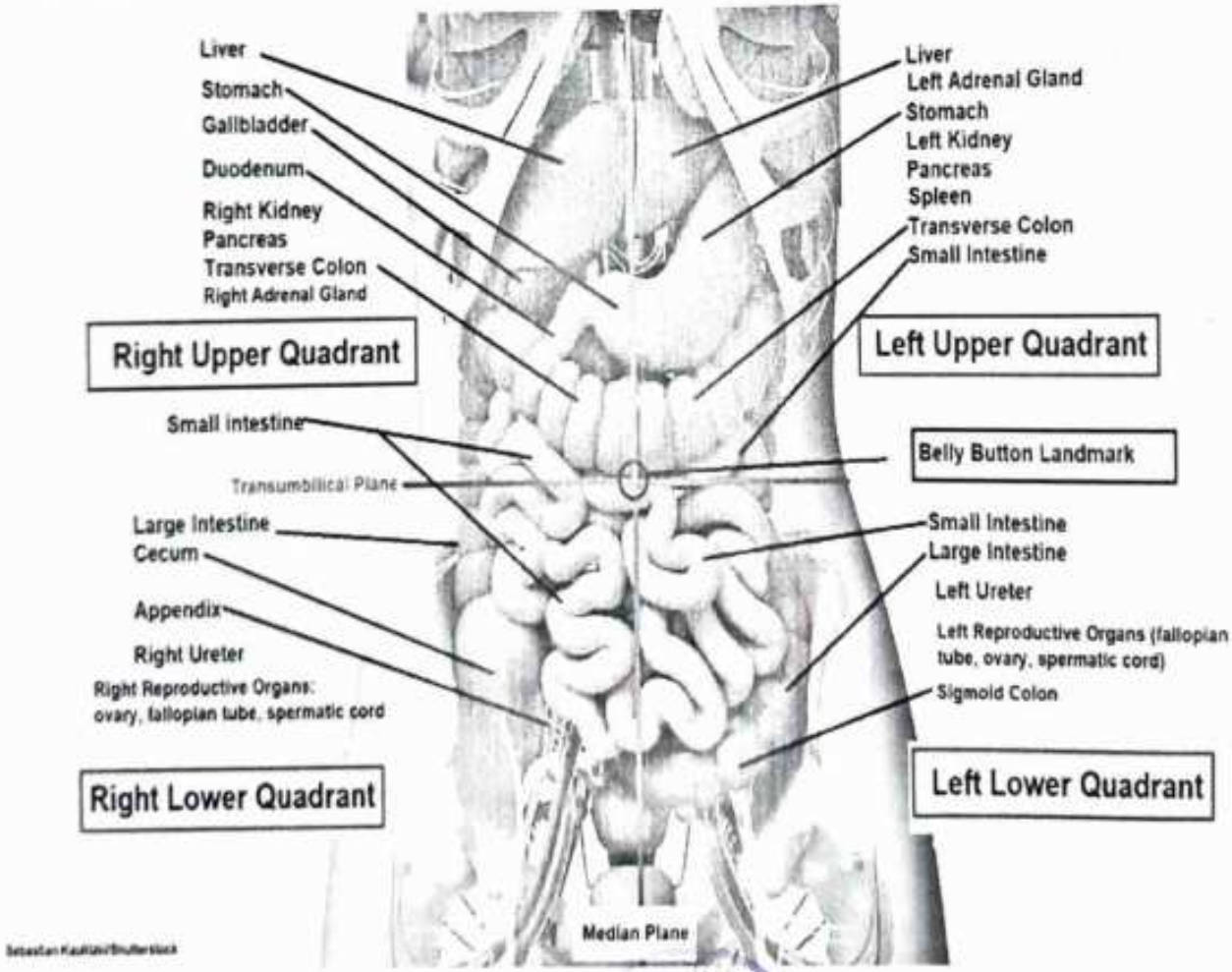
- These sounds are produced by the movements of air and fluids through the gastrointestinal tract. Peristalsis can provide diagnostic clues relevant to the motility of bowel.
- Listening to the bowel sounds (borborygmi) can be facilitated by following these steps:

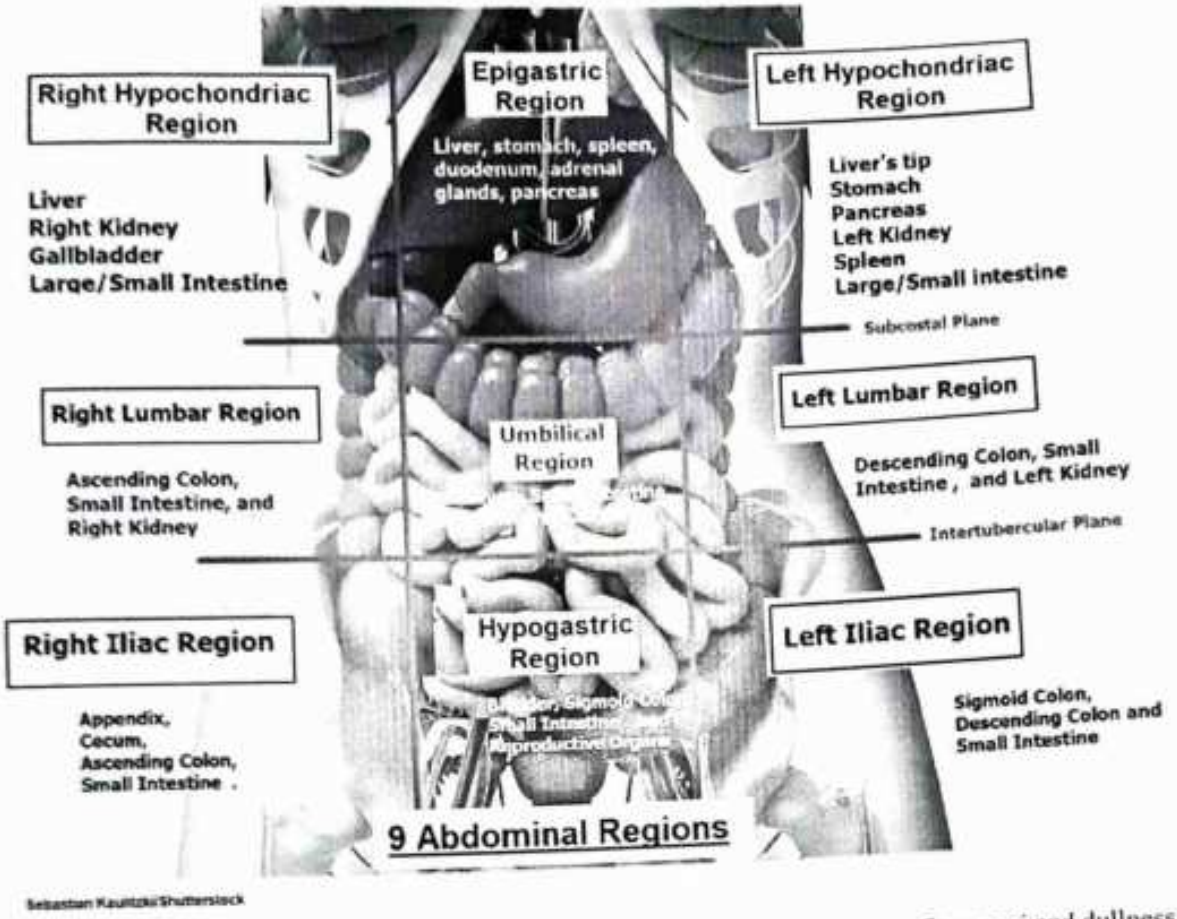
- Divide the abdomen in four quadrants.
- Listen over all auscultation sites, starting at the right lower quadrants, following the cross pattern of the imaginary lines in creating the abdominal quadrants. This direction ensures that we follow the direction of bowel movement.
- Peristaltic sounds are quite irregular. Thus it is recommended that the examiner listen for at least 5 minutes, especially at the periumbilical area, before concluding that no bowel sounds are present.
- The normal bowel sounds are high-pitched, gurgling noises that occur approximately every 5 – 15 seconds. It is suggested that the number of bowel sound may be as low as 3 to as high as 20 per minute, or roughly, one bowel sound for each breath sound.
- Some factors that affect bowel sound:
  - Presence of food in the GI tract.
  - State of digestion.
  - Pathologic conditions of the bowel (inflammation, Gangrene, paralytic ileus, peritonitis).
  - Bowel surgery
  - Constipation or Diarrhoea.
  - Electrolyte imbalances.
  - Bowel obstruction.

Percussion of the abdomen

- Abdominal percussion is aimed at detecting fluid in the peritoneum (ascites), gaseous distension, and masses, and in assessing solid structures within the abdomen.
- The direction of abdominal percussion follows the auscultation site at each abdominal guardant as detailed below.

The abdomen can be divided into four quadrants or nine regions as follows.





- The entire abdomen should be percussed lightly or a general picture of the areas of tympani and dullness.
- Tympany will predominate because of the presence of gas in the small and large bowel. Solid masses will percuss as dull, such as liver in the RUQ, spleen at the 6th or 9th rib just posterior to or at the mid axillary line on the left side.
- Percussion in the abdomen can also be used in assessing the liver span and size of the spleen.

Percussion of the liver

- The palms of the left hand are placed over the region of liver dullness.
- The area is striked lightly with a fisted right hand.
- Normally tenderness should not be elicited by this method.
- Tenderness elicited by this method is usually a result of hepatitis or cholecystitis.

Renal Percussion

- Can be done by either indirect or direct method.
- Percussion is done over the costovertebral junction.
- Tenderness elicited by such method suggests renal inflammation.

Palpation of the Abdomen

Light palpation

- It is a gentle exploration performed while the client is in supine position. With the examiner's hands parallel to the floor.
- The fingers depress the abdominal wall, at each quadrant, by approximately 1 cm without digging, but gently palpating with slow circular motion.
- This method is used for eliciting slight tenderness, large masses, and muscles, and muscle guarding.
- Tensing of abdominal musculature may occur because of:
  - The examiner's hands are too cold or are pressed to vigorously or deep into the abdomen.
  - The client is ticklish or guards involuntarily.
  - Presence of subjacent pathologic condition.

Normal Findings

- No tenderness noted.
- With smooth and consistent tension.
- No muscles guarding.

*Deep Palpation

It is the indentation of the abdomen performed by pressing the distal half of the palmar surfaces of the fingers into the abdominal wall.

- The abdominal wall may slide back and forth while the fingers move back and forth over the organ being examined.
- Deeper structures, like the liver, and retro peritoneal organs, like the kidneys, or masses may be felt with this method.
- In the absence of disease, pressure produced by deep palpation may produce tenderness over the cecum, the sigmoid colon, and the aorta.

Liver palpation

- There are two types of bi manual palpation recommended for palpation of the liver. The first one is the superimposition of the right hand over the left hand.
  - Ask the patient to take 3 normal breaths.
  - Then ask the client to breathe deeply and hold. This would push the liver down to facilitate palpation.
  - Press hand deeply over the RUQ
- The second methods:
  - The examiner's left hand is placed beneath the client at the level of the right 11th and 12th ribs.
  - Place the examiner's right hands parallel to the costal margin or the RUQ.
  - An upward pressure is placed beneath the client to push the liver towards the examining right hand, while the right hand is pressing into the abdominal wall.
  - Ask the client to breathe deeply.
  - As the client inspires, the liver maybe felt to slip beneath the examining fingers.

***Percussion and Palpation of deep structures such as liver and kidneys to be done under supervision**

Normal Findings

- The liver usually cannot be palpated in a normal adult. However, in extremely thin but otherwise well individuals, it may be felt the coastal margins.
- When the normal liver margin is palpated, it must be smooth, regular in contour, firm and non-tender.

5. Male and Female Genitalia

Inspection: The skin and the pubic hair are inspected. The labia, clitoris, vagina and urethral opening are inspected among female clients. The penis, urethral meatus, and the scrotum are inspected among male clients.

Palpation: The inguinal lymph nodes are palpated for the presence of any tenderness, swelling or enlargements. A testicular examination is done for male clients.

6. Rectum and Anus

Inspection: The rectum, anus and the surrounding area is examined for any abnormalities.

Palpation: With a gloved hand, the rectal sphincter is palpated for muscular tone, and the presence of any blood, tenderness, pain or nodules.

7. Extremities (Musculoskeletal system& Peripheral Vascular System)

Inspection

- Observe for size, contour, bilateral symmetry, and involuntary movement.
- Look for gross deformities, edema, presence of trauma such as ecchymosis or other discoloration.
- Always compare both extremities.

Palpation

- Feel for evenness of temperature. Normally it should be even for all the extremities.
- Tonicity of muscle. (Can be measured by asking client to squeeze examiner's fingers and noting for equality of contraction).
- Perform range of motion.
- Test for muscle strength (performed against gravity and against resistance and described in the table below:

Table showing the Lovett scale for grading for muscle strength and functional level

Grade	Muscle function level	Lovett Scale
0	0% of normal strength	0 (Zero)
1	10% of normal strength; no movement, contraction of muscle is palpable or visible	T (Trace)
2	25% of normal strength; full muscle movement against gravity	P (Poor)
3	50% of normal strength; normal movement against gravity	F (Fair)
4	75% of normal strength; normal movement against gravity and against minimal resistance	G (Good)
5	100% of normal strength; normal movement against gravity and against minimal resistance	N (Normal)

Normal Findings

- Both extremities are equal in size.
- Have the same contour with prominences of joints.
- No involuntary movements.
- No edema.
- Color is even.
- Temperature is warm and even.
- Has equal contraction and even.
- Can perform complete range of motion.
- No crepitus must be noted on joints.
- Can counter act gravity and resistance on ROM.

Peripheral Vascular System

Inspection: The extremities are inspected for any abnormal color and any signs of poor perfusion to the extremities, particularly the lower extremities. While the patient is in a supine position, the nurse also assesses the jugular veins for any bulging pulsations or distention.

Auscultation: The nurse assesses the carotids for the presence of any abnormal bruits.

Palpation: The peripheral veins are gently touched to determine the temperature of the skin, the presence of any tenderness and swelling.

The peripheral vein pulses are also palpated bilaterally to determine regularity, number of beats, volume and bilateral equality in terms of these characteristics.

8. **Neurological system**

Neurological assessment - mental status includes level of consciousness (LOC), orientation, and memory.

Balance is assessed using the relatively simple Romberg test. The Romberg test is the test that law enforcement use to test people for drunkenness. Gait can be assessed by simply observing the client as they are walking or by coaching the person to walk heal to toe as the nurse observes the client for their gait.

Gross motor functioning is bilaterally assessed by having the client contract their muscles; and fine motor coordination and functioning is observed for both the upper and the lower extremities as the client manipulates objects.

Sensory functioning is determined by touching various parts of the body, bilaterally, with a pen or another blunt item while the client has their eyes closed. The client is prompted to report whether or not they feel the blunt item as the nurse touches the area. Similarly, a hot and cold object is placed on the skin on various parts of the body to assess temperature sensory functioning. The client will then report whether they feel heat, cold or nothing at all.

Kinesthetic sensations are assessed to determine the client's ability to perceive and report their bodily positioning without the help of visual cues.

Tactile sensory functioning is assessed for the client's ability to have stereognosis, extinction, one point discrimination and two point discrimination. One and two point discrimination relates to the client's ability to feel whether or not they have gotten one or two pin pricks that the nurse gently applies. Stereognosis is the

client's ability to feel and identify a familiar object while their eyes are closed. For example, the nurse may place a pen, a button or a paper clip in the client's hand to determine whether or not the client can identify the object without any visual cues. Extinction is the client's ability to identify whether or not they are being touched by the person doing the assessment with either one or two bilateral touches. For example, the nurse may touch both knees and then ask the client if they felt one or two touches while the client has their eyes closed.

8.1 Reflexes

Reflexes are automatic muscular responses to a stimulus. When reflexes are absent or otherwise altered, it can indicate a neurological deficit even earlier than other signs and symptoms of the neurological deficit appear.

Reflexes can be described as primitive and long term. Primitive reflexes are normally present at the time of birth and these reflexes normally disappear as the baby grows older; neurological deficits are suspected when these primitive reflexes remain beyond the point in time when they are expected to disappear. Reflexes, other than the primitive reflexes remain intact and active during the entire life span, under normal conditions.

Deep Tendon and Superficial Reflexes

A **deep tendon reflex** is often associated with muscle stretching. **Tendon reflex** tests are used to determine the integrity of the spinal cord and peripheral nervous system, and they can be used to determine the presence of a neuromuscular disease.

Superficial reflexes. **Superficial reflexes** are motor responses to scraping of the skin. They are graded simply as present or absent, although markedly asymmetrical responses should be considered abnormal as well

- **Pupil reflex:** Pupil reflexes include pupil dilation and pupil accommodation. The "PERLA" mnemonic for pupil reflexes stands for Pupils Equally Reactive to Light and Accommodation which is a normal finding. The pupil reflexes for their reactions to light are assessed by using a flash light in a darkened room. Pupils will normally dilate as the light is withdrawn and they will normally constrict when the light is brought close to the pupils. The pupils are assessed not only for their reaction to light, they are also assessed in terms of their accommodation. Normally, the pupils will dilate when an object is moved away from the eye and they will constrict as the object is being brought closer to the eye.
- **Plantar reflex:** The plantar reflex is elicited when the person performing this assessment strokes the bottom of the foot and the client's toes curl down. The Babinski sign occurs when the foot goes into dorsiflexion and the great toe curls up; this sign is an abnormal response to this stimulation and it can indicate the presence of deep vein thrombosis.
- **Biceps reflex:** This reflex is assessed by placing the thumb on the biceps tendon while the person is in a sitting position and then tapping the thumb with the Taylor hammer.
- **Triceps reflex:** This reflex is elicited by tapping the triceps tendon with the Taylor hammer above the elbow while the client has their hands on their legs when the client is in a sitting position.
- **Patellar tendon reflex:** This reflex, often referred to as the knee jerk reflex, is elicited by tapping the patellar area with the Taylor hammer.
- **Calcaneal reflex:** This reflex, often referred to as the Achilles reflex, isthe calcaneal reflex on the ankle with the Taylor hammer.
- **Gag reflex:** The gag reflex is elicited when the back of the mouth and the posterior tongue is stimulated with a tongue blade.
- **Blinking reflex:** This reflex is elicited when the eyes are touched or they are stimulated a sudden bright light or an irritant.
- An **abdominal reflex** is a superficial neurological **reflex** stimulated by stroking of the **abdomen** around the umbilicus. It can be helpful in determining the level of a CNS lesion.

All reflexes should be done bilaterally in rapid succession so that all differences between the right and the left reflexes can be determined and assessed. For example, when the person who is performing these assessments should assess the biceps reflex of the right arm and then immediately assess the biceps reflex of the left arm so that any differences or inequalities can be assessed and documented.

Deep tendon and superficial reflexes

Reflexes

- Deep Tendon Reflexes (DTR)
  - Biceps (C5-C6)
  - Triceps (C7-C8)
  - Brachioradialis (C5-C6)
  - Quadriceps (Patellar) (L2-L4)
  - Achilles (L5-S2)
- Superficial Reflexes
  - Plantar Reflex/Babinski (L4-S2)
  - Abdominal Reflexes
    (Upper T8-T10)(Lower T10-T12)
  - Crematic Reflex (L1-L2)

Documenting Reflex Findings

Use these grading scales to rate the strength of each reflex in a deep tendon and superficial reflex assessment.

Deep tendon reflex grades

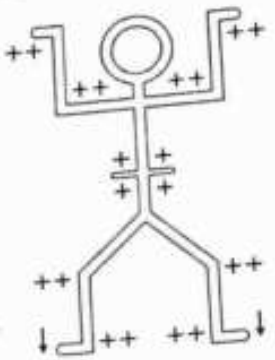
0 absent
+ present but diminished
+ + normal
+ + + increased but not necessarily pathologic
+ + + + hyperactive or clonic (involuntary contraction and relaxation of skeletal muscle)

Superficial reflex grades

0 absent
+ present

Use the patient's reflex ratings on a drawing of a stick figure. The figures here show documentation of normal and abnormal reflex responses.

Normal



8.2 Cranial nerves:

Lastly, the nurse assesses the twelve cranial nerves. Some of these twelve cranial nerves are only sensory or motor nerves, and others have both sensory and motor functions.

The twelve cranial nerves can be easily remembered using this mnemonic: On Old Olympus Tippy Top, A Fat Armed German View A Hop, as below:

1. Olfactory
2. Optic
3. Oculomotor
4. Trochlear
5. Trigeminal
6. Abducens
7. Facial
8. Acoustic
9. Glossopharyngeal
10. Vagus
11. Spinal accessory
12. Hypoglossal

Each of these twelve cranial nerves, their function and their classification as sensory, motor or both sensory and motor are shown in the table below.

Cranial Nerve I (Olfactory Nerve)

- To test the adequacy of function of the olfactory nerve:
  - The client is asked to close his eyes and occlude.
  - The examiner places aromatic and easily distinguished items nose (e.g. alcohol, vinegar, coffee).
  - Ask the client to identify the odor.
  - Each side is tested separately (**<u>There is no need to use two different substances)</u>**

Cranial Nerve II (Optic Nerve)

The optic nerve is assessed by testing for visual acuity and peripheral vision. **(Details shown in examination of eyes)**

Cranial Nerve III, IV & VI (Oculomotor, Trochlear, Abducens)

- All the 3 Cranial nerves are tested at the same time by assessing the Extra Ocular Movement (EOM) or the six cardinal position of gaze.

Follow the given steps

- Stand directly in front of the client and hold a finger or a penlight about 1 ft from the client's eyes.
- Instruct the client to follow the direction the object hold by the examiner by eye movements only; that is without moving the neck.
- The nurse moves the object in a clockwise direction hexagonally.
- Instruct the client to fix his gaze momentarily on the extreme position in each of the six cardinal gazes.
- The examiner should watch for any jerky movements of the eye (nystagmus).
- Normally the client can hold the position and there should be no nystagmus.

Cranial Nerve V (Trigeminal) - **While performing the cranial nerves assessment, the respective cranial nerve assessment can be incorporated in the respective systems.**

1. **Sensory Function**
   - Ask the patient to close the eyes.
   - Run cotton wisp over the fore head, check and jaw on both sides of the face.
   - Ask the patient if he/she feel it, and where it is felt.
   - Check for corneal reflex using cotton wisp.
   - The normal response is blinking.
2. **Motor function**
   - Ask the patient to chew or clench the jaw. Palpate the jaw and feel for movement.
   - The patient should be able to clench or chew with strength and force.

Cranial Nerve VII (Facial)

1. **Sensory function (This nerve innervates the anterior 2/3 of the tongue).**
   - Place a sweet, sour, salty, or bitter substance near the tip of the tongue.
   - Normally, the client can identify the taste.
2. **Motor function**
   - Ask the patient to smile, frown, raise eye brow, close eye lids, whistle, or puff the cheeks.

Normal Findings

- Shape maybe oval or rounded.
- Face is symmetrical.
- No involuntary muscle movements.
- Can move facial muscles at will.
- Intact cranial nerve V and VII.

The summary table is given below:

Cranial Nerve		Major Functions		Assessment
Cranial Nerve I	Olfactory	Sensory	Smell	Smell—coffee, cloves, peppermint
Cranial Nerve II	Optic	Sensory	Vision	Visual acuity—Snellen chart (cover eye not being examined) Test for visual fields Examine with ophthalmoscope
Cranial Nerve III	Oculomotor	Sensory and Motor – Primarily Motor	Eyelid and eyeball movement	Move eye up, down, and peripherally Test for accommodation Pupillary constriction Observe for ptosis of upper eyelid
Cranial Nerve IV	Trochlear	Sensory and Motor – Primarily Motor	Innervates superior oblique eye muscle Turns eye downward and laterally	Inferior lateral movement of the eye
Cranial Nerve V	Trigeminal	Sensory and Motor	Chewing Face and mouth touch and pain	Corneal reflex Sensation of skin of the face (eyebrow, cheeks and chin) by using a wisp of cotton Chewing, biting, lateral jaw movements (move jaw side to side)
Cranial Nerve VI	Abducens	Sensory and Motor – Primarily Motor	Turns eye laterally Proprioception (sensory awareness of part of the body)	Inferior lateral eye movements
Cranial Nerve VII	Facial	Sensory and Motor	Controls most facial expressions Secretion of ears and saliva	Taste—anterior two thirds of tongue: sweet—sugar, salty, sour—lemon, bitter (rinse mouth between applications) Movement of forehead and mouth Raise eyebrows, show teeth, smile, and puff out cheeks
Cranial Nerve VIII	Vestibulocochlear (auditory)	Sensory	Hearing Equilibrium sensation	Hearing, balance Weber and Rinne tests Otoscope
Cranial Nerve IX	Glossopharyngeal	Sensory and Motor	Taste Senses carotid blood pressure Muscle sense – proprioception, sensory awareness of the body	Swallowing and phonation Taste—posterior one third of tongue; see cranial nerve VII
Cranial Nerve X	Vagus	Sensory and Motor	Senses aortic blood pressure Slows heart rate Stimulates digestive organs Taste	Sensations of posterior one third of tongue, throat. Gag reflex (stimulate back of pharynx with a tongue blade) Swallowing and phonation
Cranial Nerve XI	Spinal Accessory	Sensory and Motor – Primarily Motor	Controls trapezius and sternocleidomastoid controls swallowing movements Muscle sense - proprioception	Shoulder movement, shoulder shrug, head rotation—push against examiner's hand
Cranial Nerve XII	Hypoglossal	Sensory and Motor – Primarily Motor	Controls tongue movements Muscle sense - proprioception	Tongue movement—protrude tongue, push tongue into the cheek

(Berman, Snyder, Kozier & Erb, 2008, Jarvis, 2008).

Glasgow Coma Scale:

The **Glasgow Coma Scale (GCS)** allows healthcare professionals to consistently evaluate the consciousness level of a patient. There are three aspects of behaviour that are independently measured as part of an **assessment** of a patient's **GCS** – motor responsiveness, verbal response and eye-opening.

Feature	Response	Score
Best eye response	Open spontaneously	4
	Open to verbal command	3
	Open to pain	2
	No eye opening	1
Best verbal response	Orientated	5
	Confused	4
	Inappropriate words	3
	Incomprehensible sounds	2
	No verbal response	1
Best motor response	Obeys commands	6
	Localising pain	5
	Withdrawal from pain	4
	Flexion to pain	3
	Extension to pain	2
	No motor response	1