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SECTOR SKILL COUNCIL

Participant Handbook

Sector
Beauty & Wellness

Sub-Sector
Alternate Therapy & Rejuvenation

Occupation
Neurotherapy Services

Reference ID:
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Wellness Neurotherapist

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Shri Narendra Modi
Prime Minister of India


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We would specially like to thank Acharya Ram Gopal Dixit, Aarogya Peeth and Nirogalaya Institute of Wellness Research & Training (NIWRT) who were instrumental in giving the inputs for this handbook. This participant handbook is dedicated to all the aspiring youth who desire to achieve and acquire the skill of neurotherapy, which would be a lifelong asset for their future endeavours and help them make a successful career in the Wellness Sector.

About This book

Neurotherapy is an alternative way of healing. It does not require any chemicals or medicines from outside, because human body has the capacity to heals itself by producing the requisite hormones and chemicals. In this treatment, pressure is applied on different parts of the body at different angles for specific period of time which rejuvenate and detoxify the body. It relaxes body and mind, and is an effective technique which provides physical and mental wellbeing by restoring the glands to their optimal level of functioning. The therapy focuses at the cause not at the symptoms of the disease.

Neurotherapy services comes under the sub-sector of Alternate Therapy & Rejuvenation. Beauty and Wellness industry in India is growing at a CAGR of 18.64 % and is likely to reach the 100,000 crore mark soon. The sector is thriving on the increasing section of affluent and middle-class population that has started considering beauty and wellness as a necessity. Increased emphasis on a holistic wellbeing with people's desire to look good and young are other motivators for the beauty and wellness industry.

This Participant Handbook is designed to enable theoretical and practical training to become a Wellness Neurotherapist. The Qualification Pack of a Wellness Neurotherapist includes the following National Occupational Standards which have all been covered in this Trainee Manual:

1. Prepare and maintain work area for neurotherapy procedure
2. Carry out neurotherapy procedure as per recommendation
3. Use basic health and safety practices in neurotherapy workplace

We would also like to acknowledge the efforts put in by the B&WSSC team, master trainer, consultants and our Industry Partners who give their valuable inputs in making this Participant Handbook.

Symbols Used


Key Learning Outcomes


Steps


Time


Tips


Notes


Unit Objectives

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1. Introduction

Unit 1.1 - Introduction to Neurotherapy

Unit 1.2 - Neurotherapy Treatments

Unit 1.3 - Job role of a Wellness Neurotherapist

Unit 1.4 - Setting-up and Maintaining a Neurotherapy Center

(BWS/N2301)

Key Learning Outcomes

At the end of this unit, participant will be able to:

1. Explain the meaning of Neurotherapy
2. Explain major benefits of doing Neurotherapy
3. Describe the history & evolution of Neurotherapy
4. Explain common treatments of Neurotherapy
5. Define job role & responsibilities of a Wellness Neurotherapist
6. Describe the requirements of a Neuropathy Center setup

UNIT1.1:Introduction To Neurotherapy

Unit Objectives

At the end of this unit, participant will be able to:

1. Explain the meaning of Neurotherapy
2. Describe history & evolution of Neurotherapy
3. Describe methodology of Neurotherapy
4. Describe major benefits of Neurotherapy

1.1.1 What Is Neurotherapy?

Neurotherapy is an Indian Traditional Wellness technique based on naval setting. It is a pressure therapy in which pressure is given on different parts of the body at different angles for specific period of time which rejuvenate and detoxify the body. The therapy includes therapeutic massage for body rejuvenation and detoxification. It relaxes the body and mind. It also maintains the homeostasis level of the body by balancing acid and alkaline level in the body. It is a very effective technique which provide physical and mental wellbeing as it alleviate physical and mental stress.

Fig. 1.1.1. Neurotherapy Treatment

1.1.2 History And Evolution Of Neurotherapy

Since Vedic time there have been number of experiments successfully done to keep our body fit & healthy. A healthy body depends on several factor but the most important is our daily routine.

In India our Rishis & Munis believe that naval is the center of our body. They emphasis to keep the naval system in balance which control the body keeping it fit where as on the contrary unbalanced naval bring many deficiencies in the body.

To keep the naval in balance is an Ancient technique. Our Rishi Munis gave their knowledge to the people by practicing Natural care and Yoga. They experienced by just setting the naval the whole body functions work properly and a person fell healthy.

In India there are numbers of technique used to set the naval and neurotherapy is one of them.

Fig. 1.1.2. Neurotherapy Treatment

1.1.3 Methodology

The method comprises of the client lying on a thin mattress or on some other similar soft comfortable area where the trained therapist then applies pressure and massages the relevant areas using either his/her hands and feet with the help of supporting stands.

The duration and number of times the pressure is applied is fixed and sometimes also depends on the tenderness and softness of the body part.

Fig. 1.1.3. Methodology of Neurotherapy

1.1.4 Benefits Of Neurotherapy

Following are some of the benefits of Neurotherapy -

1- Sets the naval, which make client feel lighter

2- Provides rejuvenation

3- Detoxifies the body

4- Gives relief in body pain/body ache

5- Increases energy level.

6- Controls/reduces obesity

7- Increases alertness and wellness

8- Prevents pigmentation and dark circles

9- Prevents Wrinkles on face

10- Increases flexibility in the body

11- Gives peace to mind

12- Relaxes body and mind

13- Removes stiffness

14- Bring grace and glow on face

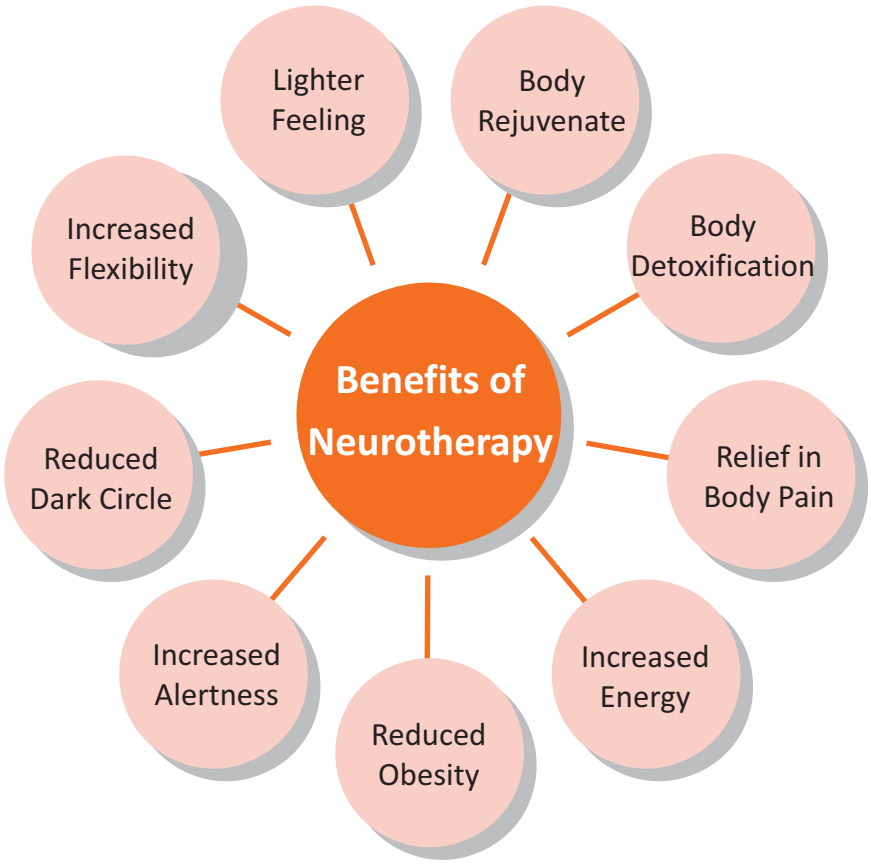

Fig. 1.1.4. Benefits of Neurotherapy

Notes

UNIT 1.2: Neurotherapy Treatments

Unit Objectives

At the end of this unit, participant will be able to:

1. Describe the common Neurotherapy treatments
2. Explain the composition of Neurotherapy treatments
3. Describe the Wellness Neurotherapy Formulas

1.2.1 Common Neurotherapy Treatments

There are many Neurotherapy Treatments, which are made of combination of various Neurotherapy procedures :
Rejuvenation treatment: (20)TF, NAN , Both Vitamin Formation , Spine c/w , OC , NG, RELAX
Detoxification Treatment: Kidney Clear , P. Evacuate + Basic

Relaxation Treatment: Spine c/w , Basic , Both vitamin Formation , New Parkhoo , New Bottom of feet

Happy Ending Treatment: Basic , All Body Ghisai , EP1 , Feather touch

Body Balancing Treatment: Acid Treatment Or Alkaline treatment + Basic x 3 times

Digestion Improving Treatment: Old UDF

Metabolism Booster Treatment: Metabolic + Basic

Panch Tatva Treatment: UDF ,Oxygen trt , M Evacuate , NAN (Decide Oxygen & Evacuate according to client's health)

Panch Kosha Treatment: I. UDF
II. Oxygen
III. (8) CNS (6) CNS (20) CNS (30) CNS x 2
IV. Antarmukhikriya

Mind Balancing Treatment: I. (20) TF (6) NNS , NC , Spine c/w
II. Serotonin , M Evacuate , Antarmukhikriya

Adhi Vyadhi Mukti Treatment: (20) TF , Immunity Treatment , Re-vital Treatment , Multi Evacuate Treatment

Fig. 1.2.1. Step of N4 Treatment

Adhi Vyadhi Mukti Treatment: (20) TF , Immunity Treatment , Re-vital Treatment , Multi Evacuate Treatment
Sanjeevani Treatment: Basic , Oxygen , Re-vital Treatment
Tan Sundar Treatment: UDF , Large Folic Black , Acid or alkaline treatment
Mann Sundar Treatment: N4 N6 treatment , M Evacuate , Antarmukhikriya
Vighnesh Treatment: UDF , Viral treatment , Re-vital Treatment
VaatMukti Treatment: (20)TF (6) NNS , UDF , G.L treatment , J.Evacuate
Hair Loss Treatment: Acid Treatment , Thyroid , LTPT
Immunity Booster Treatment: UDF , Immunity Treatment , Re-vital Treatment
Distress Treatment: Acid Treatment , M Evacuate , DCC

Fig. 1.2.2. Step of N6

Antiscars Treatment: Full Rt ovary treatment
Revital Treatment: UDF , Immunity Treatment , Re-vital Treatment

Anti Fatigue Treatment : Large Folic Black , Re-vital Treatment

Weight loss Treatment: Full liver, Inflammation treatment , New Planet acid , New Planet alkaline

Glow Treatment: UDF , Large Folic Black , Kidney Clear , Antarmukhikriya

Madhuri Chaal Treatment: Full Liver , New Planet Acid , Genetic treatment

Jheel si Aankhein Treatment: UDF , Large Folic Black , M Evacuate , SINSP, Face c/w

Kali Ghata Treatment: Acid Treatment , Thyroid , LTPT

Chitt Shudhi Treatment: (20) TF, Acid treatment , M Heparin / Full liver, M Evacuate , Both Vitamin Formation , Antarmukhikriya

Anti-Wrinkle Treatment: (20) TF (2) N4 (2) N5 (2) N6 (2) N7 x2 (30) CNS (4) N5 (4) N6 (6) OV1 (8) TH G Ch1

Younger Looking Treatment: (20) TF

(3) N6 (3) Lk1
VIRAL TREATMENT
BLACK TREATMENT

Refer to Annexure 1: ***Neurotherapy Points*** *(Click here to access the Annexure)*

1.2.2 Wellness Neurotherapy Formulas

S. No.	Treatment Name	Formulas
1	NEW EVACUATE TREATMENT	(10)N3 (3)N4 (12) N6 (12)CH1
2	CALCIUM TREATMENT	(6)N1 (6)N2 (10)N3 (3)N4 (12)N6 (4)RTPT (9)RK1 (9)LK1 (4)CH1 - OC
3	VITAMIN TREATMENT	(10)CNS (3)N1 (3)N2 (10)N3 (15)CNS (8)RTHP (8)N3 (3)N4 (9)N6 (8) LTHP(6)ADRC – OC
4	DIGESTIVE TREATMENT	(15)CNS x 2 (10)CNS x 2 N1 N2,RTHP LTHP
5	ACID TREATMENT	(10)N3 (3)N4 (3)N5 (9)LK1 (3)LK2 (8)CH1 (3)LK2 (9)ADRC (2)S45
6	ALKALINE TREATMENT	(10)N3 (3)N4 (12)N6 (9)RK1 RK2 (4)CH1
7	KIDNEY TREATMENT	(10) N3 x 3 trt (10)N3 (3)N4 (12)N6 (4) CH1 (6)LUSH P (10)N3 (9)RK1 (9)LK1 (8)CH1 + OC, (2)S45
8	TOXINS REMOVE TREATMENT	(15) CNS x 2 (10) N3 (6) N1 (6) N2 (8) RTHP (5) N4 (12) N6 (8) LTHP + OC (6)ADRC
9	BODY BALANCING TREATMENT	(15) CNS x 2 10) N3 (3) N4 (3) N5 (9) N6 (9) N7 (3) OV1 (3) OV2 (9) RK1 (9) LK1 + LK2 (8) RTHP + LTHP (BOTH)
10	RELAX TREATMENT	(12) CNS x 3trt (8) CNS x 3trt NC New parkhoo OC (20)round arrow NG EP1
11	METABOLLIC TREATMENT	(15) CNS x 2 (4) THRD G(10)N3 x 3 N4 : N5 : N6 : N7 OC (4) THRD G (6)ADRC
12	PRAN URJA TREATMENT	SINSP Organ sacral clearance (20) SPN1 (20)beside the spine (20)round arrow (6)BA1 (3)HA1 Sacral clearance ,spine c/w (4)VOCAL G (6) LUSH P (10)STRETCH (15) CNS x 3trt NG
13	FULL ACID TREATMENT	1.)NC 2.)RELAX 3.)8) CNS x 3 trt 4.)(20) TF (6)NNS x 2 5.)Fast Treatment - N1, N2, N4,N5,N6,N7,OV1,OV2, OV3 ,RK1, LK1,LK2, RK2 x 2

14	FULL ALKALINE TREATMENT	1.)NC 2.)RELAX 3.)(8)CNS x 3 4.)(20) TF (6)NNS x 2 5.)*(2)N4 (3) N6 x 2 *(1)N4 (2)N6 x 3 *(3)N4 (4) N6 (4)N1 (4)N2 {fast} *(8)N3 (1)N5 (2)N4 (2)N7 (3)N6 (3)OV2 (3)OV1, LK2 , RK2 , spine c/w OC , NG, RELAX

Refer to Annexure 1: ***Neurotherapy Points*** *(Click here to access the Annexure)*

List of Abbreviations

Point	N1	N2	N3	N4	N5	N6	N7
Denoted as	GAS ONLY	GAS I	PAN	GAL	SPL	LIV	MU
Point	OV1	OV2	OV3	STOOL	LOOS	RK	LK
Denoted as	RT.OV	LT.OV	WD	CONST	DYS	LIV0	MU0

UNIT 1.3: Job Role Of A Wellness Neurotherapist

Unit Objectives

At the end of this unit, participant will be able to:

1. Define job role of a Wellness Neurotherapist
2. Explain responsibilities of a Wellness Neurotherapist
3. Establish expectations from a Wellness Neurotherapist

1.3.1 Job Role Of A Wellness Neurotherapist

Following are the Job role of a Wellness Neurotherapist -

1- Enrolling new Clients.

2- Taking care of all organisational documentation, like - filling in Initial form for client, filling in progress report and creating incidence report.

3- Ensure all safety aspect while doing neurotherapy treatment.

4- Take appropriate actions as per orgnisation during any emergency.

5- Using appropriate personal protective equipment and/or work attire prior to carrying out the work in line with relevant occupational health & safety guidelines.

6- Assessing potential risks related to work and implement relevant safety measures wherever applicable.

7- Obtaining tools, equipment and materials required for the procedures specified in adequate quantity and designated containers Tools & equipment: Like - weighing scale, height measuring instrument, procedure support stands, etc.

8- Confirming that the selected tools and equipment are in working order and safe to handle.

9- All the other assigned roles by organisation or superior.

Fig. 1.3.1. Neurotherapy treatment by a Neurotherapist

1.3.2 Responsibilities Of A Wellness Neurothereapist

Following are the responsibilities of a Wellness Neurotherapist -

1- To ensure the appropriate environmental conditions for procedures at the site based on the following parameters: neat & tidy; good ventilation; appropriate room temperature; adequately light; etc.

2- To ensure that the environment is suitable for procedures of different types of clients including age, sex and purpose.

3- To check that the bed is set with comfortable mattress, pillows and clean linen.

4- To ensure the stands for support are stable, rightly positioned as per space and support requirements.

5- To change bed linen if soiled and after every procedure as per organisational standards.

6- To ensure clean towels and sanitizers are available for use as appropriate and positioned conveniently for use by customer and the therapist.

7- To rearrange the beds, pillows and stands as per standard requirements post the procedure.

8- To leave the work area in a safe condition after completing work.

9- To exercise safe working practices while dealing with tools and accessories.

10- To follow relevant electrical safety practices whenever required.

11- To return all tools, materials and equipment in appropriate storage location.

12- To collect used materials such as foot covers, towels, work clothes, etc. and deposit in the appropriate location for laundry service.

13- To report any work related problems or issues to appropriate personnel in line with relevant regulatory and safety requirements

Fig. 1.3.2. Neurotherapy treatment by a Neurotherapist

1.3.3 Expectation From A Neurotherapist

Following are the expectations from a Wellness Neurotherapist -

1- Greet all Clients with a smile.

2- He / She should possess energetic and positive attitude.

3- He / She should possess good speaking and listening skills.

4- He / She should be passionate about health.

5- He / She himself / herself should possess fit and flexible body.

6- He / She should wear an appropriate uniform during Neurotherapy Treatment.

9- He / She should follow organisation's rules and regulations.

10- He / She should be recording treatment details of Clients appropriately.

11- He / She should make feel comfortable to the Clients during treatment.

12- He / She should be able to motivate Clients for opting Neurotherapy.

13- He / She should be able to perform very simple and very complex treatments.

14- He / She should be punctual and regular.

15- He / She should be able to complete the tasks given satisfactorily.

16- He / She should be able to work independently.

17- He / She should stay focused on the task at hand.

18- He / She should be able to decide on priorities of work.

19- He / She should have knowledge about relevant health and safety requirements applicable in wellness neurotherapy.

20- He / She should have knowledge about own job role and responsibilities and sources for information pertaining to entitlements, job role and responsibilities.

21- He / She should have knowledge about inter-dependent functions, lines and procedure.

22- He / She should know who to approach for support in order to obtain work related instructions, clarifications and support.

23- He / She should know importance of following health, hygiene, safety and quality standards and the impact of not following the standards on consumers and the business.

24- He / She should know relevant people and their responsibilities within the work area.

25- He / She should know scope of procedures offered by the organization and related standards.

26- He / She should know how to identify hazards associated with the work and adhere to relevant health and safety practices.

27- He / She should know how to comply with relevant regulations and instructions related to client procedure & management.

28- He / She should know range of materials used for neurotherapy procedures such as powders, etc.

29- He / She should know list of tools and equipment used in neurotherapy procedures.

30- He / She should know importance of referring to information from reliable sources on procedures, practices and precautions.

31- He / She should know factors affecting safety, comfort and convenience of customers and workers in a neurotherapy lab or site.

Fig. 1.3.3. Making Client comfortable during treatment is very important

32- He / She should know how to estimate space requirements for customers, procedures and other related requirements.

33- He / She should know importance of returning all the used tools and equipment safely to their respective storage.

34- He / She should know importance and methodology of positioning stands and other support equipment.

35- He / She should know bed and pillow settings for procedures and types of clients.

36- He / She should know various body postures in which procedure is given and related adjustments to pillow, bed and stand arrangements or positions including one and half setting, angles, distance, etc.

37- He / She should know various emergency conditions and related procedures.

38- He / She should know storage places and procedures for linen and other tools, materials and equipment.

39- He / She should know units of measurement used in measuring height and weight e.g. kg, m, cm, m, etc.

40- He / She should know how to write clearly and legibly in English, Hindi or the local language.

41- He / She should know how to write messages and information with descriptive text using short or long sentences and a range of technical and non-technical vocabulary.

42- He / She should know how to fill relevant activity records in log books, write in local language or in English.

43- He / She should know how to record daily activities such as customer attendance, procedure time, nature of procedure, feedback, etc.

44- He / She should be able to create and maintain cordial relations with fellow employees.

45- He / She should behave professionally and courteously while at work.

46- He / She should be able to work in changing environments.

47- He / She should show a positive attitude toward his / her work.

48- He / She should be able to give a suggestion for improvement at work and workplace.

49- He / She should be able to work with diverse people with different cultures.

UNIT 1.4: Setting Up And Maintaining A Neurotherapy Center

Unit Objectives

At the end of this unit, partcipant will be able to:

1. Describe overview of health and wellness industry in India
2. Explain resources needed for a Neurotherapy center
3. Define requirements of a Neurotherapy center
4. Define investment requirement for a Neurotherapy center
5. Describe various registrations required for a Neurotherapy center
6. Explain how to maintain a Neurotherapy center

1.4.1 Health & Wellness Industry In India - An Overview

As per industry analysis reports, Indian Health & Wellness market is Rs. 656 Billion. It is estimated to grow at the rate of 20% per annum. It is mainly driven by an increase in disposable income and preventive cure mindset of urban people. Neurotherapy is a big and rapidly growing part of Health and Wellness industry. At present more than 1000 centers are running in India. In almost 25 cities where the centers are running successfully. Not only in India, Neurotherapy has been very promising in Canada, Dubai, Italy, Singapore etc.

1.4.2 Resources Needed for Setting Up A Neurotherapy Center

For Setting up a Neurotherapy Center, following are the resources which need to be planned -

1- Place for setting up a Neurotherapy Center

2- Staff for running up a Neurotherapy Center

3- Neurotherapy Equipment

4- Audio-Video for Healthy Lifestyle

5- Consumables

6- Registration of Center with various Government agencies

1.4.2.1 Place For Setting Up A Neurotherapy Center

This is the first and foremost thing for setting up a Neurotherapy center. There are various factors for selecting a place for setting up a Neurotherapy Center -

1- Location

2- Availability of Parking

3- Availability of Natural Light and Fresh Air

4- Minimum requirement of Room sizes for a Neurotherapy Treatment Room

5- Lighting in the Neurotherapy Room

6- Air Conditioning

1.4.2.1.1 Location

Location for a Neurotherapy center is most important factor in choosing it. Any place which is far off from the city will not be suitable, no matter how spacious and beautiful it is. Things to take care before selecting location for Neurotherapy Center is as below -

1- It should be in the center of a city or a locality

2- Approach to the building should be easy, and one should not be required to walk too much for entering the Neurotherapy Center.

3- The place should be well connected with local transport.

4- It should be away from any existing Neurotherapy Center, to avoid any un-necessary competition.

1.4.2.1.2 Availability of Parking

Nowadays, Parking availability is very important. No Neurotherapy Client would like to waste his/ her precious time in searching for parking slot on a daily basis. This issue could be a major reason for fewer people coming to your Neurotherapy center.

Ensure you have ample parking space allocated for your center with full security of parked vehicles.

Fig. 1.4.1. Ample Parking should be available at Neuropathy Center

1.4.2.1.3 Availability of Natural Light and Fresh Air

Although it is little difficult in the current scenario since nowadays buildings have less space in between them, which affects natural light and fresh air, an absolute necessity for a Neurotherapy Center. However, you can try to search for a better place, which has natural light, preferably in the morning hours and should be away from emission emitting sources such as factories or crowded road.

Fig. 1.4.2. Natural Light & Fresh Air is essential at Neurotherapy Center

1.4.2.1.4 Room Sizes

Since Neurotherapy treatment is given to single person at a time hence room should be big enough for spreading one mattress and keeping the stand besides that. However, bigger room can be divided in many individual treatment areas by keeping separating then with the help of curtains. Room size should be minimum 120 square feet. The height of Room should be minimum ten feet.

Fig. 1.4.3. Neurotherapy Room floor with Carpet

1.4.2.1.5 Room Walls

Colors of Neurotherapy Room wall should be light and soothing for eyes. You can put some good posters for creating healing atmosphere. You can also have a mirror on one wall so that Clients can see them while procedure. However, few people consider mirror a distraction and avoid it. It is totally a personal choice.

1.4.2.1.6 Room Floor

Preferably Neurotherapy room surface should have Carpet on it. But if that is not possible, then floor should be covered with some rug. One cotton mattress should be kept on this for getting cushioning effect. It is not advisable to do Neurotherapy on a hard surface, as it may damage your knees or another body part while doing treatment. It should also be remembered that cushioning should not be in excess since we need surface support while doing treatment.

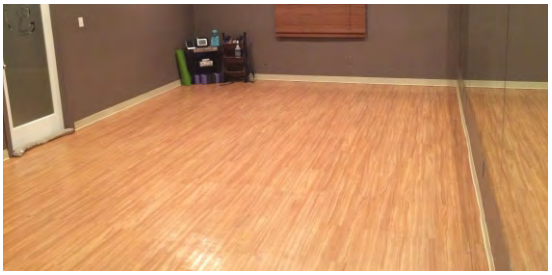

Fig. 1.4.4. Neurotherapy Room floor with Wooden Flooring

1.4.2.1.7 Room Lighting

Neurotherapy room should have soothing light. All windows should have curtains or blinds on it, to keep hard sunlight away. But apart from natural sunlight, it should have proper artificial lights, which will be required after sunset. Ideally, lights should be natural white, but you can do some experiments with light for giving a soothing effect. It will be very good If you can have dimmer in the room. You can use it very well during preparation and treatment.

1.4.2.1.8 Room Temperature

The temperature for Neurotherapy Room should be maintained between 24-29 degrees. So, if the natural temperature is more or lesser than this, Air conditioning should be used. It should be ensured that Air conditioning should be even in all the parts of the room.

1.4.2.1.9 Reception

This is an entrance area of any Neurotherapy center, where people enquire for Neurotherapy courses or wait for their treatment to start. This should have a pleasant atmosphere with ample space for seating. New clients gets impressed with Reception first, so it should be neatly decorated and should always be maintained.

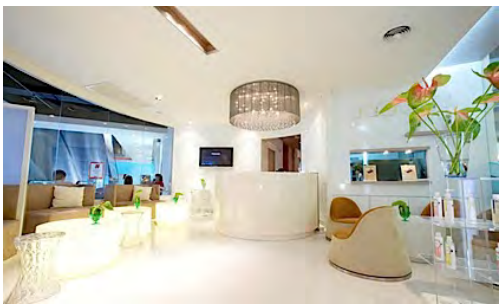

Fig. 1.4.5. Neurotherapy Center Reception

1.4.2.2 Staff For Neurotherapy Center

Normally, Neurotherapy Center is a very lean organisation. Staff hired should have a passion for Neurotherapy and should believe in its philosophy. Following is the staff requirement for a Neurotherapy Center -

1- Receptionist -1 nos.

2- Neurotherapist - as per Neurotherapy Center size

3- Housekeeping Assistant - as per Neurotherapy Center size

4- Support Staff for Accounts & HR - 1 or 2 nos.

1.4.2.3 Neurotherapy Equipment

Although Neurotherapy is a form of treatment which is done without any equipment, still some equipment are needed for support or making treatment comfortable. Following is the list of equipment used in Neurotherapy -

1.4.2.3.1 Stand

This is the first and foremost equipment for Neurotherapy. It should be firm and stick to the floor. While giving treatment, it should be bend or shake. It should also remain firm at its place. Any shaking of slipping might harm client and Neurotherapist both.

Fig. 1.4.6. Stand

1.4.2.3.2 Talcum Powder

Talcum powder is required for giving smoothing effect while doing pressure treatment by hand. It is applied on client body and neurotherapist hand before starting the pressure treatment.

Fig. 1.4.7. Talcum Powder

1.4.2.3.3 Hand Sanitizer

A neurotherapist should be touching many people by hand, hence it is possible to get infection. It may get transfer to him/her or to the next client also. Sometime it is inconvenient to wash hands again and again. So, it is advisable to use Hand Sanitizer before starting the pressure treatment.

Fig. 1.4.8. Hand Sanitizer

1.4.2.4 Arrangement Of Audio & Video

There should be an arrangement of Audio & Video player at Neurotherapy Center. Video can be played for showing some healthy life style video while client is waiting for its turn for treatment and Audio can be used for playing soothing music during Neurotherapy Sessions.

1.4.2.5 Investment Required For Neurotherapy Center

Investment required for opening a Neurotherapy center purely depends on your plans. You can start a small Neurotherapy Center with an investment of as little as Rs. 3 to 5 Lacs, by taking a studio on rent. On the higher side, there is no limit on investment since you can make it as luxurious as you want, depending on your client list. But it is recommended to invest a small amount in the beginning, as return on investment in Neurotherapy business is little slow as compared to other businesses.

1.4.2.6 Registration Required For Neurotherapy Center

You can open 3 types of Neurotherapy Centers - Proprietorship, Partnership/LLP and Private Limited. Proprietorship, Partnership/LLP are a simpler way of running a business. In case of Partnership/LLP and Private Limited, you need to get a PAN card in the name of organisation too. However, in the case of Proprietorship company your personal PAN card is acceptable.

You need to open a Current Account for all the type of companies for doing any business transaction.

You need to take Goods and Service Tax no (GST no.). if your total turnover exceed 20 Lac. Till that limit Goods and Service Tax registration is not mandatory.

1.4.2.7 Maintenance Of Neurotherapy Center

Maintenance of Neurotherapy center and its equipment distinguish good Neurotherapy centers from bad Neurotherapy centers. It is very easy to invest money and buy good equipment for your Neurotherapy center, but it is very difficult to maintain it. However, it gives good dividend by keeping your customers happy.

We can divide maintenance of Neurotherapy center in the following areas-

1- Recep on

2- Neurotherapy rooms

3- Neurotherapy equipment

4- Toilets

1.4.2.7.1 Reception

This is the entrance & one of the main portion of Neurotherapy Center. Anyone coming to your Neurotherapy center enters in this portion first. To impress him/her, it is necessary to have this area absolutely maintained all the time. Maintenance of this area can not be an activity of once or twice a day. Someone should be responsible for this area to be maintained at all the time.

Maintenance of this area includes -

1- Sweeping and wiping of Floor

2- Dusting of chairs and tables

3- Arranging things kept at Reception

4- Maintaining a good fragrance by spraying room freshener or burning scented sticks or some other means.

5- Maintaining a good lighting all the time.

6- Maintaining a right temperature as per climate.

7- Changing old / torn newspapers or magazines.

8- Ensuring that Wall paint or wallpaper is in good condition, else it should be painted or repaired immediately.

1.4.2.7.2 Neurotherapy Room

The Neurotherapy room is the center of action in any Neurotherapy Center. This is the area where practitioner spends maximum of their time. To create a good image of Neurotherapy Center, you should always maintain the Neurotherapy Room. Some of the things which should be ensured are -

1- First and foremost rule - Place for all the things and all things at their place.

2- As mentioned for Reception, the floor should be regularly swept and wiped. Neurotherapy is done on floor only and while doing Neurotherapy treatment, even minute dust particle are easily visible to the Client. Hence, it should be ensured that after every Neurotherapy session, the floor is wiped with appropriate disinfectant.

3- Wall should be well painted with no marks on it of any kind. While doing Neurotherapy, the Client will be facing the wall for a long time, and it is not pleasant to watch dirt marks on the wall during the treatment.

4- If there are mirrors in the Neurotherapy room, ensure it is clean and has no marks on it. Cleint see themselves in the mirror during a Neurotherapy treatment, and nobody wants to see him / herself in a dirty mirror.

5- All equipment should be kept in their designated place while starting a Neurotherapy session. It may get scattered during a Neurotherapy session, but immediately after a Neurotherapy session, it should again be kept at their place.

6- Air-conditioning of Neurotherapy room should be as per requirement. At no time Client should feel very hot or very cold.

7- There should be an arrangement of getting fresh air in the Neurotherapy room. Using Air-Conditioner for a long time makes air stale. Windows should be opened at regular interval for getting fresh air in the room.

8- Lighting of the room should be working all the time. Any fused bulbs or tube light should be replaced immediately.

1.4.2.7.3 Neurotherapy Equipment

Neurotherapy Equipment are most important part of any Neurotherapy Center. Although most of the equipment used in Neurotherapy are non-functional, hence they hardly face any issue, but after long use sometimes they may also get damaged. Following are the maintenance advices for Neurotherapy Equipment -

1- Any damaged equipment should immediately be repaired or replaced.

2- Everybody choose Neurotherapy for improving his / her health. So no one wants to get any disease by using equipment used by someone else. While doing Neurotherapy there is a lot of sweating. Hence there are high chances of infection passing on to another person. For eliminating any chance of passing germs, all the equipment, mattress and pillow covers should be cleaned with appropriate disinfectant.

1.4.2.7.4 Toilet

This is the most neglected area of any organisation. But for creating an overall good image of Neurotherapy, toilet cleaning is very important. Toilets should be cleaned regularly and should smell good all the time.

Notes

Excercise

Q1. **Neurotherapy is an ----- technique:**
a. Indian
b. Arabian
c. American
d. Europian

Q2. **Neurotherapy is based on:**
a. Exercise
b. Meditation
c. Naval Setting
d. All of the above

Q3. **Neurotherapy creates balance in ---- of body:**
a. Acid and Alkaline level
b. Oxygen
c. Water
d. Blood

Q4. **Major benefits of Neurotherapy are:**
a. Makes feel lighter
b. Body detoxification
c. Increase in Energy level
d. All of the above

Q5. **Kidney clear, P Heparin + Basic is ----- treatment:**
a. Detoxification treatment
b. Relaxation Treatment
c. Happy Ending Treatment
d. Body balancing treatment

Q6. **Basic, All Body Ghisai, Ep1, Feather touch is -----treatment:**
a. Detoxification treatment
b. Relaxation Treatment
c. Happy Ending Treatment
d. Body balancing treatment

Q7. **Acid or Alkaline treatment + Basic x 3 times is -----treatment:**
a. Detoxification treatment
b. Relaxation Treatment
c. Happy Ending Treatment
d. Body balancing treatment

Q8. **Old UDF is -----treatment:**
a. Detoxification treatment
b. Digestion Improvement Treatment
c. Happy Ending Treatment
d. Body balancing treatment

Q9. **---- Area should always remain maintain at a Neurotherapy Center:**
a. Reception
b. Neurotherapy room
c. Toilets
d. All of above

Q10. **Ideal location for a Neurotherapy center would be:**
a. At village
b. At outskirts of City
c. Center of city
d. None of above

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2. Preparation For Neurotherapy

Unit 2.1 - Work Area Preparation

Unit 2.2 - Neurotherapist Preparation

Unit 2.3 - Client Preparation

BWS/N2301

Key Learning Outcomes

At the end of this unit, participant will be able to:

1. Explain how to prepare room for Neurotherapy
2. Describe the requirement of Neurotherapy room
3. Define risk assessment procedure of Neurotherapy room
4. Define work attire requirement of a Neurotherapist.
5. Explain the PPE requirement of a Neurotherapist
6. Describe the importance of training for a Neurotherapist.
7. Explain the procedure of assessing the client.
8. Describe the procedure of preparing client.

UNIT 2.1: Work Area Preparation

Unit Objectives

At the end of this unit, participant will be able to:

1. Explain how to prepare room for Neurotherapy
2. Describe the requirement of Neurotherapy Room
3. Define risk assessment procedure of Neurotherapy Room

2.1.1. Room Preparation

Room preparation is the first activity for neurotherapy treatment. Following are the things which needs to be taken care of -

1. Room cleaning
2. Bed Sheet and Pillow cover change
3. Arrangement of Stands
4. Arrangement of Consumables, like - Powder, etc.
5. Arrangement of Towels
6. Lighting arrangment
7. Temperature
8. Music

2.1.1.1 Room Cleaning

Neurotherapy room should be thoroughly cleaned after every treatment and before start of next treatment. Room floor should be wiped with a good floor disinfectant. Room freshener might be used for creating a fragrant environment. It should be ensured that all the walls are also clean and there are no webs on ceilings. Any type of uncleanliness gives very bad impression to client and might be a reason for not coming back again for regular treatment. While a clean treatment room gives a pleasant feeling and client would love to come to that place again and again.

2.1.1.2 Maintenance Of Therapy Bed

After every treatment Bed sheet and Pillow cover should be changed, even though they seems to be clean. Not changing Bed sheets or pillow cover might become a reason for infection spreading from one client to another client, which is not a good thing for a neurotherapy center. Bed sheets and pillow cover should be spotless and should be odorless or should have good smell in them. It will make client experience of treatment very pleasing and he would like to come back again and again for treatment.

2.1.1.3 Arrangements Of Stands

As explained earlier, Stands are very essential equipment for doing Neurotherapy treatment. This should be arranged before start of treatment process. The stand should be cleaned with a good disinfectant. Also the stands should be kept in such a way that it should not make difficult for client to lie on mattress.

2.1.1.4 Arrangement Of Consumables

All the consumables should be arranged before Neurotherapy treatment starting. It includes - Talcum Powder etc.

2.1.1.5 Arrangement Of Towels

Towels should be arranged before hand. It is very useful in case of sweating of Client of Neurotherapist. There should be arrangement of separate towels for client and Neurotherapist. Also it should be changed after every treatment.

2.1.1.6 Arrangement Of Light

Light arrangement in room is very important. It is very nice if you have dimmer, since before treatment start you need bright light for room arrangement and during treatment you can have dim light. Dim light will give soothing effect to cliet during treatment.

2.1.1.7 Room Temperature

Ideally room should have an AC. The temperature of the room should be set between 24 to 26 degrees. Or you can ask client for his / her preference of temperature, based on that you can increase or decrease room temperature.

2.1.1.8 Music Arrangement

Music is not mandatory for Neurotherapy treatment, but it will add value to your center. Music should be soft and soothing to ears. You can even ask client preference on music. Clients will feel privileged if they can listen music of their choice while getting the treatment done.

2.1.2 Work Area Risk Assessment

This is a very important aspect of Room preparation for Neurotherapy Treatment. Following risk assessment should have been done before starting treatment -

2.1.2.1 Electrical Hazard Risk Assessment

In this risk assessment following should be assessed -

1- All electrical equipment and points available in the room are have proper earthing.

2- There is no loose electric connections.

3- There is no joints in wiring, if there is any, it should be properly secured and to be covered with electric tape.

4- All electric equipment are connected to correct power source.

2.1.2.2 Fire Hazard Risk Assessment

In this risk assessment following should be assessed -

1- There is no risk of fire due to electric short circuit.

2- There is no inflammable goods in room, if any, it is secured properly as per guidelines.

3- If any candle is lighted, it is properly kept on table and is away from any inflammable things.

2.1.2.3 Physical Hazard Risk Assessment

In this risk assessment following should be assessed -

1- Neurotherapist should be well trained, he / she should not harm client during treatment by giving wrong pressure at wrong place.

2- The stand should be very stable, they should not fall down on client during treatment.

3- The stand should be firm and provide enough support to neurotherapist, lest he / she should not fall down on client during treatment.

4- All accessories and other consumables are away from client and there is no threat of falling those on Client during procedure.

UNIT 2.2: Neurotherapist Preparation

Unit Objectives

At the end of this unit, participant will be able to:

1. Define Work Attire requirement of a Neurotherapist.
2. Explain the PPE requirement of a Neurotherapist
3. Describe the mental condition of a Neurotherapist.
4. Describe the physical condition of a Neurotherapist.
5. Describe the importance of training for a Neurotherapist.

2.2.1 Attire Of Neurotherapist

A Neurotherapist should be properly dressed as per local culture and beliefs. Ideal uniform could be full sleeve shirt and pant for men and salvar kurta for women. A white coat can be worn on this. The had should be covered with a Head cover. Socks should be worn in foot, to avoid any direct skin touch and to maintain the hygiene also. Similarly Hand gloves can also be worn.

Fig. 2.2.1. Work attire of a Neurotherapist

2.2.2 PPE Requirement

Since no tools are involved in neurotherapy, hence there no big requirement of PPEs. However, as explained in previous topic, gloves, socks to be worn to maintain the hygiene.

Another level of hygiene can be added by wearing face mask to avoid any type of germs passing through breathing.

2.2.3 Mental Preparation

Before Starting the treatment the Neuropathist should be in stable mental condition. He / she should be free from any anger, depression or similar thoughts. He should feel fresh, happy before doing the procedure. There should not be any lack of sleep also.

2.2.4 Physical Condition

Wellness Neurotherapist should be in good physical condition. He / She should be free from any medical disease. He /she should not have any injury.

2.2.5 Training

Wellness Neurotherapist should have completed the proper training under guidance of a able trainer. Without completion of training, he / she should not be allowed to do a procedure on a client. He / She might hurt the client during the activity.

UNIT 2.3: Client Preparation

Unit Objectives

At the end of this unit, participant will be able to:

1. Explain the procedure of assessing the client.
2. Describe the procedure of preparing client.

2.3.1. Client Assessment

1. Assess the client by checking his pain points.
2. Assess the client through liver.
3. Assess the client by checking acid and alkaline through his ring finger in both hands.
4. Assess the client by seeing his tongue and nails.

Fig. 2.3.1. Assessment of Client by a Neurotherapist

2.3.2. Client Preparation

Following are the points for client preparation -

1- Ask Client to be relax.

2- Ask Client to release all tensions for time being.

3- Ask Client to remove chain, watch or any other accessories, it may harm him / her during procedure.

4- Ask client to wear comfortable clothing.

Fig. 2.3.2. Handing over of accessories for safe deposit

Notes

Excercise

Q1. **------ activity is part of Room preparation:**
a. Room cleaning
b. Arrangement of Stand
c. Arrangement of towels
d. All of above

Q2. **Room cleaning should be done with a good disinfectant:**
a. Correct
b. Incorrect

Q3. **Reuse of Bed sheets does not pose risk of spreading infection:**
a. Correct
b. Incorrect

Q4. **------ is important tools for Neurotherapy procedure:**
a. Mattress
b. Stand
c. Talcum powder
d. All of the above

Q5. **------ is part of work area risk assessment:**
a. Electric equipment
b. Loose wirings
c. Earth connection
d. All of the above

Q6. **----- is part of Fire risk assessment :**
a. loose electric wiring
b. Flammable objects
c. Unprotected Fires
d. All of the above

Q7. **Socks should be worn by Neurotherapist to maintain hygiene:**
a. Correct
b. Incorrect

Q8. **----- is most important part of Client Assessment in Neurotherapy:**
a. Checking pain point
b. Checking colour of body
c. Checking height
d. None of the above

Q9. **Client should be ------ during Neurotherapy procedure:**
a. At sleep
b. Relax
c. Standing
d. None of above

Q10. **It is ok to wear any type of accessories during Neurotherapy procedure:**
a. Correct
b. Incorrect

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3. Carry Out Neurotherapy Procedures

Unit 3.1 - Anatomy and Physiology concepts
Unit 3.2 - Nutrition in Food and Balanced diet
Unit 3.3 - Conducting Neurotherapy Procedures
Unit 3.4 - Post Neurotherapy Activities

BWS/N2302

Key Learning Outcomes

At the end of this unit, participant will be able to:

1. Explain about human body anatomy
2. Describe the benefits of Neurotherapy on human body
3. Explain meaning of Nutrition
4. Describe different type of vitamins
5. Explain what is balanced diet
6. Describe the check points before Neurotherapy procedures
7. Demonstrate the key Neurotherapy procedures
8. Explain about documentation after Neurotherapy procedure
9. Describe procedure of client counseling after Neurotherapy procedure

UNIT 3.1:Anatomy & Physiology Concept

Unit Objectives

1. Explain about human body anatomy
2. Explain various internal organs and glands
3. Define role of organs and glands in a person's health

3.1.1 Human Body

Human Body is a very complex machine. It works well when all of its components works in tandem and remain in good condition. We can divide Human Body in following systems -

1- Skeletal System

2- Cardiovascular System

3- Muscular System

4- Digestive System

5- Endocrine System

6- Nervous System

7- Respiratory System

8- Immune & Lymphatic System

9- Urinary System

10- Female Reproductive System

11- Male Reproductive System

3.1.1.1 Skeletal System

The skeletal system in an adult body is made up of 206 individual bones. These bones are arranged into two major divisions: the axial skeleton and the appendicular skeleton. The axial skeleton runs along the body's midline axis and is made up of 80 bones in the following regions:

Skull, Hyoid, Auditory ossicles, Ribs, Sternum and Vertebral column

The appendicular skeleton is made up of 126 bones in the following regions:

Upper limbs, Lower limbs, Pelvic girdle and Pectoral (shoulder) girdle

Fig. 3.1.1. Skeletal System

3.2.1.1.1 Skull

The skull is composed of 22 bones that are fused together except for the mandible. These 21 fused bones are separate in children to allow the skull and brain to grow, but fuse to give added strength and protection as an adult. The mandible remains as a movable jaw bone and forms the only movable joint in the skull with the temporal bone.

The bones of the superior portion of the skull are known as the cranium and protect the brain from damage. The bones of the inferior and anterior portion of the skull are known as facial bones and support the eyes, nose, and mouth.

Fig. 3.1.2. Skull

3.1.1.1.2 Hyoid And Auditory Ossicles

The hyoid is a small, U-shaped bone found just inferior to the mandible. The hyoid is the only bone in the body that does not form a joint with any other bone—it is a floating bone. The hyoid's function is to help hold the trachea open and to form a bony connection for the tongue muscles.

The malleus, incus, and stapes—known collectively as the auditory ossicles—are the smallest bones in the body. Found in a small cavity inside of the temporal bone, they serve to transmit and amplify sound from the eardrum to the inner ear.

Fig. 3.1.3. Hyoid & Auditory Ossicles

3.1.1.1.3 Vertebrae

Twenty-six vertebrae form the vertebral column of the human body. They are named by region:

Cervical (neck) - 7 vertebrae

Thoracic (chest) - 12 vertebrae

Lumbar (lower back) - 5 vertebrae

Sacrum- 1 vertebra

Coccyx (tailbone) - 1 vertebra

With the exception of the singular sacrum and coccyx, each vertebra is named by the first letter of its region and its position along the superior-inferior axis. For example, the most superior thoracic vertebra is called T1, and the most inferior is called T12.

Fig. 3.1.4. Vertebrae

3.1.1.1.4 Ribs and Sternum

The sternum, or breastbone, is a thin, knife-shaped bone located along the midline of the anterior side of the thoracic region of the skeleton. The sternum connects to the ribs by thin bands of cartilage called the costal cartilage.

There are 12 pairs of ribs that together with the sternum form the ribcage of the thoracic region. The first seven ribs are known as “true ribs” because they connect the thoracic vertebrae directly to the sternum through their own band of costal cartilage. Ribs 8, 9, and 10 all connect to the sternum through cartilage that is connected to the cartilage of the seventh rib, so we consider these to be “false ribs.” Ribs 11 and 12 are also false ribs but are also considered to be “floating ribs” because they do not have any cartilage attachment to the sternum at all.

Fig. 3.1.5. Ribs & Sternum

3.1.1.1.5 Pectoral Girdle And Upper Limb

The pectoral girdle connects the upper limb (arm) bones to the axial skeleton and consists of the left and right clavicles and left and right scapulae.

The humerus is the bone of the upper arm. It forms the ball and socket joint of the shoulder with the scapula and forms the elbow joint with the lower arm bones. The radius and ulna are the two bones of the forearm. The ulna is on the medial side of the forearm and forms a hinge joint with the humerus at the elbow. The radius allows the forearm and hand to turn over at the wrist joint.

The lower arm bones form the wrist joint with the carpals, a group of eight small bones that give added flexibility to the wrist. The carpals are connected to the five metacarpals that form the bones of the hand and connect to each of the fingers. Each finger has three bones known as phalanges, except for the thumb, which only has two phalanges.

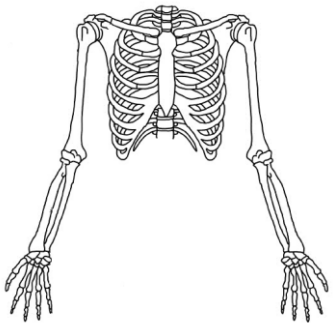


Fig. 3.1.6. Pictoral Girdle & Upper Limb

3.1.1.1.6 Pelvic Girdle And Lower Limb

Formed by the left and right hip bones, the pelvic girdle connects the lower limb (leg) bones to the axial skeleton.

The femur is the largest bone in the body and the only bone of the thigh (femoral) region. The femur forms the ball and socket hip joint with the hip bone and forms the knee joint with the bia and patella. Commonly called the kneecap, the patella is special because it is one of the few bones that are not present at birth. The patella forms in early childhood to support the knee for walking and crawling.

The bia and fibula are the bones of the lower leg. The bia is much larger than the fibula and bears almost all of the body's weight. The fibula is mainly a muscle attachment point and is used to help maintain balance. The bia and fibula form the ankle joint with the talus, one of the seven tarsal bones in the foot.

Fig. 3.1.7. Pelvic Girdle & Lower Limb

The tarsals are a group of seven small bones that form the posterior end of the foot and heel. The tarsals form joints with the five long metatarsals of the foot. Then each of the metatarsals forms a joint with one of the sets of phalanges in the toes. Each toe has three phalanges, except for the big toe, which only has two phalanges.

3.1.1.2 Cardiovascular System

The cardiovascular system consists of the heart, blood vessels, and the approximately 5 liters of blood that the blood vessels transport. Responsible for transporting oxygen, nutrients, hormones, and cellular waste products throughout the body, the cardiovascular system is powered by the body's hardest-working organ — the heart, which is only about the size of a closed fist. Even at rest, the average heart easily pumps over 5 liters of blood throughout the body every minute.

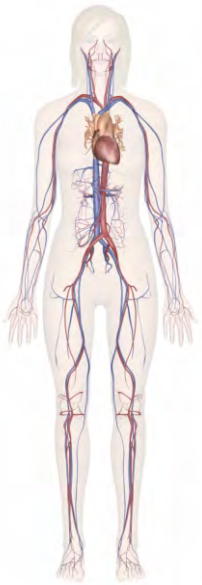


Fig. 3.1.8. Cardiovascular System

3.1.1.2.1 The Heart

The heart is a muscular pumping organ located medial to the lungs along the body's midline in the thoracic region. The bottom tip of the heart, known as its apex, is turned to the left so that about 2/3 of the heart is located on the body's left side with the other 1/3 on the right. The top of the heart, known as the heart's base, connects to the great blood vessels of the body: the aorta, vena cava, pulmonary trunk, and pulmonary veins.

There are 2 primary circulatory loops in the human body: the pulmonary circulation loop and the systemic circulation loop.

Fig. 3.1.9. The Heart

Pulmonary circulation transports de-oxygenated blood from the right side of the heart to the lungs, where the blood picks up oxygen and returns to the left side of the heart. The pumping chambers of the heart that support the pulmonary circulation loop are the right atrium and right ventricle.

Systemic circulation carries highly oxygenated blood from the left side of the heart to all of the tissues of the body (with the exception of the heart and lungs). Systemic circulation removes wastes from body tissues and returns de-oxygenated blood to the right side of the heart. The left atrium and left ventricle of the heart are the pumping chambers for the systemic circulation loop.

3.1.1.2.2 Blood Vessels

Blood vessels are the body's highways that allow blood to flow quickly and efficiently from the heart to every region of the body and back again. The size of blood vessels corresponds with the amount of blood that passes through the vessel. All blood vessels contain a hollow area called the lumen through which blood is able to flow. Around the lumen is the wall of the vessel, which may be thin in the case of capillaries or very thick in the case of arteries.

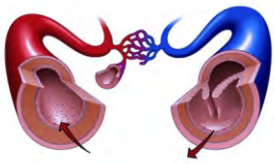


Fig. 3.1.10. Blood Vessels

3.1.1.3 Muscular System

The muscular system is responsible for the movement of the human body. Attached to the bones of the skeletal system are about 700 named muscles that make up roughly half of a person's body weight. Each of these muscles is a discrete organ constructed of skeletal muscle tissue, blood vessels, tendons, and nerves. Muscle tissue is also found inside of the heart, digestive organs, and blood vessels. In these organs, muscles serve to move substances throughout the body.

There are three types of muscle tissue: Visceral, cardiac, and skeletal.

Fig. 3.1.11. Muscular System

3.1.1.3.1 Visceral Muscle

Visceral muscle is found inside of organs like the stomach, intestines, and blood vessels. The weakest of all muscle tissues, visceral muscle makes organs contract to move substances through the organ. Because visceral muscle is controlled by the unconscious part of the brain, it is known as involuntary muscle—it cannot be directly controlled by the conscious mind. The term “smooth muscle” is often used to describe visceral muscle because it has a very smooth, uniform appearance when viewed under a microscope. This smooth appearance starkly contrasts with the banded appearance of cardiac and skeletal muscles.

3.1.1.3.2 Cardiac Muscle

Found only in the heart, cardiac muscle is responsible for pumping blood throughout the body. Cardiac muscle tissue cannot be controlled consciously, so it is an involuntary muscle. While hormones and signals from the brain adjust the rate of contraction, cardiac muscle stimulates itself to contract. The natural pacemaker of the heart is made of cardiac muscle tissue that stimulates other cardiac muscle cells to contract. Because of its self-stimulation, cardiac muscle is considered to be autorhythmic or intrinsically controlled.

The cells of cardiac muscle tissue are striated—that is, they appear to have light and dark stripes when viewed under a light microscope. The arrangement of protein fibers inside of the cells causes these light and dark bands. Striations indicate that a muscle cell is very strong, unlike visceral muscles.

The cells of cardiac muscle are branched X or Y-shaped cells tightly connected together by special junctions called intercalated disks. Intercalated disks are made up of finger like projections from two neighbouring cells that interlock and provide a strong bond between the cells. The branched structure and intercalated disks allow the muscle cells to resist high blood pressures and the strain of pumping blood throughout a lifetime. These features also help to spread electrochemical signals quickly from cell to cell so that the heart can beat as a unit.

3.1.1.3.3 Skeletal Muscle

Skeletal muscle is the only voluntary muscle tissue in the human body—it is controlled consciously. Every physical action that a person consciously performs (e.g. speaking, walking, or writing) requires skeletal muscle. The function of skeletal muscle is to contract to move parts of the body closer to the bone that the muscle is attached to. Most skeletal muscles are attached to two bones across a joint, so the muscle serves to move parts of those bones closer to each other. Skeletal muscle cells form when many smaller progenitor cells lump themselves together to form long, straight, multinucleated fibers. Striated just a like cardiac muscle, these skeletal muscle fibers are very strong. Skeletal muscle derives its name from the fact that these muscles always connect to the skeleton in at least one place.

3.1.1.4 Digestive System

The digestive system is a group of organs working together to convert food into energy and basic nutrients to feed the entire body. Food passes through a long tube inside the body known as the alimentary canal or the gastrointestinal tract (GI tract). The alimentary canal is made up of the oral cavity, pharynx, esophagus, stomach, small intestines, and large intestines. In addition to the alimentary canal, there are several important accessory organs that help your body to digest food. Following are the main parts of Digestive System.

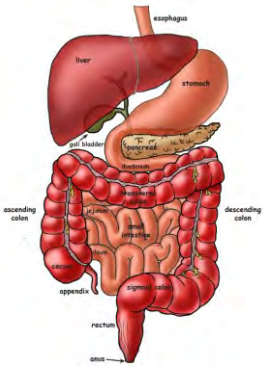


Fig. 3.1.12. Digestive System

3.1.1.4.1 Mouth

Food begins its journey through the digestive system in the mouth, also known as the oral cavity. Inside the mouth are many accessory organs that aid in the digestion of food—the tongue, teeth, and salivary glands. Teeth chop food into small pieces, which are moistened by saliva before the tongue and other muscles push the food into the pharynx.

Fig. 3.1.13. Mouth

3.1.1.4.2 Teeth

The teeth are 32 small, hard organs found along the anterior and lateral edges of the mouth. Each tooth is made of a bone-like substance called dentin and covered in a layer of enamel—the hardest substance in the body. Teeth are living organs and contain blood vessels and nerves under the dentin in a soft region known as the pulp. The teeth are designed for cutting and grinding food into smaller pieces.

Fig. 3.1.14. Teeth

3.1.1.4.3 Tongue

The tongue is located on the inferior portion of the mouth just posterior and medial to the teeth. It is a small organ made up of several pairs of muscles covered in a thin, bumpy, skin-like layer. The outside of the tongue contains many rough papillae for gripping food as it is moved by the tongue's muscles. The taste buds on the surface of the tongue detect taste molecules in food and connect to nerves in the tongue to send taste information to the brain. The tongue also helps to push food toward the posterior part of the mouth for swallowing.

Fig. 3.1.15. Tongue

3.1.1.4.4 Salivary Glands

Surrounding the mouth are 3 sets of salivary glands. The salivary glands are accessory organs that produce a watery secretion known as saliva. Saliva helps to moisten food and begins the digestion of carbohydrates. The body also uses saliva to lubricate food as it passes through the mouth, pharynx, and esophagus.

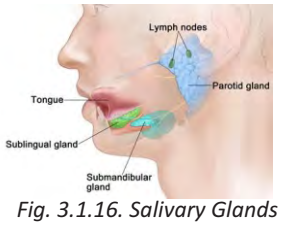


Fig. 3.1.16. Salivary Glands

3.1.1.4.5 Pharynx

The pharynx, or throat, is a funnel-shaped tube connected to the posterior end of the mouth. The pharynx is responsible for the passing of masses of chewed food from the mouth to the esophagus. The pharynx also plays an important role in the respiratory system, as air from the nasal cavity passes through the pharynx on its way to the larynx and eventually the lungs. Because the pharynx serves two different functions, it contains a flap of tissue known as the epiglottis that acts as a switch to route food to the esophagus and air to the larynx.

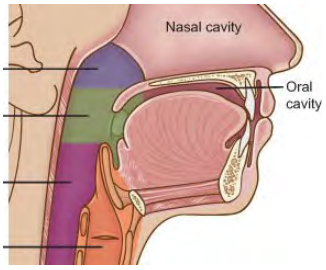


Fig. 3.1.17. Pharynx

3.1.1.4.6 Esophagus

The esophagus is a muscular tube connecting the pharynx to the stomach that is part of the upper gastrointestinal tract. It carries swallowed masses of chewed food along its length. At the inferior end of the esophagus is a muscular ring called the lower esophageal sphincter or cardiac sphincter. The function of this sphincter is to close off the end of the esophagus and trap food in the stomach.

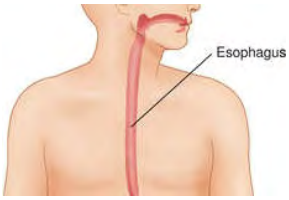


Fig. 3.1.18. Esophagus

3.1.1.4.7 Stomach

The stomach is a muscular sac that is located on the left side of the abdominal cavity, just inferior to the diaphragm. In an average person, the stomach is about the size of their two fists placed next to each other. This major organ acts as a storage tank for food so that the body has time to digest large meals properly. The stomach also contains hydrochloric acid and digestive enzymes that continue the digestion of food that began in the mouth.

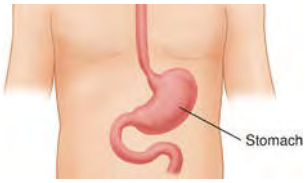


Fig. 3.1.19. Stomach

3.1.1.4.8 Small Intestine

The small intestine is a long, thin tube about 1 inch in diameter and about 10 feet long that is part of the lower gastrointestinal tract. It is located just inferior to the stomach and takes up most of the space in the abdominal cavity. The entire small intestine is coiled like a hose, and the inside surface is full of many ridges and folds. These folds are used to maximize the digestion of food and absorption of nutrients. By the time food leaves the small intestine, around 90% of all nutrients have been extracted from the food that entered it.

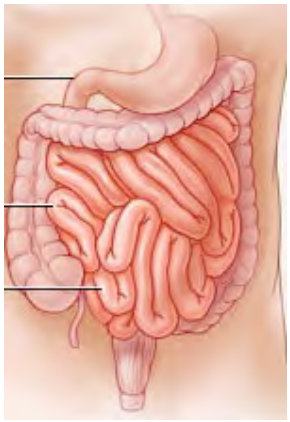


Fig. 3.1.20. Small Intestine

3.1.1.4.9 Liver And Gallbladder

The liver is a roughly triangular accessory organ of the diges ve system located to the right of the stomach, just inferior to the diaphragm and superior to the small intes ne. The liver weighs about 3 pounds and is the second largest organ in the body. The liver has many different func ons in the body, but the main func on of the liver in diges on is the produc on of bile and its secre on into the small intes ne. The gallbladder is a small, pear-shaped organ located just posterior to the liver. The gallbladder is used to store and recycle excess bile from the small intes ne so that it can be reused for the diges on of food.

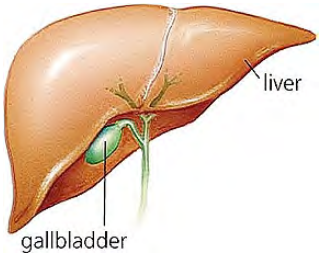


Fig. 3.1.21. Liver & Gall Bladder

3.1.1.4.10 Pancreas

The pancreas is a large gland located just inferior and posterior to the stomach. It is about 6 inches long and shaped like short, lumpy snake with its "head" connected to the duodenum and its "tail" pointing to the left wall of the abdominal cavity. The pancreas secretes digestive enzymes into the small intestine to complete the chemical digestion.

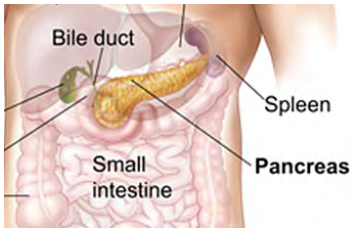


Fig. 3.1.22. Pancreas

3.1.1.4.11 Large Intestine

The large intestine is a long, thick tube about 2 ½ inches in diameter and about 5 feet long. It is located just inferior to the stomach and wraps around the superior and lateral border of the small intestine. The large intestine absorbs water and contains many symbiotic bacteria that aid in the breaking down of wastes to extract some small amounts of nutrients. Faeces in the large intestine exit the body through the anal canal.

Fig. 3.1.23. Small Intestine

3.1.1.5 Endocrine System

The endocrine system includes all of the glands of the body and the hormones produced by those glands. The glands are controlled directly by stimulation from the nervous system as well as by chemical receptors in the blood and hormones produced by other glands. By regulating the functions of organs in the body, these glands help to maintain the body's homeostasis, Cellular metabolism, reproduction, sexual development, sugar and mineral homeostasis, heart rate, and digestion.

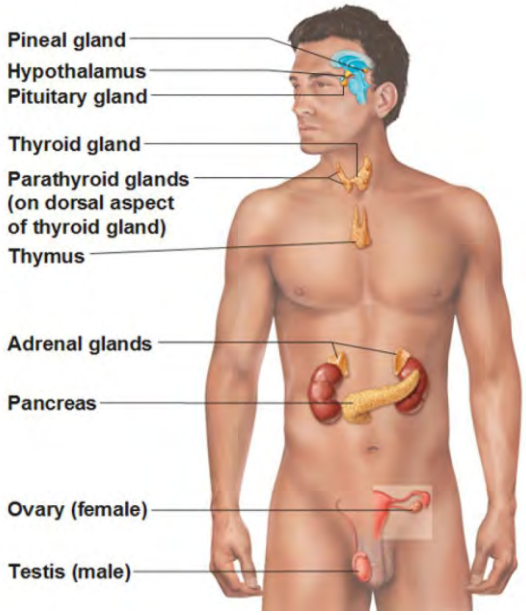


Fig. 3.1.24. Endocrine System

3.1.1.5.1 Hypothalamus

The hypothalamus is a part of the brain located superior and anterior to the brain stem and inferior to the thalamus. It serves many different functions in the nervous system and is also responsible for the direct control of the endocrine system through the pituitary gland. The hypothalamus contains special cells called neurosecretory cells—neurons that secrete hormones:

1- Thyrotropin-releasing hormone (TRH)
2- Growth hormone-releasing hormone (GHRH)
3- Growth hormone-inhibiting hormone (GHIH)
4- Gonadotropin-releasing hormone (GnRH)
5- Corticotropin-releasing hormone (CRH)
6- Oxytocin
7- Antidiuretic hormone (ADH)

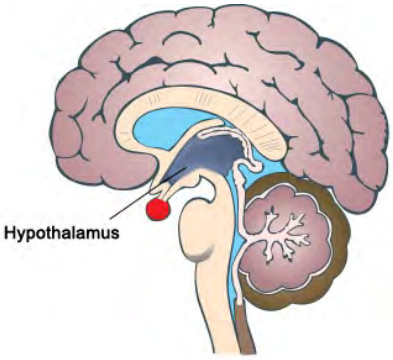


Fig. 3.1.25. Hypothalamus

3.1.1.5.2 Pituitary Gland

The pituitary gland, also known as the hypophysis, is a small pea-sized lump of tissue connected to the inferior portion of the hypothalamus of the brain. Many blood vessels surround the pituitary gland to carry the hormones it releases throughout the body. Situated in a small depression in the sphenoid bone called the sella turcica, the pituitary gland is actually made of 2 completely separate structures: the posterior and anterior pituitary glands.

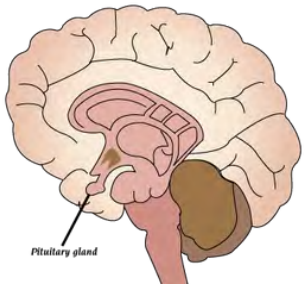


Fig. 2.2.26. Pituitary Gland

3.1.1.5.3 Pineal Gland

The pineal gland is a small pinecone-shaped mass of glandular tissue found just posterior to the thalamus of the brain. The pineal gland produces the hormone melatonin that helps to regulate the human sleep-wake cycle known as the circadian rhythm. The activity of the pineal gland is inhibited by stimulation from the photoreceptors of the retina. This light sensitivity causes melatonin to be produced only in low light or darkness. Increased melatonin production causes humans to feel drowsy at nighttime when the pineal gland is active.

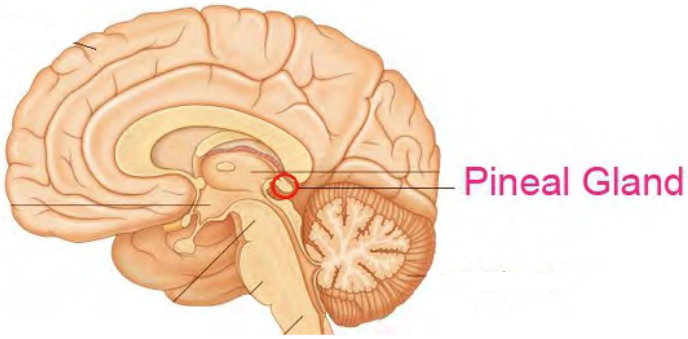


Fig. 3.1.27. Pineal Gland

3.1.1.5.4 Thyroid Gland

The thyroid gland is a butterfly-shaped gland located at the base of the neck and wrapped around the lateral sides of the trachea. The thyroid gland produces 3 major hormones:

- Calcitonin
- Triiodothyronine (T3)
- Thyroxine (T4)

Calcitonin is released when calcium ion levels in the blood rise above a certain set point. Calcitonin functions to reduce the concentration of calcium ions in the blood by aiding the absorption of calcium into the matrix of bones. The hormones T3 and T4 work together to regulate the body's metabolic rate. Increased levels of T3 and T4 lead to increased cellular activity and energy usage in the body.

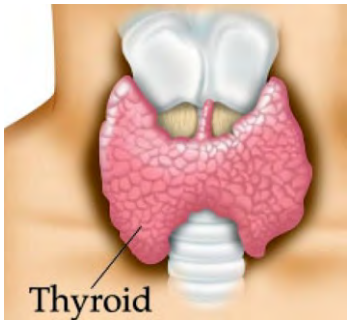


Fig. 3.1.28. Thyroid Gland

3.1.1.5.5 Parathyroid Glands

The parathyroid glands are 4 small masses of glandular tissue found on the posterior side of the thyroid gland. The parathyroid glands produce the hormone parathyroid hormone (PTH), which is involved in calcium ion homeostasis. PTH is released from the parathyroid glands when calcium ion levels in the blood drop below a set point. PTH stimulates the osteoclasts to break down the calcium containing bone matrix to release free calcium ions into the bloodstream. PTH also triggers the kidneys to return calcium ions filtered out of the blood back to the bloodstream so that it is conserved.

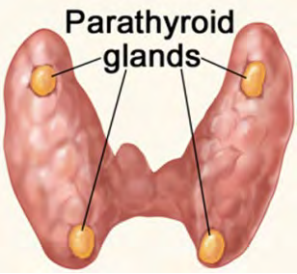


Fig. 3.1.29. Parathyroid Glands

3.1.1.5.6 Adrenal Glands

The adrenal glands are a pair of roughly triangular glands found immediately superior to the kidneys. The adrenal glands are each made of 2 distinct layers, each with their own unique functions: the outer adrenal cortex and inner adrenal medulla.

Androgens, such as testosterone, are produced at low levels in the adrenal cortex to regulate the growth and activity of cells that are receptive to male hormones. In adult males, the amount of androgens produced by the testes is many times greater than the amount produced by the adrenal cortex, leading to the appearance of male secondary sex characteristics.

The adrenal medulla produces the hormones epinephrine and norepinephrine under stimulation by the sympathetic division of the autonomic nervous system. Both of these hormones help to increase the flow of blood to the brain and muscles to improve the "fight-or-flight" response to stress. These hormones also work to increase heart rate, breathing rate, and blood pressure while decreasing the flow of blood to and function of organs that are not involved in responding to emergencies.

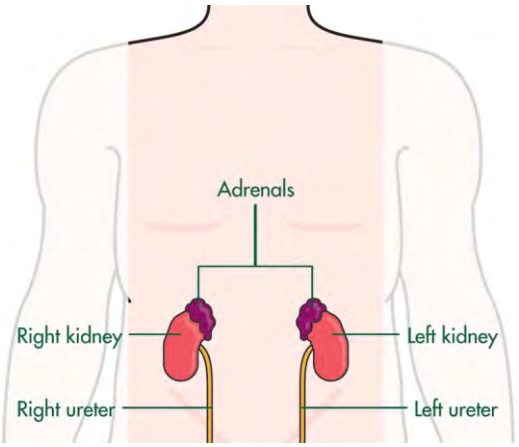


Fig. 3.1.30. Adrenal Glands

3.1.1.5.7 Pancreas

The pancreas is a large gland located in the abdominal cavity just inferior and posterior to the stomach. The pancreas is considered to be a heterocrine gland as it contains both endocrine and exocrine tissue. The endocrine cells of the pancreas makeup just about 1% of the total mass of the pancreas and are found in small groups throughout the pancreas called islets of Langerhans. Within these islets are 2 types of cells—alpha and beta cells. The alpha cells produce the hormone glucagon, which is responsible for raising blood glucose levels.

Glucagon triggers muscle and liver cells to break down the polysaccharide glycogen to release glucose into the bloodstream. The Beta cells produce the hormone insulin, which is responsible for lowering blood glucose levels after a meal. Insulin triggers the absorption of glucose from the blood into cells, where it is added to glycogen molecules for storage.

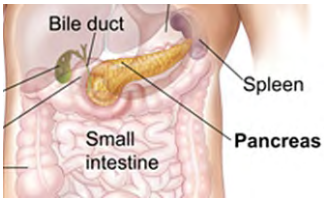
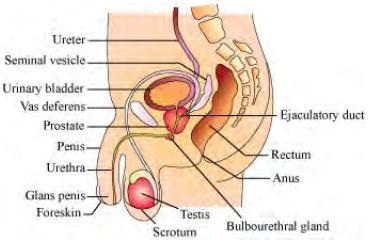


Fig. 3.1.31. Pancreas

3.1.1.5.8 Gonads

The gonads—ovaries in females and testes in males—are responsible for producing the sex hormones of the body. These sex hormones determine the secondary sex characteristics of adult females and adult males.

Testes: The testes are a pair of ellipsoid organs found in the scrotum of males that produce the androgen testosterone in males after the start of puberty. Testosterone has effects on many parts of the body, including the muscles, bones, sex organs, and hair follicles. This hormone causes growth and increases in strength of the bones and muscles, including the accelerated growth of long bones during adolescence. During puberty, testosterone controls the growth and development of the sex organs and body hair of males, including pubic, chest, and facial hair. In men who have inherited genes for baldness, testosterone triggers the onset of androgenic alopecia, commonly known as male pattern baldness.



Ovaries: The ovaries are a pair of almond-shaped glands located in the pelvic body cavity lateral and superior to the uterus in females. The ovaries produce the female sex hormones progesterone and estrogens. Progesterone is most active in females during ovulation and pregnancy where it maintains appropriate conditions in the human body to support a developing fetus. Estrogens are a group of related hormones that function as the primary female sex hormones. The release of estrogen during puberty triggers the development of female secondary sex characteristics such as uterine development, breast development, and the growth of pubic hair. Estrogen also triggers the increased growth of bones during adolescence that leads to adult height and proportions.

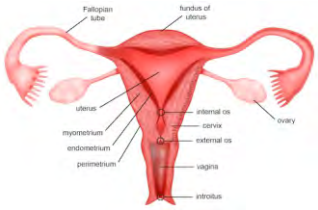


Fig. 3.1.32. Gonads

3.1.1.5.9 Thymus

The thymus is a soft, triangular-shaped organ found in the chest posterior to the sternum. The thymus produces hormones called thymosins that help to train and develop T-lymphocytes during fetal development and childhood. The T-lymphocytes produced in the thymus go on to protect the body from pathogens throughout a person's entire life. The thymus becomes inactive during puberty and is slowly replaced by adipose tissue throughout a person's life.

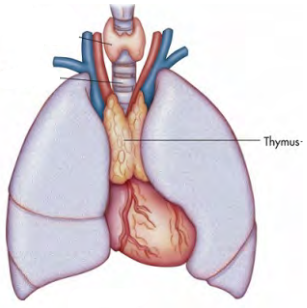


Fig. 3.1.33. Thymus

3.1.1.6 Nervous System

The nervous system consists of the brain, spinal cord, sensory organs, and all of the nerves that connect these organs to the rest of the body. Together, these organs are responsible for the control of the body and communication among its parts. The brain and spinal cord form the control center known as the central nervous system (CNS), where information is evaluated and decisions made. The sensory nerves and sense organs of the peripheral nervous system (PNS) monitor.

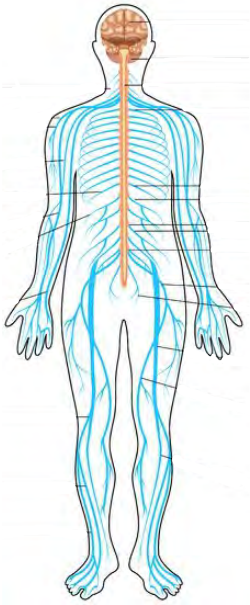


Fig. 3.1.34. Nervous System

3.1.1.7 Respiratory System

The cells of the human body require a constant stream of oxygen to stay alive. The respiratory system provides oxygen to the body's cells while removing carbon dioxide, a waste product that can be lethal if allowed to accumulate. There are 3 major parts of the respiratory system: the airway, the lungs, and the muscles of respiration. The airway, which includes the nose, mouth, pharynx, larynx, trachea, bronchi, and bronchioles, carries air between the lungs and the body's exterior.

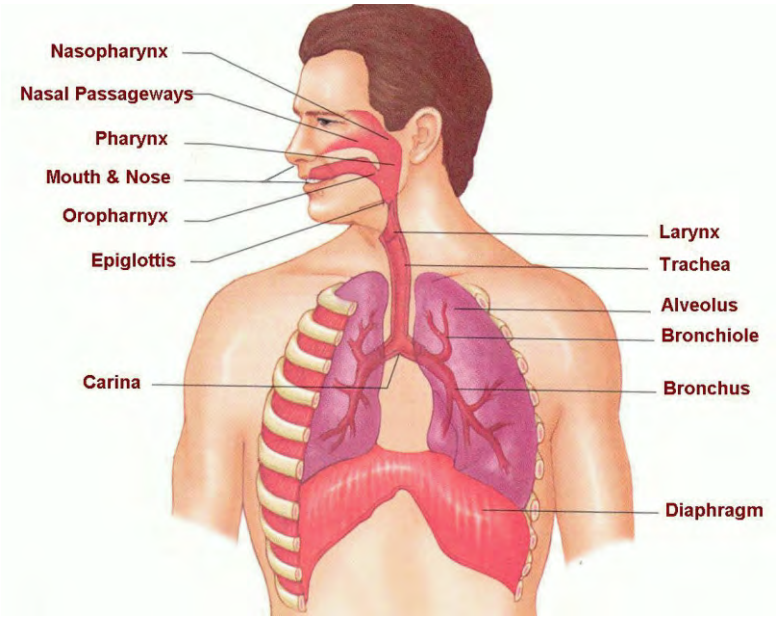


Fig. 3.1.35. Respiratory System

3.1.1.8 Immune And Lymphatic Systems

The immune and lymphatic systems are two closely related organ systems that share several organs and physiological functions. The immune system is our body's defense system against infectious pathogenic viruses, bacteria, and fungi as well as parasitic animals and protists. The immune system works to keep these harmful agents out of the body and attacks those that manage to enter. The lymphatic system is a system of capillaries, vessels, and nodes.

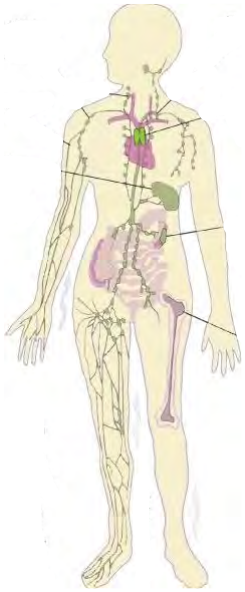


Fig. 3.1.36. Immune & Lymphatic System

3.1.1.9 Urinary System

The urinary system consists of the kidneys, ureters, urinary bladder, and urethra. The kidneys filter the blood to remove wastes and produce urine. The ureters, urinary bladder, and urethra together form the urinary tract, which acts as a plumbing system to drain urine from the kidneys, store it, and then release it during urination. Besides filtering and eliminating wastes from the body, the urinary system also maintains the homeostasis of water, ions, pH, blood pressure and calcium.

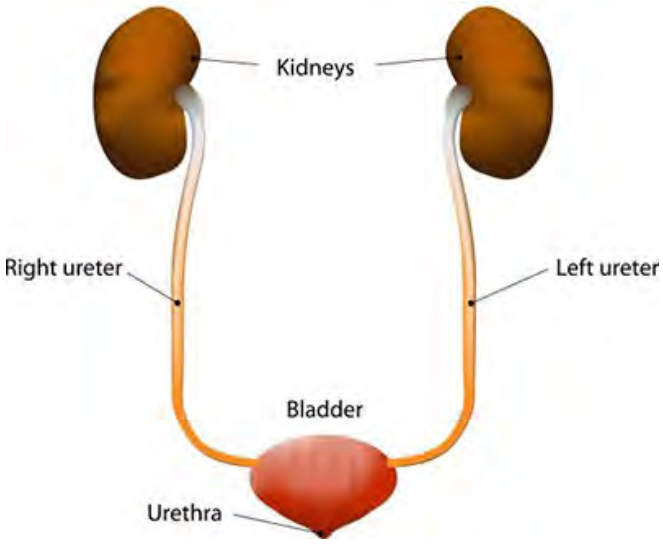


Fig. 3.1.37. Urinary System

3.1.1.10 Female Reproductive System

The female reproductive system includes the ovaries, fallopian tubes, uterus, vagina, vulva, mammary glands, and breasts. These organs are involved in the production and transportation of gametes and the production of sex hormones. The female reproductive system also facilitates the fertilization of ova by sperm and supports the development of offspring during pregnancy and infancy.

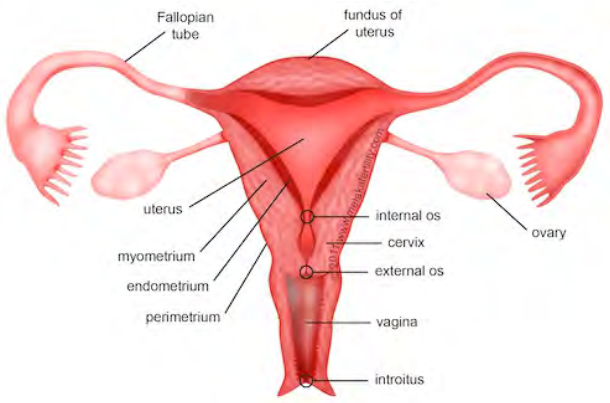


Fig. 3.1.38. Female Reproductive System

3.1.1.11 Male Reproductive System

The Male reproductive system comprises of many organs, whose main function is to produce and supply sperms for reproduction. The male sex system is formed by testosterone secreted from the fetal testes; on reaching puberty, the secondary sex organ gets developed and become fully functional. Its main function is to produce Sperm in the testes and to send it by the epididymis, ejaculatory duct, and urethra. The sperms are released from the penis during ejaculation.

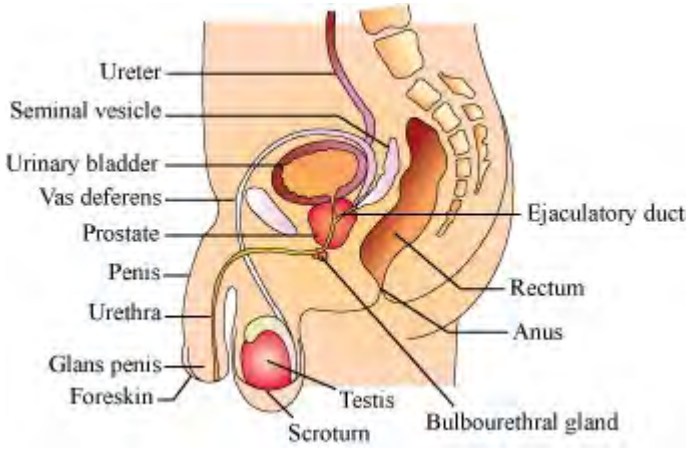


Fig. 3.1.39. Male Reproductive System

UNIT 3.2: Nutrition In Food And Balanced Diet

Unit Objectives

At the end of this unit, participant will be able to:

1. Explain meaning of nutrition
2. Describe classifica on of nutrition available in food
3. Describe different type of vitamins
4. Explain what is balanced diet

3.2.1 What Is Nutrition?

The word 'Nutrition' means the act or process of nourishing or of being nourished, a 'nutrient' means any substance that nourishes an organism. A nutrient can also be defined as a chemical that an organism needs to live and grow or a substance used inti an organism's metabolism which must be taken in from its environment.
We need nutrients as they provide energy for our body, help build and repair tissues and regulate body processes. The food we take is our main source of nutrition; the food is digested by our digestive system and the nutrients are absorbed from this process.

Nutrients are classified into 6 groups; they are carbohydrates, fats, proteins, vitamins, minerals and water.

Fig. 3.2.1. Food

3.2.1.1 Carbohydrates

A carbohydrate is an organic compound that consists only of carbon, hydrogen, and oxygen. Carbohydrates supply energy to our body; they also help in growth and maintenance of the body and provide fiber to the body. 50%-60% of calories required by body comes from carbohydrate. Some of the sources of carbohydrates are bread, rice, vegetables such as potatoes, green beans and corn.
Other food items rich in carbohydrates are sugar, honey and fruits.

3.2.1.2 Proteins

Proteins are large biological molecules consisting of one or more chains of amino acids. Proteins are very important for our body as they help build and repair body tissues, fight infections and supply energy to the body. Some of the sources of proteins are meat, poultry, fish, eggs, milk, curds, peas and nuts.

3.2.1.3 Fats

Fat consist of a wide group of compounds that are generally soluble in organic solvents and generally insoluble in water. Fats supply concentrated sources of energy to our body; they also help in carrying vitamins essential to our body. Most importantly fats provide a feeling of fullness and satisfaction after each meal as our bodies generally take longer to digest fats.

3.2.1.4 Vitamins

A Vitamin is an organic compound required for our body; as a vital nutrient in limited amounts. Vitamins are further classified as Vitamins A, B, C, D, E and K. Vitamins play a vital in maintain a healthy body as each type of Vitamin provides plenty of benefits.

3.2.1.4.1 Vitamin A

Helps keep eyes healthy and able to adjust to dim light.
Helps keep skin healthy.
Helps keep lining of mouth, nose, throat and digestive tract healthy and resistant to infection.
Promotes growth.
Food sources include liver, dark green and deep yellow vegetables such as broccoli, collards and other green leafy vegetables, carrots, pumpkin, sweet potatoes, winter squash

3.2.1.4.2 Vitamin B Complex

Thiamin (B1)
Riboflavin (B2)
Niacin (B3)
Pantothenic Acid (B5)
Pyridoxine (B6)
Biotin
Folate (Folic Acid or Folacin) B9

3.2.1.4.2.1 Thiamin (B1)

Helps body cells obtain energy from food.
Helps keep nerves healthy.
Promotes good appetite and digestion.
Food sources include: meat, poultry, fish, dried beans and peas, nuts, enriched and whole-grain breads and cereals.

3.2.1.4.2.2 Riboflavin (B2)

Helps cells use oxygen to release energy from food.
Helps keep eyes healthy and vision clear.
Helps keep skin around mouth and nose healthy.
Food sources include: milk, liver, meat, poultry, fish, eggs and green leafy vegetables.

3.2.1.4.2.3 Niacin (B3)

Helps cells use oxygen to release energy from food.
Maintains health of skin, tongue, digestive tract and nervous system.
Food sources include: liver, meat, poultry, and fish, peanuts and peanut butter, dried beans and dried peas, and enriched and whole-grain

3.2.1.4.2.4 Pantothenic (B5)

Aids in the metabolism of fat.
Aids in the formation of cholesterol and hormones.
Food sources include: liverwurst, meats, poultry, egg yolk, wheat germ, rice germ, tomato paste, sweet potatoes, oatmeal and milk

3.2.1.4.2.5 Pyridoxin (B6)

Needed to help nervous tissues function normally.
Helps to maintain the health of the skin and red blood cells.
Assists in the metabolism of proteins, carbohydrates, and fats.
Food sources include: liver, lean meats, cereals, vegetables and milk.

3.2.1.4.2.6 Biotin

Essential in the breakdown of carbohydrates, lipids, and proteins in the body.
Food sources include: liver, kidneys, egg yolk, vegetables and fruits (especially bananas, grapefruits, watermelon, and strawberries).

3.2.1.4.2.7 Folate (Folic Acid or Folacin) B9

Helps body produce normal red blood cells.
Helps in the biochemical reactions of cells in the production of energy.
Reduces the risk of neural tube birth defects in newborns.
Food sources include: most enriched breads, flour, corn meal, pasta, rice and other grain products; vegetables; mustard and turnip greens; liver; citrus fruit juices; and legumes.

3.2.1.4.3 Vitamin C (Ascorbic Acid)

Helps form cementing substances such as collagen that hold body cells together, thus strengthening blood vessels and hastening healing of wounds and bones. Increases resistance to infections. Helps body absorb iron in the diet.
Vitamin C is an essential compound of collagen, a protein found in the skin that gives it elasticity.
Food sources include: grapefruit, grapefruit juice, honeydew melon, kiwi fruit, mango, orange juice, papaya, strawberries, asparagus, broccoli, brussels sprouts, cabbage, cauliflower, kale, sweet green sweet potato and red peppers.

3.2.1.4.4 Vitamin D

Helps body absorb calcium.
Helps body build strong bones and teeth.
Food sources include: vitamin D-fortified milk.
In addition: Exposure to sunlight is another source of
Vitamin D. (Vitamin D is produced in the skin with stimulus of sun.)

3.2.1.4.5 Vitamin E

Active in maintaining the involuntary nervous system, vascular system, and involuntary muscles.
Vitamin E is an antioxidant that also helps protect cells from free radicals. It works along with vitamin A for numerous skin benefits. This vitamin combination is often found in facial creams and other skin care cosmetics.
Food sources include: vegetable oils, margarine (butter, cooking oil) made from vegetable oils.

3.2.1.4.6 Vitamin K

Necessary for proper blood clotting.
Food sources include: green leafy vegetables, milk, meat, eggs.

3.2.1.5 Minerals

Minerals make 60 to 80% of all the inorganic material in our body. They can be further classified as microminerals and macro-minerals. Macro-minerals are minerals that your body needs in relatively large and steady doses. In contrast, trace minerals or microminerals are minerals that your body only needs in small amounts (usually less than 100 milligrams a day).
Macro-minerals are calcium, phosphorus, magnesium, sodium, chloride and potassium.
Micro-minerals are iron, zinc, copper, manganese, silica

3.2.1.5.1 Calcium

Needed for bone rigidity.
Helps in blood clotting.
Aids in muscle contraction, normal nerve functions.
Food sources include: milk (nonfat, low fat, and whole), yogurt, cheese, green leafy veg- eatables such as kale, collards, mustard greens, and turnip greens.

3.2.1.5.2 Phosphorous

Helps build strong bones and teeth.
Aids in all phases of calcium metabolism.
Food sources include: meat, poultry, liver, fish, eggs, milk, other dairy products, grain products, lima beans, legumes, nuts and seeds.

3.2.1.5.3 Magnesium

Helps regulate body temperature, muscle contractions, and the nervous system.
Helps cells utilize carbohydrates, fats, and proteins.
Food sources include: green leafy vegetables, nuts (almonds, and cashews), meats, beef liver, salmon, cheddar cheese, milk, eggs, and dry beans and peas.

3.2.1.5.4 Sodium, Chloride, Potesium

These three work together to:
Regulate the flow of fluids in the body.
Help regulate the nervous system.
Help regulate the muscle functions, including heart.
Help regulate nutrient absorption in the cells.
Food sources include: sodium and chloride are found in table salt. Potassium is found in meats, milk, bananas, leafy green vegetables and citrus fruits.

3.2.1.5.5 Iron

Combines with protein in the blood to form hemoglobin.
Food sources include: Liver and other organ meats, egg yolks, dried legumes, ground beef, leafy green vegetables, shellfish, enriched breads, fortified cereals

3.2.1.5.6 Zinc

Plays an important role in the formation of protein in the body, thus assists in wound healing, blood formation, and general growth and maintenance of all tissues.
Food sources include: oysters, organ meats, beef, pork, chicken, turkey, wheat germ.

3.2.1.5.7 Copper

Necessary in the formation of hemoglobin.
Food sources include: liver, shell fish, nuts and seeds, prunes, whole-wheat grain and bran products, barley, lima beans, white and sweet potatoes, tomato juice, and turnip greens.

3.2.1.5.8 Manganese

Necessary for normal development of bones and connective tissues.
Food sources include: nuts, rice, whole grains, beans, and leafy green vegetables.

3.2.1.5.9 Silica

Silica (silicon dioxide) is a trace mineral found in the connective tissues (like the hair and skin) and is required in the body to keep nails, hair and skin in good health. It is also needed by the body to make collagen.
Food sources include: cucumber, carrot, beetroot, pepper, raspberries

3.2.1.5.10 Iodine

Needed by thyroid gland to produce thyroxine, which is essential for the oxidation rates of cells.
Food sources include: iodized salt, ocean fish, seaweed, and milk.

3.2.1.6 Water

Water is the most important nutrient of all the nutrient groups. It is essential for life; it represents two thirds of our body weight. It is the medium for all metabolic changes (digestion, absorption, and excretion).
Helps transport nutrients and all body substances. Helps maintain body temperature and acts as a lubricant.
Sources of water are drinking water, liquid foods, water in foods, and water released when carbohydrates, protein, and fats are metabolized in the body.

3.2.2 Balanced Diet

A balanced diet is one that provides the body with all the essential nutrients, vitamins and minerals required to maintain cells, tissues and organs as well as to function correctly. A diet that is lacking in nutrients can lead to many different health problems ranging from tiredness and lack of energy to serious problems with the function of vital organs and lack of growth and development.
A balanced diet needs to contain foods from all the main food groups in the correct proportions to provide the body with optimum nutrition. The main food groups are Fruits & vegetables, Protein, Diary, Carbohydrates and fatty & sugary food. Every person is different and hence the correct diet for health may vary from person to person, however by following a diet that is varied, covers all foods groups and is low in undesirable nutrients such as sodium, saturated fats and sugar, you are well on your way to a healthy body. Nutritional needs vary depending on sex, size and age.

Notes

UNIT 3.3: Conducting Neurotherapy Procedures

Unit Objectives

At the end of this unit, participant will be able to:

1. Describe the check points before neurotherapy procedures
2. Demonstrate the key neurotherapy procedures
3. Describe the instructions to follow during neurotherapy procedures

3.3.1 Documentation

All Neurotherapy centers have pre-printed form for filling in the details of client. Following are the points which needs to be filled in the form -

1- Name of client.

2- Age of client.

3- Sex of client.

4- Current health problems.

5- Date and time of enrollment.

6- Suggested procedures to be carried out on client.

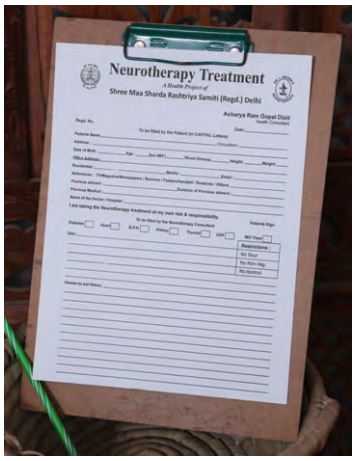


Fig. 3.3.1. Documentation for client

3.3.2 Instructions For Customers

Although procedure of Neurotherapy is decided by the neurotherapist, but customer is asked for his / her pain points. Following are the points for which customer instruction is asked -

1- Pain points.

2- How much pressure is ok for him / her.

3- Duration of pressure.

4- Any injury place, where special care to be taken for putting pressure.

3.3.3 Check Points For Neurotherapy Procedures

Following are the check points before starting Neurotherapy procedure -

1- Check whether Client is physically and mentally prepared for the neurotherapy procedures.

2- Check whether neurotherapy room is cleaned.

3- Check whether all tools required for neurotherapy are avialable.

4- Check whether room temperature is as per guideline and as per client preference.

5- Check whether Talcum powder and towels are available in neurotherapy room.

Fig. 3.3.2. Check availability of Talcum powder

Fig. 3.3.3. Arrange Stand before starting the procedure

3.3.4 Preparation For Neurotherapy Procedure

Following are the preparation points for starting Neurotherapy procedure -

1- Ask Client to lie down on mattress.

2- Adjust pillows as per procedure to be carried out.

3- Adjust Client body as per procedure requirement.

4- Adjust Stand as per the requirement of procedure.

5- Apply talcum powder to client as per procedure requirement.

Fig. 3.3.4. Make client body comfortable before starting the procedure

3.3.5 Steps For N1

With the middle part of your feet put the pressure on both thighs starting from thigh joint upto knee joint in three different points.

Step-1

Step-2

Step-3

3.3.6 Steps For N2

With the middle part of your feet put the pressure on the calf muscles from knee joint to ankle joint in three points.

Step-1

Step-2

Step-3

3.3.7 Steps For N3

Stand on client's thigh joint &press with your middle part of feet .Repeat the same as per the counting given.

Step-1

Step-2

Step-3

3.3.8 Steps For N4

With right leg put pressure on the left thigh joint making three points upto knee joint.

Step-1

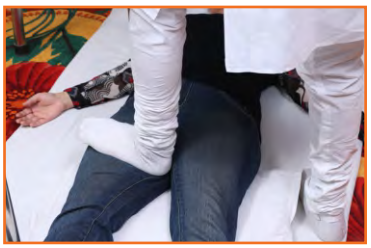
Step-2

Step-3

3.1.9 Steps For N5

With left leg put pressure on the right thigh joint making three points upto knee joint.

Step-1



Step-2

Step-3

3.1.10 Steps For N6

With the help of supporting stand press the left hand between elbow and wrist joint with your right leg.Press the left leg inwards between thigh joint and knee joint from your left leg. Make 1 or 3 points as per the requirement.

Step-1

Step-2

Step-3

Step-4

Step-5

3.3.11 Steps For N7

With left leg press the right hand near the elbow and from right leg press the right thigh inwards .Make 1 or 3 points as per requirement.

Step-1

3.3.12 Steps For RK1

Press the left shoulder joint and thigh simultaneously with your right leg and left leg.

Step-1

Step-2

Step-3

3.3.13 Steps For LK1

Press the right shoulder joint and thigh simultaneously with your left leg and right leg.

Step-1

Step-2

3.3.14 Steps For LK2

Step-3

Step-4

Step-5

3.3.15 Steps For OV1

Give pressure with left leg between left elbow joint and wrist joint in three points.

Step-1

Step-2

3.3.16 Steps For OV2

Give pressure with right leg between right elbow joint and wrist joint in three points.

Step-1

Step-2

Step-3

3.3.17 Steps For OV3

Give pressure on both hands between elbow joint and wrist joint making three different points.

Step-1

Step-2

Step-3

3.3.18 Steps For CH1

Rub three times on the left side of chest towards shoulder then repeat the same on the right side of the chest.

3.3.19 Steps For Stretch

Rub three times on the left side of chest towards shoulder then repeat the same on the right side of the chest.

3.3.20 Steps For RK2

On left leg with both feet on the region of the thigh.

3.3.21 Steps For Vocal G

Rub both sides of the throat from centre to sideways.

Step-1

Step-2

Step-3

Step-4

Step-5

3.3.22 Steps For CNS

Rub both sides of the neck from your thumb, start from left and then right.

Step-1

Step-2

Step-3

3.3.23 Steps For RAMAN

Put both hands at the back of the shoulder and pull the back muscles upwards, hold for few seconds and then release. Repeat the procedure for three times

3.3.24 Steps For NC

Rub clockwise on neck muscles from ear to shoulder at different position from up to downwards. Start from left and end it on the right side.

3.3.25 Steps For FAP

Massage entire face from one side to another.

3.3.26 Steps for RTHP

Fold both legs, press right femur near the hip socket at two places.

Step-1

Step-2

3.3.27 Steps For LTHP

Fold both legs , press left femur near the hip socket at two places.

Step-1

Step-2

3.3.28 Steps For RTHPG

Fold both legs press clockwise at right side of femur bone.

Step-1

Step-2

Step-3

Step-4

Step-5

Step-6

Step-7

Step-8

Step-9

Step-10

3.3.29 Steps For LTHPG

Fold both legs press clockwise at left side of femur bone.

Step-1

Step-2

Step-3

Step-4

Step-5

3.3.30 Steps For SPN1

Using your thumb rub on the vertebra from C1 to L5 and L5 to C1, downward and upward, both sides.

Step-1

Step-2

Step-3

3.3.31 Steps For SPN2

Rub on both sides of the spine from C1 to L5 downwards and L5 to C1 in upward direction.

Step-1

Step-2

Step-3

3.3.32 Steps For SPN3

Rub around the spine in clockwise direction from3..... C1 to C7 and T1 to L5.

Step-1

Step-2

Step-3

Step-4

Step-5

Step-6

3.3.33 Steps For Tissue

Rub lightly on the vertebras from cervical region till hips without giving any gap between them.

3.3.34 Steps For Clockwise Movement

a) Stand in front of the client & rub clockwise with your hands starting from the corner of shoulder joint to the sides of the chest & end at shoulder bone.
b) Then stand aside of the client and rub clockwise from corner sides of scaptula in upward motion upto shoulder joint.

3.3.35 Steps For Bending Forward

This is given on calf muscles from the back side upto heels .And then on the sides and front side also till toes. The counting is six times.

3.3.36 Steps For Standing Point

Stand in front of the person and press with your heels on his toes, at each starting point of the finger & the press with your soul three times.

3.3.37 Steps For JJ1

It is given at outside the upper femur.

Step-1

Step-2

Step-3

Step-4

Step-5

Step-6

Step-7

Step-8

Step-9

Step-10

Step-11

Step-12

Step-13

3.3.38 Steps For JJ2

It is given at outside the femur on the backside.

Step-1

Step-2

Step-3

Step-4

Step-5

Step-6

Step-7

3.3.39 Steps For OA2

It is given softly with fingers to free knee cap.

Step-1

Step-2

Step-3

Step-4

3.3.40 Steps For OA1

It is given behind the knee, back side of the patella, up and down.

Step-1

Step-2

Step-3

3.3.41 Steps For NG

Rubbing of neck on the back side.

3.3.42 Steps For ET

Back of heels to calves, back side and both sideways and front i.e. all four sides.

3.3.43 Steps For Feather Touch

Using the fingertips of hands softly touch and rub the affected area for number of times. It sends the impulses to all over the body.

3.3.44 Manner Of Touch

Since a neurotherapist is supposed to touch his / her client physically and at various places of body, hence it is very important that the manner of touch should be very neutral. It is preferred that therapy of women to be done by woman neurotherapist and visa versa for men clients. But in case neurotherapy is done by opposite gender person, then it should be kept in mind that no private parts should be touched during the procedure. Also the touch should be very professional.

UNIT 3.4: Post Neurotherapy Activities

Unit Objectives

At the end of this unit, participant will be able to::

1. Explain about documentation after Neurotherapy procedure
2. Describe procedure of client counseling after Neurotherapy procedure
3. Describe the instructions for room cleaning after Neurotherapy

3.4.1 Documentation

Documentation of procedures carried out on Client is very important. It creates record of all activities, based on that senior Neuropathist check progress of client and decide for future procedure. Also it helps in deciding fee amount due from the client.

For documentation normally neurotherapy centers have pre-printed formats, on which wellness neurotherapist is supposed to fill in the details of procedures carried in current session.

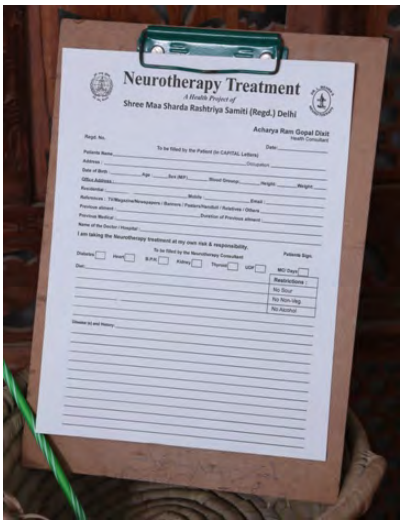


Fig. 3.4.1. Documentation after Neurotherapy Procedure

3.4.2 Client Counselling

This is also an very important post neuropathy activity. In this activity following points are carried out -

1- Client is asked about the session and how he / she feeling after the procedure.

2- Client is asked about the session duration, whether it is less or more.

3- Client is asked about the pressure he / she felt on body, does he / she need any changes in that.

4- Client is asked for taking good diet with full nutritions.

5- Client is explained about healthy life style.

6- Client is briefed about the changes he / she need to make in his / her life style.

7- Client is informed about the next procedure date and time.

3.4.3 Room Cleaning

In order serve next client without delay, it is important to clean the room immediately after completing the procedure on current client. following points should be taken care during room cleaning -

1- Floor has been swept and wiped for any spillage of powder or other material.

2- Bed sheets are replaced with fresh one.

3- Pillow covers are replaced with fresh one.

4- All consumables are replaced.

5- Towels are replaced with fresh tow.

6- Stands are set as per new procedure to be carried out on next client.

Notes

Excercise

Q1. **Human Body has ---- bones:**
a. 206
b. 306
c. 106
d. 406

Q2. **The main function of Heart is to:**
a. Pump blood to all parts of body
b. Inhale Oxygen
c. Digest the food
d. Move the body parts

Q3. **The main function of Muscle System is to:**
a. Pump blood to all parts of body
b. Inhale Oxygen
c. Digest the food
d. Move the body parts

Q4. **------ is part of nutrients:**
a. Carbohydrates
b. Fats
c. Proteins
d. All of the above

Q5. **----- is not a type of Vitamin:**
a. R
b. A
c. B
d. K

Q6. **----- helps in regulating in body Temperature:**
a. Iron
b. Calcium
c. Magnesium
d. Phosphorus

Q7. **------ is not the Main source of Potassium:**
a. Meat
b. Shellfish
c. Banana
d. Citrus fruits

Q8. **------ is the Main source of Iron:**
a. Egg Yolks
b. Green leafy vegetables
c. Fortified cereals
d. All of above

Q9. **---- is not required to be documented in customer detail form before starting the neurotherapy procedure:**
a. Name
b. Age
c. Profession
d. Sex

Q10. **Customer feedback about Neurotherapy session is very important :**
a. Correct
b. Incorrect

Skill India
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सत्यमेव जयते
GOVERNMENT OF INDIA
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N·S·D·C
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Skill Development
Corporation
Transforming the skill landscape

4. Health & Safety Practices At Neurotherapy Work Place

B&WSSC
BEAUTY & WELLNESS
SECTOR SKILL COUNCIL

Unit 4.1 - Work Place Safety

Unit 4.2 - Safety During Neurotherapy

Unit 4.3 - Handling Fire and Other Emergencies

BWS/N9907

Key Learning Outcomes

At the end of this module, participant will be able to:

1. Explain what is hazard
2. Describe safety hazards associated with Neurotherapy.
3. Explain various safety precautions to be taken during Neurotherapy practice.
4. Describe various emergency situations at work place.
5. Describe common injuries at work place
6. Describe First Aid box and its constituents
7. Demonstrate how to handle fire emergencies

UNIT 4.1: Workplace Safety

Unit Objectives

At the end of this unit, participant will be able to:

1. Explain what is hazard
2. Identify Hazards at a Neurotherapy Center
3. Describe Safety Precautions to be taken at a Neurotherapy Center

4.1.1 What Is Hazard?

'Hazard' is a set of conditions, which can be a risk to health or life. It can be an atmosphere of work place or construction of a machine or working procedure. Anything out of these can be a Hazard.

For understanding it better, we can see Examples of various hazards and threat possessed by them.

Oil on the floor creates a Slip hazard. Use of Asbestos causes Cancer and other breathing problem hazards. Use of broken electric wires creates electrocution hazard and fire hazard by potential sparking out of it.

Fig. 4.1.1. Hazard

4.1.2 Hazards In A Neurotherapy Center

Apart from some common hazards of working areas, Neurotherapy centers has some exclusive hazard, which are associated with doing procedures during Neurotherapy.

First, we will learn common hazards of workplace in detail –

4.1.2.1 Manual Handling

Around 40% of the total accident at workplaces is reported due to this cause.

Fig. 4.1.2. Hazard of manual handling

4.1.2.2 Accidents By Moving Objects

This is one of the other big hazards at the workplace. There are many big and heavy things at workplaces which are difficult to manage manually. During transportation also, if they are not secured properly then there is a chance that they may fall from moving the vehicle or can fall on the person who opens the door of the closed transportation vehicle. Special safety arrangement should be made to load heavy objects.

Fig. 4.1.3. Accident by moving / falling object

4.1.2.3 Slips And Falls

This is also one of the biggest reasons for workplace accidents. The floor of the workplace should be free from any oil or slippery material. Also, aisles should be clutter free so that movement of persons and trolleys remains smooth.

Fig. 4.1.4. Slip or fall

4.1.3 Other Hazards

Apart from above hazards, there are some other hazards which are very dangerous. These are following -

1- Physical Hazard
2- Chemical Hazard
3- Ergonomic Hazard

4.1.3.1 Physical Hazard

Physical hazards are the type of energies that may be hazardous to workers. Following are examples of physical hazards –

1- Noise
2- Vibration
3- High Temperature
4- Very Low Temperature

Fig. 4.1.5. Noise from Music

4.1.3.2 Chemical Hazard

There are many chemicals that are used in workplaces. Prolonged exposure to these chemicals without using effective PPEs can affect human body adversely. There are 3 ways of getting affected by chemicals.

1- Inhalation
2- Ingestion
3- Absorption

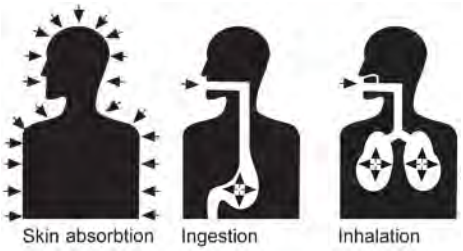

Fig. 4.1.6. Affects from chemical

4.1.3.3 Ergonomic Hazards

Ergonomic hazards can cause painful and disabling injuries to joints and muscles. These can occur from:

- Heavy, frequent, or awkward lifting
- Repetitive tasks
- Awkward grips, postures
- Using excessive force
- Over exertion
- Using wrong tools for the job or using tools improperly
- Using improperly maintained tools
- Hand-intensive work

Correct Lifting position

- Chin tucked in
- Comfortably straight back
- Leaning slightly forward
- Arms close to body
- Secure grip
- Bent knees & Proper foot position.

Fig. 4.1.7. Ergonomic hazard due to difficult procedure in Neurotherapy

4.1.4 Special Hazards

Following are some special Hazards associated with Neurotherapy Center -

- Falling hazard while doing Neurotherapy treatment, If support stand is not stable.
- Ergonomic hazard of muscle pulling while doing procedures.
- Neck pain hazards while doing procedures.
- Tearing ligament while doing some special procedures.
- Bone fracture, while doing procedures

4.1.5 Safety Precautions

Following are the precautions to be taken while doing Neurotherapy -

1- First and foremost precaution is to take proper training from a certified Neuropathist before doing any procedure on any client.

2- Check client's medical history before starting Neurotherapy procedure, especially after the age of 30 years.

3- Do not push client's body's beyond permissible limit.

4- Never hold a pressure point for longer durations. Every person has different ability to endure pressure, and a neuropathist should know client's body endurance limit.

5- Do not do Neurotherapy procedure immediately after eating or drinking something, there should be a gap of minimum 2 to 3 hours after your last meal.

TIP

A board detailing the above precautions can be put up in Neurotherapy Room so that all practitioners should remember these.

Notes

UNITti4.2: Safety Hazards

Unit Objectives

At the end of this unit, participant will be able to:

1. Describe Safety Hazards associated with Neurotherapy.
2. Explain various safety precautions to be taken during Neurotherapy practice

4.2.1. Safety Hazard During Practicing Neurotherapy

Although Neurotherapy is for improving one's health, but if not done correctly it may cause harm to the body also. During procedure, one may fall and get injured himself and injure client also. Similarly, giving pressure to client's body has the same hazard. In some procedure, Neuropathist may give excess pressure to client and may injure him or her. The threat of fracture and sprain is also present in some of procedures.

Untrained Neuropathist practitioner may pull client's muscles if procedure is not done properly or difficult pressure procedure are done without precautions.

There is a chance of vomiting if Neurotherapy is practiced immediately after having a meal.

Fig. 4.2.1. One of the difficult procedure of neurotherapy

4.2.2 Safety Precautions While Practicing Neurotherapy

There are many threats present while practicing Neurotherapy, but these all can be avoided if proper Neurotherapy training is taken under supervision of a trained Neuropathist and with some precautions. Following are the precaution one must take during Neurotherapy procedures -

4.2.2.1 Medical Condition Of Client

Client must get him / herself medically checked completely. One must take one's doctor's advice before taking up Neurotherapy treatment.

There are certain Neurotherapy treatment, which should not be done to the persons suffering from certain diseases. On review of medical reports, Neuropathist can advise properly which procedure needs to be avoided.

Starting Neurotherapy, without knowing client's medical condition may harm client very severely. We need to understand that all Neurotherapy procedures are not advisable to all the persons.

4.2.2.2 Neurotherapy Training

New Neuropathist must start Neurotherapy under good supervision only. Trained Neuropathist is required to give continuous advice for improvement. Trained Neuropathist is also helpful in giving initial support while understanding difficult Neurotherapy Procedures.

4.2.2.3 Don't Pressurize Client's Body

As explained earlier, all bodies have different level of endurance capacity. A good Neuropathist should judge by seeing the body that how much pressure need to be given. A good Neuropathist also ask his / her client about how they are feeling. If pressure is too less or too much, he / she need to adjust the pressure to get the desired results. Neuropathist should increase the intensity of pressure, gradually.

4.2.2.4 Practice Neurotherapy With Empty Stomach

A Neuropathist should ensure that Neurotherapy should be practiced with an empty stomach. There are many Neurotherapy procedures in which client lies on stomach and put pressure stomach. If client is not empty stomach, he / she could vomit, or there could be a pain in stomach. Ideally, you should keep a gap of 2 to 3 hours after last meal.

4.2.2.5 Drink Less Water Before Neurotherapy

You should avoid drinking too much water before and during Neurotherapy. The temperature of the room plays a great role in this. If there is too much heat in the Neurotherapy room, then client tends to sweat more and feel more thirstier. Hence Neurotherapy should be done at a comfortable temperature. If client really wants to drink water then he / she should only take a few sips of water.

4.2.2.6 Precautions During Pregnancy

You can do Neurotherapy procedures during pregnancy, but you need to take extra precautions for the type of Neurotherapy procedures to be done and for other precautions. If precautions are not taken, there could be a complication in pregnancy and client may face abortion also. Neuropathist should asked about the status of pregnancy before starting Neurotherapy to such clients.

4.2.2.7 Duration Of Neurotherapy

Duration of Neurotherapy procedures should be as per clients medical condition and requirement for treatment. Individual point Pressure duration and total procedure duration should be gradually increased. Longer duration of procedure might hurt client.

Notes

UNIT 4.3: Handling Fire & Other Emergencies

Unit Objectives

At the end of this unit, participant will be able to:

1. Define what is emergency
2. Describe various emergency situations at workplaces
3. Describe common injuries at workplaces
4. Describe First Aid box and its constituents
5. Demonstrate how to handle Fire Emergencies
6. Demonstrate how to use a multipurpose Fire Extinguisher
7. Describe type and class of Fires
8. Describe suitable fire extinguisher as per fire type and class

4.3.1 What Is Emergency?

An Emergency is a sudden or unexpected state of the situation, which, if not tackled properly, will lead to loss of property, health or life. In cases where any mitigation is not possible, immediate evacuation is needed.

4.3.2 Emergency Situation At WorkP

There are various emergency situations at workplace. Some of them are –

1- Accident Emergency

2- Electric shock Emergency

3- Medical Emergency

4- Natural Disaster Emergency – Flood, Earthquake, Tsunami, etc.

5- Fire Emergency

For first 3 emergencies, we need to give first aid and immediately call Ambulance.

For Natural Disaster we should take shelter at a safe place or follow company's emergency procedure.

For Fire Emergencies we will discuss in detail. First, we will understand about common Injuries at the workplace and their First Aid.

4.3.3 Common Injuries At Work And How To Deal With It

As per nature of workplace, it is very difficult to eliminate the threat of accidents at workplaces. However, by using safety precautions, we can minimize the occurrence of accidents. Following are common injuries and their First Aid instructions -

4.3.3.1 Abrasions And Small Cuts

Clean wound with soap and water. Apply antibiotic cream or Providone-iodine solution. Bandage and check dressing daily. See your doctor if there are signs of infection: increased redness, pus or red lines running from the wound.

Fig. 4.3.1. Abrasions

4.3.3.2 Splinters

Remove with sharp, pointed tweezers. (They should be sharp enough to pick up a single hair.) If the splinter is completely under the skin, expose splinter end with sewing needle doused in alcohol, and then remove with tweezers.

Fig. 4.3.2. Splinters

4.3.3.3 Lacerations

Clean wound with soap and water. Assess damage: If The laceration is gaping or more than 1⁄4 inches deep, seek emergency help. Otherwise, apply pressure to stop bleeding. Close wound with butterfly closures or adhesive strips. Check dressing daily.

Fig. 4.3.3. Lacerations

4.3.3.4 Fractures

Signs include extreme pain, swelling, bruising and an inability to move an adjacent joint. If you have any of these signs, you should be seen by a doctor to see whether you need an X-ray to evaluate for a fracture.

Fig. 4.3.4. Fractures

4.3.3.5 Amputations

Apply pressure to wounded area with a clean bandage. Don't panic. Call for help. Raise wounded area above the heart. Wrap amputated appendage in a plastic bag. Keep appendage cool, not directly on ice. Sit in a chair near the door, and await help.

Fig. 4.3.5. Amputation

4.3.3.6 Eye Injuries

Look in the mirror to assess eye. If foreign matter is embedded in the eye, go to the emergency room. If foreign matter is on the surface, flush it out with water, or use eye wash and cup. For chemical splashes, flush with running water for five to 10 minutes. If it hurts too much to open your eye, go to the emergency room.

Fig. 4.3.6. Eye injury

4.3.3.7 Fumes And Dust

If you feel dizzy or are having trouble breathing, leave the area, and go to fresh air. If normal breathing doesn't return in 15 minutes, go to the emergency room.

Fig. 4.3.7. Fumes and dust

4.3.4 Basic Things In First Aid Box

Top shelf: An asthma inhaler to counteract allergic reactions of fumes and dust; sharp scissors for cutting bandages; adhesive tape for bandaging; an elastic bandage for securing dressings.

Middle shelf: Needles for splinter removal are stored in sterile alcohol; splinter tweezers, precise enough to pick up a single hair; 4-inch by 4-inch gauze pads for bandaging; assorted adhesive strips for small cuts; a clean plastic bag for amputated parts; sterile rolled gauze for bandaging; butterfly bandages for drawing together larger lacerations.

Bottom shelf: Providone-iodine solution for killing germs; eyewash and cup; a small mirror for eye inspections; instant ice packs to reduce swelling or for transporting amputated parts to the hospital; latex gloves for eye examinations.

Fig. 4.3.8. First aid box

4.3.5 Handling Fire Emergencies

Fires and explosions can severely damage or destroy premises or plant. There have been cases numerous fires started due to either badly maintained cables at the workplace, electric sparks, or due to open wood burning stoves and cigarettes.

Make sure that all electric equipment are cleaned, and that dust is not allowed to accumulate. Report any defects you see in equipment.

TIP

Although workplaces, especially office area or Neurotherapy Center, have a low risk of fire because the workplace has very few inflammable substances like wood, petrol, and chemicals, etc. Still, it is necessary to have fire-extinguishing equipment inside the workplace, and all employees should be trained properly to use these equipment.

4.3.6 Type Of Fire Extinguishers

Water Extinguishers: It is used to extinguish the fire on wood, paper, cloth, etc. It should not be used to extinguish the fire over electrical equipment.
Foam Extinguishers (Foam Extinguishers): It is used to extinguish the fire caused by kerosene, spirit, thinner, etc. It also should not be used to extinguish the fire caused by electrical equipment.
Dry Powder Extinguishers (Dry Powder Extinguishers): This is used to extinguish – the fire evolving due to flammable liquids such as petrol, diesel, etc.
Carbon dioxide Fire Extinguisher: Carbon Dioxide evolves from this fire extinguisher , and it can be used to extinguish fire over electric equipment, liquid gases, or fluids.
These fire-extinguishing equipment should be installed at the proper place, and it should be inspected, repaired and refilled regularly.

4.3.7 Fire Extinguishers Chart

Extinguisher		Type of Fire				
Colour	Type	Solids (wood, paper, cloth, etc)	Flammable Liquids	Flammable Gasses	Electrical Equipment	Cooking Oils & Fats
	Water	✓ Yes	✗ No	✗ No	✗ No	✗ No
	Foam	✓ Yes	✓ Yes	✗ No	✗ No	✓ Yes
	Dry Powder	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No
	Carbon Dioxide (CO2)	✗ No	✓ Yes	✗ No	✓ Yes	✓ Yes

Fig. 4.3.9. Fire extinguisher chart

4.3.8 Class And Type Of Fires

Class	Type
A	Wood, Paper, Ordinary Combustibles Extinguished by Cooling and Quenching Using Water or Dry Chemicals
B	Gasoline, Oil, Grease, Other Greasy Liquids Extinguished by Smothering, Cooling or Heat Shielding using Carbon Dioxide or Dry Chemicals
C	Electrical Equipment Fires Extinguished with Non-conducting Agents such as Carbon Dioxide or Dry Chemicals. DO NOT USE WATER.
D	Fires in Combustible Metals Extinguished by Using Specialized Extinguishing Powders

4.3.9 Class And Type Of Fire Exnguisher To Be Used

Class of Fire	Fire Extinguisher Type
B or C	Regular Dry Chemical
A, B, C, or D	Multi-Purpose Dry Chemical
D	Purple K Dry Chemical
B or C	KCL Dry Chemical
D	Dry Powder Special Compound
B or C	Carbon Dioxide (Dry)
B or C	Halogenated Agent (Gas)
A	Water
A	Water With Anti-Freeze
A or B	Water, Loaded Steam Style
B,	Foam

4.3.10 How To Respond In Case Of Fire

When fires occur, the role of a person is to minimize the damage, he / she should be -

- Extinguishing small fires
- Assisting in evacuations
- Notifying the local Fire Brigade promptly

TIP

1- Do not use water on Types B, C or D fires.
2- If it is used on Type B fire, it can spread the flames.
3- Water conducts electricity, so if it is used on Type C fire, it can cause a major shock.
4- If it is used on Type D fire, it will react violently causing an explosion.

4.3.11 How To Operate A Multipurpose Fire Extinguisher

Remember **PASS**

P- Pull the pin In some models, you may have to remove a locking pin.
A- Aim Aim low. Direct the hose or cone to the base of the fire.
S-Squeeze Squeeze the handle. This will release the contents of the extinguisher.
S-Sweep Sweep from side to side. Don't lessen the pressure on the handle. Try to keep it constant.

Fig. 4.3.10. Method of operating Fire extinguisher

TIP

It is important that you get fire extinguisher training before you have to use one. You don't want to waste valuable time trying to read directions or figure out how to remove a pin in an emergency situation. Other important information, like how far to stand away from a fire, when to move towards it, and how long the extinguisher contents last can only be understood by actually operating one. Make sure your employer and your Safety and Health Representative know that you need this training.

Notes

Exercise

Q1. Which of these is correct meaning of hazard?
a. It is a set of good conditions at work place
b. 'Hazard' is a set of conditions, which can be a risk to health or life
c. The condition of no production is called hazard
d. None of the above

Q2. Which if these is the main hazard of any workplace:
a. Manual Handling
b. Accident by moving or falling object
c. Slips and falling
d. Dust and Fumes

Q3. Which of these is the type of hazards:
a. Chemical hazard
b. Physical hazard
c. Ergonomic hazard
d. All of above

Q4. Which of these is a way of getting affected by chemicals:
a. Inhalation
b. Ingestion
c. Absorption
d. All of the above

Q5. Which of these is not a reason for Ergonomic hazard?
a. Heavy, frequent, or awkward lifting
b. Awkward grips, postures
c. Noise
d. Hand-intensive work

Q6. Which of these is not part of the Safety procedure of an Organisation?
a. Safety Equipment to be used in organisation
b. Maximum leave an employee can take in a month / year
c. Emergency Evacuation plan
d. Hazards of different processes of organisation

Q7. Water cannot be used for dousing which type of Fires:
a. 'B' Type fire
b. 'C' Type fire
c. 'D' Type fire
d. All of the above

Q8. Electric fires should be extinguished by ---- fire extinguisher:
a. Water
b. Foam
c. Dry Powder
d. None of the above

Q9. Which of these should be part of First Aid box:
a. sharp scissors
b. adhesive tape
c. Providone-iodine solution
d. All of the above

Q10. Which of these is Class A Fire:
a. Wood, Paper, Ordinary Combustibles
b. Gasoline, Oil, Grease, Other Greasy Liquids
c. Equipment Fires
d. Fires in Combustible Metals

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5. Create A Positive Impression At Work Area

Unit 5.1 - Personal Health & Hygiene

Unit 5.2 - Communication Skills

Unit 5.3 - Following Organisation's Rules & Instructions

BWS/N9003

Key Learning Outcomes

At the end of this module, participant will be able to:

1. Describe what is hygiene
2. Explain how to maintain good hygiene
3. Describe grooming tips for men and women
4. Describe communication process
5. Define points of good writing skill
6. Define meaning of policies and guidelines
7. Explain organisational procedures for reporting and documentation

UNIT 5.1: Personal Health & Hygiene

Unit Objectives

At the end of this unit, participant will be able to:

1. Describe what is hygiene
2. Explain how to maintain good hygiene
3. Describe grooming tips for men and women
4. Describe communication process
5. Define points of good writing skill
6. Define meaning of policies and guidelines
7. Explain organisational procedures for reporting and documentation

5.1.1. What Is Hygiene?

Hygiene, It is the process of maintaining good health through maintaining a clean body and environment around us. Good hygiene is one of the most important practices to help with the prevention and spreading of infections and diseases.

Good physical and emotional health helps our bodies and minds to function properly without pain, anxiety, depression or discomfort. Improper hygiene can cause diseases, which can negatively impact our physical & mental well-being.

Poor hygiene causes us to smell bad (due to bacteria), develop infections, and contract diseases such as flu, common cold, e-coli, Salmonella, and skin diseases such as ringworm, and scabies. Other problems such as tooth decay, lice in the hair, and foot infections are also caused due to poor hygiene.

5.1.2 How To Maintain Good Hygiene?

Following are the ways to maintain good hygiene -

- Washing hands, face, hair and other parts of body, frequently
- Brushing/cleaning teeth at least once a day
- Cleaning the living quarters including frequent change of bed sheets, pillow covers, and changing personal clothes and undergarments frequently
- Taking care to avoid soiling of clothes and body parts, when urinating, vomiting or relieving oneself in toilet
- Washing hands before eating- especially after touching animals
- Holding a tissue/handkerchief over the mouth when coughing or sneezing. If you use hands, make sure to wash them afterward
- Suppression of habits such as nose-picking, touching the face, etc.
- Not biting nails
- Washing hands after using toilet
- Shower every day with soap/body wash. Remember to also wash under armpits and feet with soap. It's important to be clean. Always clean your private areas (the hair traps sweat and can stink if not washed regularly).

- Shampoo and condition hair as needed. Most people have to wash their hair every day to prevent smell and grease. Remember to scrub your scalp and rinse all the product out of your hair until it is "squeaky" clean. Use a good smelling hair product. Keep it nice and neat.
- Use roll-on, not spray deodorant to prevent armpit odor. [Use the deodorant when you are clean, not instead of getting clean.] Put deodorant on in the morning or any time you get sweaty.
- Use a lotion to smooth out dry skin. This is optional and isn't essential, but it's good for your skin and to prevent the look of ugly, dry, cracked skin.
- Make sure to clean and clip your fingernails whenever they start getting white ends. Girls especially will notice if you have long, dirty nails. This counts for toenails, too.
- Brush your teeth after every meal and floss them at least once a day. If you're a student, be sure to brush your teeth thoroughly every morning before school. They will look much cleaner and your breath will be more fresh. Make sure to thoroughly brush your teeth AND your tongue to get all the bacteria out. Using mouthwash is also highly recommended.
- Take off your shoes as soon as you get home so they can air out and dry out.
- Wear socks when you wear shoes. Each foot sweats a lot during the day, so your shoes will smell pretty bad if you don't wear socks.
- Wear undershirts to help keep your regular shirt smelling fresher.
- Cover your nose and mouth when you cough or sneeze. (best to do it with a tissue)
- If you're around animals of any kind, don't touch them before eating. If you do, be sure to wash your hands before eating.
- Don't lick your fingers (such as when turning pages in a book).
- Menstruating women should take care to change pads or tampons frequently.
- Carry some mints around if you have a problem of bad breath. If the problem persists, then visit a doctor; you could be suffering from halitosis.
- Hair on your chin, upper lip, ears, and nose can make you look unsightly. So remember to pluck it out when they start becoming visible on your face. Women should visit the salon every 15 days to shape up the eyebrows. Another safe and effective way is to opt for a laser surgery for removing facial hair only if it fits your pocket.
- Wear clean socks and apply some talcum powder before wearing shoes. Give your shoes some room to breathe especially after any strenuous activity. Own 2-3 pair of shoes and rotate their use. Buy a foot deodorant to help get rid of your foot odors.
- Makeup clogs up your skin pores and gives germs a chance to multiply. If you do not remove the makeup before you hit the bed, you will surely have a couple of pimples sprouting out the next day. So no matter how tired you are, you must remove your make up before you sleep.

5.1.3 Grooming

Grooming oneself includes washing, cleansing, combing, regularly cutting and styling the hair. It also includes cosmetic care of the body, such as shaving and other forms of depilation.

5.1.3.1 Grooming Tips - For Men

1. Trim the nose hairs: This is something very basic that makes a world of difference. Many companies make nose hair clippers for a moderate price

2. Trim the eyebrows: actually even recommend getting them professionally cleaned (not shaped) to open up the eyes. Remember to brush them up before you leave for the day as this opens up the eye, keeping the face more alert.
3. Clean the hair off your ears and neck: This is something your barber can do for you monthly that gives the appearance of good grooming. The sight of long ear hairs, or neck hair going into the collar of your shirt, is never appealing.
4. Keep your nails short and clean: Dirty, long fingernails require no explanation as to why they don't work. If your budget or schedule permits, try a monthly manicure/pedicure to have someone take care of this for you. I also recommend buffing your nails as a way to keep the healthy shine without looking artificial.
5. Brush and floss your teeth daily: it doesn't matter if your teeth are not perfectly straight and white, but please keep them clean. It is rather unappealing to talk to someone and see built up plaque or food stuck between their teeth. I know this one seems simple, but trust me when I tell you to take nothing for granted.
6. Have your clothes tailored to fit your body: This is a big one, as no matter what your shape is, the right fit makes everything look so much better.
7. Stand up straight: posture is very important. You create a sense of confidence and pride when standing tall, showing everyone you are secure in the man you are.
8. Cleanse your face on a regular basis with a facial soap: I have so many male friends who use the same soap on their body that they use on their face. Most body soaps are too strong for the face. You must invest in a cleanser that is just for the face.
9. Remember less is more when it comes to fragrance: It's all right to smell good, but everyone doesn't have to smell it. Fragrance is such a personal preference, and you really must find the one that works best for you. Just remember not to bathe in it.
10. Match your belt to your shoes: This one is really simple and makes a world of difference. If you are wearing black shoes, you don't wear a brown belt. I'm not saying you need to be a fashion plate, but this basic tip makes everything you wear look that much better.

5.1.3.2 Grooming Tips - For Women

It is not just your work that talks for you, it is your gestures and how you bring yourself. Individual self-care or Personal self-care for females is as essential as it is to men. How to sit, how to talk, when to talk, what to talk, may all seem fundamentals, but keep a lot of significance.
1- Look Fresh: The first thing is to look fresh. This is the primary phase of your grooming. Have your nails nicely maintained. Prevent dressing in fancy shades that are too shiny or appealing.
2- Using Perfume: Use a mild fragrance. Too much of a fragrance may be frustrating to the individuals around you. Also, you must take care not to put on intensely fragrant products when you are in a business conference.
3- Using Makeup: Cosmetics should be easy and mild for official places of work. Use makeup that is not too little and neither too large. Do not wear too much lipstick that it propagates on the paper napkin or the cup when you take a sip of water.
4- Using Jewellery: You must not wear a lot of jewellery. Jewellery that is loud and too huge would irritate individuals around a serious conversation. Use easy jewellery to avoid clinging earrings, huge wristbands, etc.
5- Hair Style: Your hair style should be easy and neat looking.
6- Wearing proper dress: Normally when you are at work place, you need to be presentable. At work place, with business individuals around, you should dress rather cautiously.

7- Eating in Public: Self-care also includes how you eat. Put the paper napkin on your lap. Make the lowest disturbance with the cutlery while you are consuming food.
8- Choosing Footwear: Wear comfortable and elegantly designed footwear.

5.1.4 Consequences Of Not Grooming Well

One of the most effective ways we have to protect ourselves and others from illness is good personal hygiene. This means washing your hands and have a bath too. It means being careful not to cough or sneeze on others, cleaning things that you touch if you are unwell, putting items such as tissues (that may have germs) into a bin, and using protection (like gloves or condoms) when you might be at risk of catching an infection.
Personal hygiene, such as bathing, is very much dependent on the culture in which you live. In some cultures, it is expected that you will wash your body at least every day and use deodorants to stop body smells. Other cultures have different expectations.

5.1.5 Importance Of Grooming

Keeping clean is an important part of staying healthy. For example, the simple act of washing hands before eating and after using the toilet is a proven and effective tool for fighting off germs and avoiding sickness.

Being clean and well-presented is also an important part of confidence for teenagers. If your child's body and breath smell OK, his clothes are clean, and he's on top of his basic personal hygiene, it can help him fit in with other people.

The following health related problems can occur if one does not maintain good personal hygiene:

5.1.5.1 Body Odor

Fresh perspiration, when allowed to evaporate does not cause body odor. An offensive smell is caused when bacteria that are present on the skin get to work on the sweat and decompose it. This is especially so in the groin, underarms, and feet or in clothing that has absorbed sweat. Diet influences the odor too. Bathing every day and changing of clothes that are in close contact with the body should take care of the problem. Talcum powders, of the non-medicated kind, can be used under the armpits. The addition of perfumes masks the odor.

Excessive perspiration can lead to the scaling of the skin or inflammation (Dermatitis). Usually, this is no cause for worry. Some people sweat more than others due to hereditary and body composition factors. Excessive perspiration may also be a symptom of diabetes, anemia, and hyperthyroidism.

Body smells are caused by some factors working in combination, including:

- Chemicals in sweat, including pheromones, which are made by the body and sexually attract (or repel) other people.
- Wastes excreted through the skin, such as metabolized alcohol.
- The actions of bacteria that live on the skin and feed on dead skin cells and sweat.
- Unwashed clothes, such as underwear and socks.

5.1.5.2 Hand Washing

Most infections, especially colds and gastroenteritis, are caught when we put our unwashed hands, which have germs on them, to our mouth. Some infections are caught when other people's dirty hands touch the food we eat. Hands and wrists should be washed with clean soap and water, using a brush if your fingernails are dirty. Dry your hands with something clean, such as paper towels or hot air dryers. You should always wash your hands:

- After using the toilet
- Before making or eating food
- After handling dogs or other animals
- If you have been around someone who is coughing or has a cold.

5.1.5.3 Bad Breath

Good dental hygiene includes regular brushing and flossing. Bad breath can be caused by diseases of the teeth, gums, and mouth, such as infections. Most people have bad breath first thing in the morning because saliva is not made while you're asleep. Bad breath proves another easily recognizable consequence of poor hygiene. It commonly develops from not regularly brushing and flossing your teeth. Bad breath results because of two main reasons. First, bacteria thrive on particles of food that can stick to your teeth. As the bacteria digest this food, their byproduct results in odor. Food can also get stuck in your teeth and rot over time, producing a foul odor,

Some foods that can cause bad breath include garlic and onion. Mouthwashes, Mouth sprays, and flavored chewing gum can make your breath smell better for a while, but if you have a health problem in your mouth, you need to see your dentist.

5.1.5.4 Smelly Feet & Shoes

Smelly feet and shoes can also be a problem for you, whether you are sporty or not. You can avoid this by giving your feet extra attention in the shower, and make sure they're completely dry before putting your shoes on. It's a good idea to alternate your shoes and to wear cotton socks instead of socks made of synthetic fibers.

5.1.5.5 Traveling Hygiene

When traveling overseas, take special care if you're not sure whether the water is safe. Suggestions include:

- Drink only bottled water.
- Don't use tap water to clean your teeth.
- When you wash your hands, make sure they are totally dry before you touch any food.
- Don't wash fruit or vegetables in unsafe water.
- If you have no other water source, make sure the water is boiled before you drink it by holding it at a rolling boil for one minute.
- Make sure any dishes, cups or other utensils are totally dry after they are washed.

5.1.5.6 Building Good Hygiene Habits

Building good hygiene habits is not a work of a day, it takes continuous efforts. The following activities should be included in daily routine – washing hands, covering mouth when coughed and having regular baths or showers.

5.1.5.7 Dental Disease

Not only can poor dental hygiene lead to bad breath, but it can also lead to dental diseases. As you allow food particles and bacteria to build up on the teeth, a coating called plaque begins to form. The bacteria in this plaque release acid, which break down the enamel on your teeth. As this process continues over time, a hard substance called calculus can form on the teeth, irritating the surrounding gums. This irritation can progress into gingivitis, leading to inflammation of the gums, which can later lead to gum disease. Gum disease causes infection and eventually may destroy your teeth.

5.1.5.8 General Disease

Hygiene practices, such as washing your hands, prove the most effective ways to prevent contracting disease and spreading disease, according to the Mayo Clinic and the Center for Disease Control and Prevention (CDC). Your hands are in constant contact with both the environment and your face, providing easy transportation from the surface of an infected object or person to your nose or mouth. Washing your hands with clean running water and soap helps reduce the amount of bacteria on your skin, lessening your chances of contracting diseases such as the common cold, influenza (flu), salmonellosis, hepatitis A, typhoid, streptococcus and staph infections.

5.1.5.9 Gender Specific

Men and women have unique hygiene needs that if ignored may lead to health problems. For example, men who have an uncircumcised penis need to regularly retract the foreskin and clean beneath to prevent inflammation, phimosis (where the penis cannot fully retract the foreskin), or penile adhesions. Women must take care to keep the genitalia clean, and always wipe from front to back after using the restroom to prevent introducing infections from the rectum to the urethra.

5.1.5.10 Traveling Hygiene

Lice are tiny insects that live on the human scalp; they make a pin prick like a puncture on the scalp, emit an anti-clotting substance and feed on the blood as nourishment. Lice thrive on unclean hair. Children are especially prone to lice infestation. Lice spread from one head to another when there is close contact, such as in school environments. Lice eggs are wrapped in a shiny white sheath and show upon the upper layers of hair as the infestation increases. They make the scalp itchy and are a cause of annoyance and embarrassment. In infants, they may cause disturbed sleep and bouts of crying. Unchecked, they can produce scalp infection.

5.1.5.11 Ear Wax

Ear wax accumulates in the ear canal that leads from the outer ear to the eardrum. As the secretion comes out of the ear, it collects dust particles. Do not reach farther than you can with your little finger into your ear to clean it. Putting in hair pins, safety pins or blunt edged objects for cleaning inner parts of the ear might harm the ear. Ear wax should be cleaned by your doctor.

5.1.5.12 Urinary Infection

The urinary infection causes pain or a burning sensation during urination. Chances of urinary infection increase during pregnancy and after major surgery. The urine can be discolored; itching, frequent urination, fever, and chills can also result from urinary infection. To avoid this infection, improve overall hygiene, both- toilets and personal parts. Wash or wipe front to back after urinating or defecating. Remember this when wiping or washing babies too, as a general rule. Do not wear tight-fitting synthetic underwear. Drink plenty of water. Do not hold back when you have the tendency to urinate. If the condition persists, consult a doctor.

5.1.5.13 Pinworms

These worms come out of the anal opening to lay eggs at night causing intense itching disturbed sleep; mild pain and diarrhea are possible consequences. When scratching, eggs stick to the hand and under the nails and infect anything the person touches. The eggs can pass through air or by contact with infected food or bed linen. The eggs cannot be killed by disinfectants and remain active in the dust for a long period. Bedclothes, undergarments, and nightwear of the infected person must be washed thoroughly in hot water. A doctor has to be consulted to treat the worm infestation; sometimes all member of the family may be asked to take de-worming medication when one member is affected. Those infected must scrub hands well with soap before eating.

5.1.5.14 Athlete Foot (Ringworm Of The Foot)

A certain fungus that breeds in warm wet places-causes this infection, resulting in scaly skin or sores or blisters between toes - often spreading to the soles. Sometimes these skins cracks and sores become the site for other infections. Rub off peelings gently. Wash feet well and apply powder. A mild fungicidal ointment at bedtime will help. Keep feet exposed. If you have to wear shoes, wear cotton socks; if the blisters begin to ooze seek professional help from your doctor.

Notes

UNIT 5.2: Communication Skills

Unit Objectives

At the end of this unit, participant will be able to:

1. Define what is communication
2. Describe communication process
3. Explain problems in communication
4. Describe various communication barriers
5. Explain traits of Active Listening
6. Define points of good writing skill

5.2.1 What Is Communication?

Communication is an exchange of information between people. It can be in the form of oral words, written words, drawings or physical actions. Communication is essential to express ideas and thoughts to friends, family, co-workers, customers. Communication also plays a major role in information exchange and decision making.

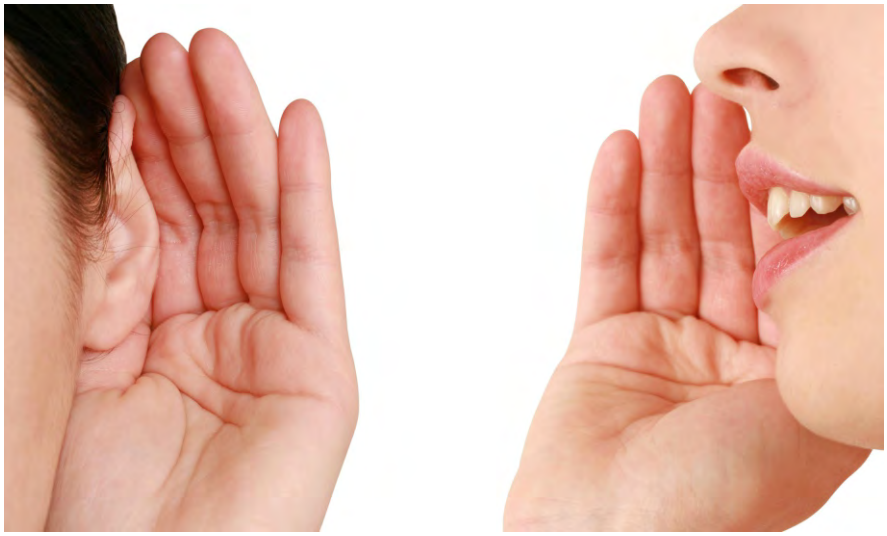

Fig. 5.2.1. Communication

5.2.2 Types Of Communications

There are two types of Communications -

1- Verbal

2- Non- Verbal

5.2.2.1 Verbal Communication

When information is exchanged between the parties through words, it is called verbal communication. It is a word-based communication. Verbal Communication has further two types –

1- Written Communication, and

2- Oral Communication.

5.2.2.1.1 Written Communication

When a message is exchanged or communicated in a written form, it is called written communication. It is also a word based communication. It is widely used when the permanency and record of the messages are important and when the audience stays at a distance. It has different forms like letters, memos, reports, etc.

5.2.2.1.2 Oral Communication

When a message is exchanged between the parties orally, it is called Oral Communication. It is also a word-based communication but not in written form rather in verbal or oral form. Major forms of Oral Communication include conversation, interview, telephone, speech, etc.

5.2.2.2 Non-Verbal Communication

Communication without using words is called non-verbal communication. It is not a word-based communication. It does not use any written or spoken words but uses symbols, body language, colors, etc. to convey messages. Non-Verbal Communication can be visual, audio-visual and silent.

5.2.3 Problems In Communication

In the process of communication, care has to be taken so as to avoid communication barriers that can come up either consciously or unconsciously. Communication barrier can cause losses to a company in terms of money and productivity . Without good communication, a company is unable to exchange information essential for daily opera ons. But some mes people fail to understand communication. Following are some of the symptoms of communication problems in an organization:

- Lack of teamwork
- Poor planning or workload
- Insufficient resources and support
- Lateness
- Poor work quality
- Non-Cooperative people

5.2.4 Common Communication Barriers

Following are the barriers of Communication -

5.2.4.1 Assumption

Generally, sender forgets to communicate complete information to the receiver, assuming that the receiver would know what has to be done. On the other hand, the receiver might assume an entirely different scenario causing a barrier in communication.

5.2.4.2 Use Of Jargons

Some people are in the habit of using jargons in their communication message. But they fail to understand that their jargons may not be clear to the receiver of the message. The receiver might misunderstand them, causing a barrier to communication.

5.2.4.3 Incomplete Sentences

At times, people leave their sentences incomplete, like "I wanted to go but....". This leaves the receiver with numerous assumptions, and the exact message cannot be conveyed.

5.2.4.4 Psychological Barriers

The state of mind and mood of the sender and the receiver also affects the message delivery. If a person is in a bad mood, then a positive message can also sound negative. Senders may also spoil the message delivery by over communicating the message, that is, communicating the same message through different channels and also giving too much information to make a point. This confuses the receiver, and the message context may not be clear.

5.2.4.5 Language Difference

The difference of language between the sender and the receiver can also be a major cause of a barrier in communication. So both should make sure that the language used for communication is understandable to both. Or else the entire process of communication ends up in being a failure.

5.2.4.6 Prejudice

The receiver might have some prejudices about the sender which may be based on culture, status, etc. In such cases, the receiver can misunderstand the exact idea of the communicated message. For example, a supervisor feels that the subordinate is not a sincere worker. So the supervisor, due to his prejudice towards the subordinate, will misjudge every communication of this subordinate.

5.2.4.7 Physical Barrier

One of the major barriers to communication is the physical barrier. Physical barriers are present in the area surrounding the sender and receiver. Physical barriers include a work environment that has a lot of background noise, poor lighting or unstable temperature. These barriers can affect how individuals try to send and receive messages. If there is a lot of background noise than the receiver may not hear what the sender is saying. If the temperature in a work environment is too hot or too cold, the sender may not be as focused on the message that they are trying to send. If people in the workplace are separated by a physical barrier, communication will not be as effective. They can use communication aids because it helps them get to know one another.

5.2.5 Active Listening

Listening is an underestimated skill, which is rarely taught and mostly neglected by all. Active listening means listening to understand the communication. Active listening is an art that comes by practice. It takes more effort than plain "hearing" but the benefits make it worthwhile. Listening goes beyond hearing.

Below are some tips to improve active listening:

Keys to effective listening	The bad listener	The good listener
Find areas of interest	Switches off during boring or dull subjects	Asks if there might be something of relevance to him
Judge content not delivery	If delivery is poor, switches off	Considers content, skips over errors of delivery
Hold your fire	Jumps in before hearing the full argument	Waits until he understands fully before exercising his opinion
Listen for ideas	Listens for facts	looks for a theme or thread in what is being said
Be flexible	Takes copious notes using only one system	Takes fewer notes. Uses several systems according to the speaker
Work at listening	Makes no real effort to listen – Fakes his attention	Works hard to concentrate
Resist distractions	Is easily distracted	Fights or avoids distractions, tolerates bad habits, knows how to concentrate
Exercise your mind	Avoids difficult material, looks for light relief	Seeks complex material to exercise his mind
Keep your mind open	Reacts to emotional words	Hold his emotions in check

5.2.6 Writing Skills

For getting success in any industrial organisation writing skill is also very important. Some of the key instructions for good writing skills are -

5.2.6.1 Clarity In Content

Your writing must be understood at the first reading. A business document is clear when it means exactly what the writer intends. Avoid technical jargon, unfamiliar words or informal language.

Eliminate ambiguity, i.e. avoid using a word with a double meaning or misplacing a phrase within a sentence.

5.2.6.2 Remain Brief

Avoid unnecessary repetition. Include only relevant information. Come to the point quickly and without "waffle". Omit unnecessary background information. Use short, familiar words instead of long words. Revise your first draft, looking for ways to reduce the number of words or to cut out unnecessary information.

5.2.6.3 Be Complete

Check that all the information, needed by the reader, is included: Who? What? Where? When? Why? How?

5.2.6.4 Accuracy In Spelling and Facts

Check your work for accuracy of punctuation, grammar, and spelling (especially the names of people and places). Check for accuracy of information: e.g. time, dates, figures and telephone numbers. Check for consistency of layout.

5.2.6.5 Be Convincing

- Use language that is believable.
- Avoid exaggeration and superlatives.
- Suggest possibilities or probabilities rather than making forceful assertions.
- Provide supporting arguments for your point of view – e.g. provide examples, statistics or a quote from a respected authority.

5.2.6.6 Show Courtesy In Words

- Display good manners and a caring attitude in your writing.
- Whenever possible, phrase your writing positively with a pleasant tone.
- Passive voice should be used when communicating bad news. This avoids negative overtones and personal criticism. Use language that is rational and unemotional.

5.2.7 How To Resolve Conflict

When people work together, conflict is often unavoidable because of differences in work goals and personal styles. Follow below guidelines for handling conflict in the workplace.

5.2.7.1 Talk With The Other Person

- Ask the other person to name a time when it would be convenient to meet.
- Arrange to meet in a place where you won't be interrupted.

5.2.7.2 Focus On Behavior

- Say "When this happens ..." instead of "When you do ..."
- Describe a specific instance or event instead of generalizing.

5.2.7.3 Listen Carefully

- Listen to what the other person is saying instead of getting ready to react.
- Avoid interrupting the other person.
- After the other person finishes speaking, rephrase what was said to make sure you understood it.
- Ask questions to clarify your understanding.

5.2.7.4 Identify Points Of Agreement & Disagreement

- Summarize the areas of agreement and disagreement.
- Ask the other person if he or she agrees with your assessment.
- Modify your assessment until both of you agree on the areas of conflict.

5.2.7.5 Prioritize The Area Of Conflict

- Discuss which areas of conflict are most important for each of you to resolve.

5.2.7.6 Develop A Plan To Work On Conflicts

- Start with the most important conflict.
- Focus on the future.
- Set up future meeting times to continue your discussions.

5.2.7.7 Follow Through Your Plan

- Stick with the discussions until you've worked through each area of conflict.
- Maintain a collaborative, “let's-work-out-a-solution” attitude.

5.2.7.8 Build On Your Success

- Look for opportunities to point out progress.
- Compliment the other person's insights and achievements.

TIP

Congratulate each other when you make progress, even if it's just a small step. Your hard work will pay off when scheduled discussions eventually give way to ongoing, friendly communication.

Notes

UNIT 5.3: Following Organisation's Rules And Instructions

Unit Objectives

At the end of this unit, participant will be able to:

1. Explain about Government Acts and By-laws
2. Describe about rules.
3. Define meaning of policies and guidelines
4. Describe meaning of procedure
5. Explain what is work instruction
6. Discuss organisational procedures for reporting and documentation
7. Describe importance of reporting

5.3.1 Rules And Procedure Pyramid

Rules and Procedure Pyramid creates a relationship between different Government Rules and Bylaws and work instructions of an individual organisation.

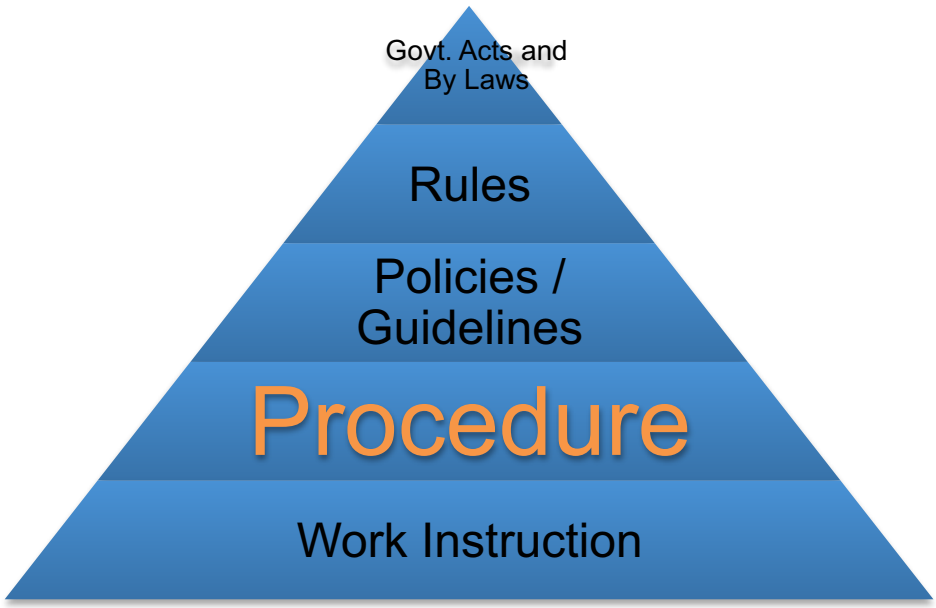

Fig. 5.3.1. Rules pyramid

5.3.1.1 Government Acts And Bylaws

Government Acts are those Acts and laws, which are made by Government and following these Acts are compulsory. There is a penalty for not following Government Acts. Examples of this are Income Tax Act, Sales Tax Law, etc.

5.3.1.2 Rules

Authoritative statement for what to do and what not is called Rule. It is given by an appropriate person of the body. The Rule is applicable in that forum or the body which is controlled by the rule making person. This can be any organisation, society or a community of persons.

5.3.1.3 Policies And Guidelines

A policy is a definitive principle or rule that an organisation must follow to reach its long-term goal. Typically, a policy marks out an organisation's views on a particular matter.

Company guidelines establish the rules of conduct within an organisation. Guidelines define the responsibilities of both the employees and employer. Company policies and procedures are made to protect the rights of employees as well as the business interest of employers.

Employees, including managers and supervisors, are expected to uphold company policy and work according to it. The employees should complete tasks accurately by being flexible and adapting to work plans and procedures as per the company policies.

Make sure you take a look at the handbook thoroughly within the first few days of joining the job. You can request for the handbook to your supervisor.

Some typical company guidelines include:

- Employee code of conduct (for example, dress code and behavioral approach)
- Attendance policy (for example, time of entry and exit from the workplace)
- Leave policy (for example, different types of leaves)
- Workplace safety (for example, understanding and following fire safety guidelines)
- Harassment policy (for example, engaging in the course of un-welcoming comment or conduct against a worker in a workplace)
- Substance abuse policy (for example, ban of smoking, alcohol, and drugs)
- Property abuse policy (for example, damaging company assets).

5.3.1.4 Procedures

The Procedure is a broad guideline for carrying out any activity. To eliminate ambiguity in carrying out regular activities, all organisations make procedures for all day-to-day activities. All employees should read these procedures carefully before carrying out those activities.

Procedures and policies help an organisation to:

- Provide a framework for actions that help employees quickly understand what is expected of them
- Stop employees from discussing and re-discussing the same issues every time they arise
- Help in legal matters
- Act as a tool to improve the quality
- Create goodwill and trust among employees, customers, and clients
- Help employees behave in a professional and responsible manner

5.3.1.5 Work Instructions

This is the last but very important link in the chain. This is the base of Pyramid. Work Instructions are detailed form of procedure. It has step-by-step details of the method for carrying out that activity.

5.3.2 Organisational Procedure For Reporting and Documentation

It is important to keep your supervisor and co-workers informed about any issues related to malfunctioning of equipment, task completion difficulties, timeline progress, and any other work related issues. Such issues may include:

1- Volume of work

2- Quality of work

3- Time within which work needs to be completed

Since reporting and documentation are very important hence it cannot be left to people to decide that in which format and structure they would document and report.

An organisational procedure has details of all requirements of Documentation and reporting. Such as –

1- Format of report
2- Who will create
3- To whom it should be submitted
4- Frequency of reporting
5- Place of filing documentation
6- Retention duration of document to keep

Notes

Exercise

Q1. **Hygiene is key to ----:**
a. Good Health
b. Various diseases
c. Bad personality
d. None of the above

Q2. **Which of these is not a way to keep hygiene:**
a. Keeping hand washed
b. Keeping hair clean and combed
c. Keeping big and dirty nails
d. Wearing clean clothes

Q3. **Which of these is part of Grooming practice:**
a. Trimming nose hair
b. Trimming eyebrows
c. Wearing ironed clothes
d. All of the above

Q3. **Which of these is not part of a company policy:**
a. Leave Policy
b. attendance policy
c. National Security policy
d. Safety policy

Q5. **Which of these should be part of the organisational procedure for reporting:**
a. The Format of report
b. Who will create
c. To whom it should be submitted
d. all of the above

Q6. **Which of these is not a type of communication**:
a. Verbal Communication
b. Simple Communication
c. Written Communication
d. Non-Verbal Communication

Q7. **Which of these is not a symptom of Poor Communication:**
a. Poor planning or workload
b. Lateness
c. Good Teamwork
d. Poor work quality

Q8. **Which of these is part of good writing skill:**
a. Be convincing
b. Be complete
c. Be brief
d. All of the above

Q9. **Which of these is not a communication barrier:**
a. Assumption
b. Use of jargon
c. Clear pronunciation
d. Language Difference

Q10. **Which of these is part of Active listening:**
a. Listen for ideas
b. No clarity in content
c. Accuracy in spellings
d. All of the above

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6. Employability Skills

Unit 6.1 - Employability Skills - 60 hours

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7. Annexures

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Annexure

S. No.	Module	Unit No.	Topic Name	Page No.	URL(s)	QR Code(s)
1	3	3.3	**Neurotherapy Services**	77		
			Neurotherapy Treatment 1		https://www.youtube.com/watch?v=XxPb3uyNerk	Click/Scan this QR Code to access the related video
2			Neurotherapy Treatment 2		https://www.youtube.com/watch?v=OUL_54WzttY	Click/Scan this QR Code to access the related video
3			Neurotherapy Treatment 3		https://www.youtube.com/watch?v=D68ip3hXNu8	Click/Scan this QR Code to access the related video
4			Neurotherapy Treatment 4		https://www.youtube.com/watch?v=8JhgiORs9O8	Click/Scan this QR Code to access the related video
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10			Neurotherapy Treatment 10		https://www.youtube.com/watch?v=gax0lReXqPw	Click/Scan this QR Code to access the related video
11			Neurotherapy Treatment 11		https://www.youtube.com/watch?v=b-9rbc3LNVo	Click/Scan this QR Code to access the related video

It is recommended that all trainings include Employability Skills Module. Content for the same is available here:

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