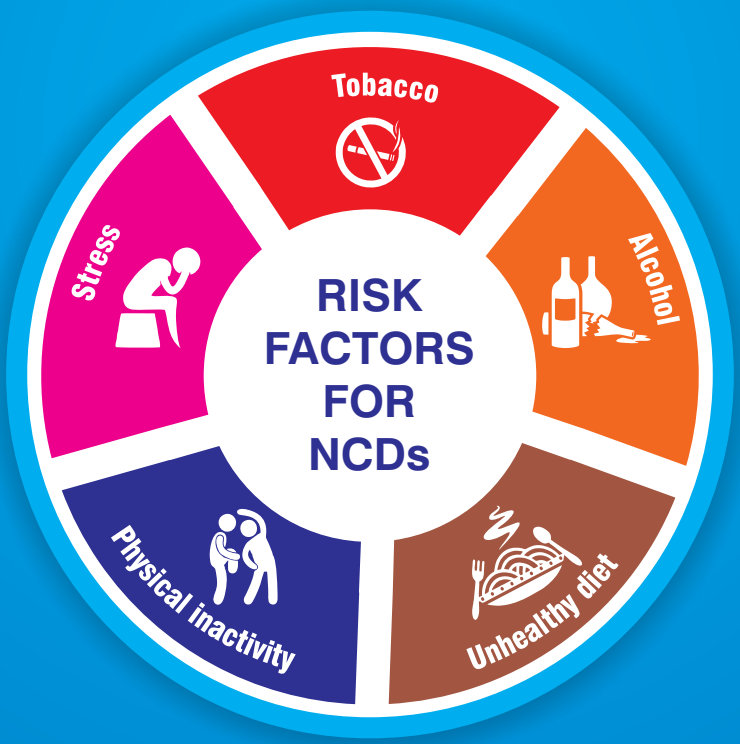
सत्यमेव जयते

NATIONAL PROGRAMME FOR PREVENTION AND CONTROL OF CANCER, DIABETES, CARDIOVASCULAR DISEASES AND STROKE (NPCDCS)

HANDBOOK FOR COUNSELORS

REDUCING RISK FACTORS FOR NONCOMMUNICABLE DISEASES



Directorate General of Health Services
Ministry of Health and Family Welfare
Government of India

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Developed by National Institute of Mental Health and Neuro Sciences (NIMHANS) in collaboration with World Health Organization India

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FOREWORD

Non-Communicable Diseases (NCDs) like Cardiovascular Diseases, Diabetes, Cancers and Chronic Respiratory Diseases are the leading causes of morbidity and premature mortality globally and also in India. They entail not only poor health effects but also adverse economic and developmental consequences.

In India, the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular diseases and Stroke (NPCDCS) was launched in 2010. The objectives of this programme include preventing and controlling NCDs through behavior and life-style changes; providing early diagnosis and management of common NCDs; building capacity at various levels of health care and training of human resources, etc.

The NPCDCS operational guidelines seek to create adequate community resources for effective prevention, detection, referral and treatment through convergence/linkage with the ongoing programmes under the National Health Mission. For NCD related programmes like NPCDCS, Nation Tobacco Control Programme, Nation Mental Health Programme and National Programme for Health Care of Elderly, various convergence/linkage areas have been identified including sharing of human resources, etc. To achieve this objective, it is important to sensitize the Counselor and other health personnel in understanding the risk factors for NCDs and their reduction strategies. This hand book will enable counselors to learn skills for counseling on healthy lifestyle management, reduction of risk factors as well as to encourage treatment compliance and follow-up of patients.

Reducing many of the NCD risk factors involves behavioral change. Therefore, the Counselors need to acquire the required knowledge and skills to motivate the community and NCD patients to change/initiate and maintain healthy behaviors that will ensure optimal health.

We hope the Counselors deployed under the NCD related programmes will use this handbook effectively, as it is their efforts which will have a major impact on reducing the NCD burden and their risk factors in the country.

(Dr. Jagdish Prasad)

ACRONYMS

ANM	Auxiliary Nurse Midwife
AUDIT C	Alcohol Use Disorders Identification Test
BP	Blood Pressure
BMI	Body Mass Index
CHC	Community Health Centre
CHW	Community Health Worker
COPD	Chronic Obstructive Pulmonary Disease
COTPA	Cigarettes and Other Tobacco Products Act
DALY	Disability-Adjusted Life Years
DM	Diabetes Mellitus
ICMR	Indian Council of Medical Research
MO	Medical Officer
NCD	Noncommunicable Diseases
NGO	Non-Governmental Organisation
NFHS	National Family Health Survey
NHM	National Health Mission
NIMHANS	National Institute of Mental Health and Neuro Sciences
NIN	National Institute of Nutrition
NPCDCS	National Programme for Prevention and Control of Cancer, Diabetes,Cardiovascular Diseases and Stroke
NRT	Nicotine Replacement Therapy
PHC	Primary Health Centre
SHG	Self-Help Groups
SHS	Secondhand Smoke
WHO	World Health Organization

UNIT 1

INTRODUCTION

There are many diseases and conditions which we can completely prevent or reduce the complications from if we are careful with our lifestyle. In this Unit, the Counselor will have an introduction to these conditions, understand how they are increasing in our country and why it is important to prevent them.

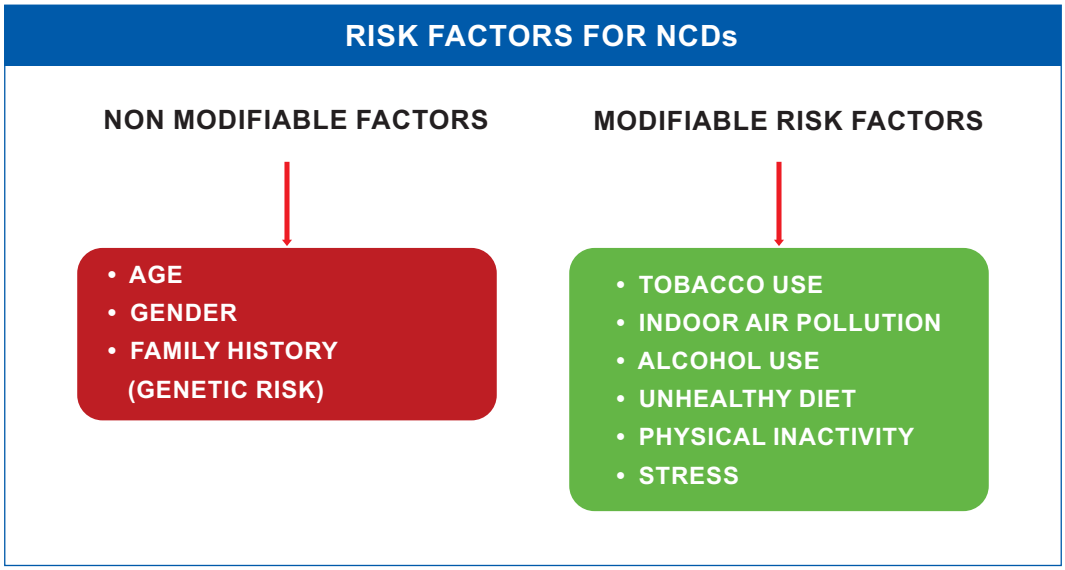
1.1 What are Noncommunicable Diseases (NCDs)?

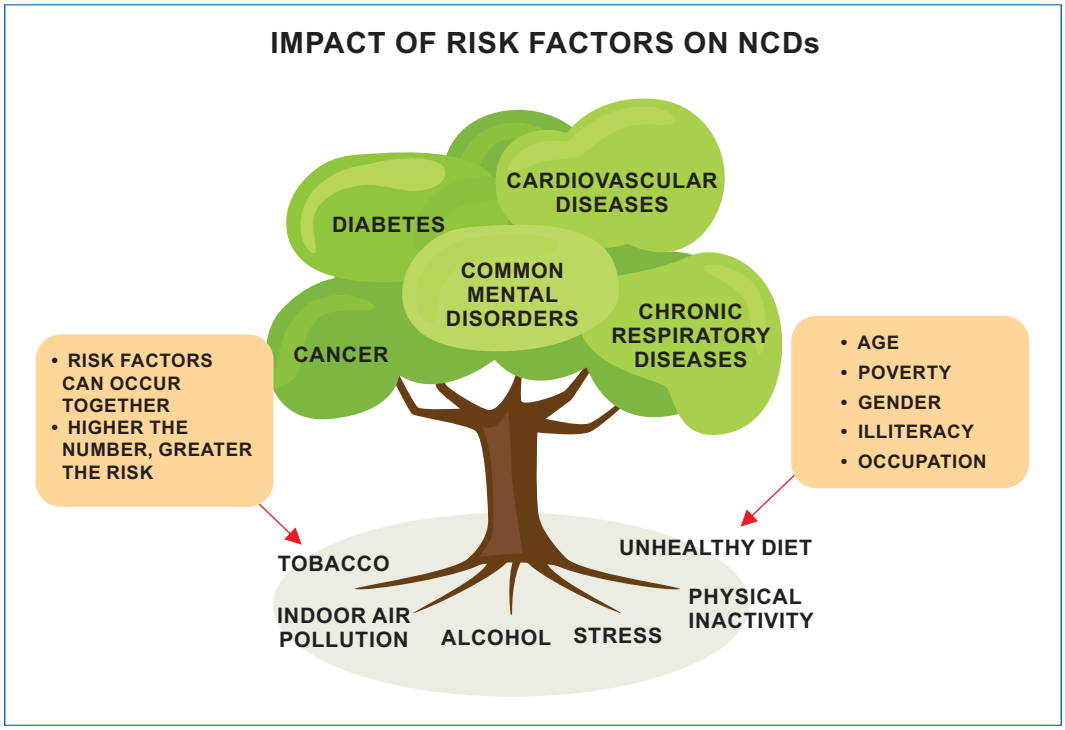
Noncommunicable Diseases (NCDs), also known as chronic diseases, are conditions which do not spread from person to person. Examples are cardiovascular diseases (diseases of the heart and blood vessels including high blood pressure), diabetes, cancer, chronic respiratory diseases, neurological disorders like epilepsy and common mental health disorders (like depression and anxiety) etc. NCDs tend to be of long duration and are the result of a combination of genetic, physiological, environmental and behavioural factors.

1.2 Why are NCDs important?

- Over 60% of deaths in India are contributed to by Noncommunicable Diseases (WHO-Global Health Estimates, 2015). Cardiovascular disease and cancers account for majority of deaths.
- NCDs affect both urban and rural populations in their most productive age (30-60) years.
- Tobacco use, alcohol use, physical inactivity, unhealthy diet, stress increase risk of NCDs many fold.
- The poor and disadvantaged are at greater risk for NCDs. Poor people are also more likely to be exposed to NCD risk factors. If the main earners are those who get sick or die, families can face great hardships to meet expenses food, education and health. Also, NCDs are costly to treat, both for the person affected and for the health care providers.
- More than three quarters of NCDs are preventable. An important way to control NCDs is to focus on reducing the risk factors associated with these diseases.
- More the number of risk factors, higher the risk of developing NCDs.

1.3 What are the risk factors for NCDs?





Interrelationship among risk factors and NCDs

1.4 Levels of prevention

Primordial prevention: Primordial prevention consists of a set of interventions targeted at preventing the emergence of risk factors in population groups in which they have not appeared. It includes healthy, risk-free populations. Interventions involve various settings such as community-based interventions, workplace interventions and school-based interventions.

Primary prevention: When action is taken before the onset of risk factors i.e. through education activities in the community (in schools, self–help groups, women's groups, farmers, youth groups, factory workers etc.). Prevention involves the development of an effective communication strategy to modify individual, group and community behaviour. It focuses on community mobilization and participation and mainstreaming the health promotion agenda to reach till the village level.

Secondary prevention: Screening, medical examination and referrals for early intervention for high blood pressure or excess weight helps to reduce risk factors from becoming complicated and developing into NCDs.

Tertiary prevention: It is used when the disease process has advanced beyond its early stages. Interventions involved in this stage include disability limitation and rehabilitation. Counselor has a limited role in tertiary prevention.

1.5 NCDs Prevention and Control Programme in India

NCDs prevention and control intervention forms an important part of the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Disease and Stroke (NPCDCS). According to the Operational Guidelines of NPCDCS, services in primary care include Health promotion; Screening and early detection; Access to affordable treatment for NCDS and Rehabilitation.

Health promotion strategies include awareness generation and community education about healthy lifestyle; various interventions for behavior change including communication through interpersonal communication.

Under the NPCDCS programme, Counselors are recruited at District and CHC level for health promotion and counseling services. In a health facility where Counselors are not available, the staff nurse may be trained to provide basic counseling services to persons with NCDs or with NCD risk factors.

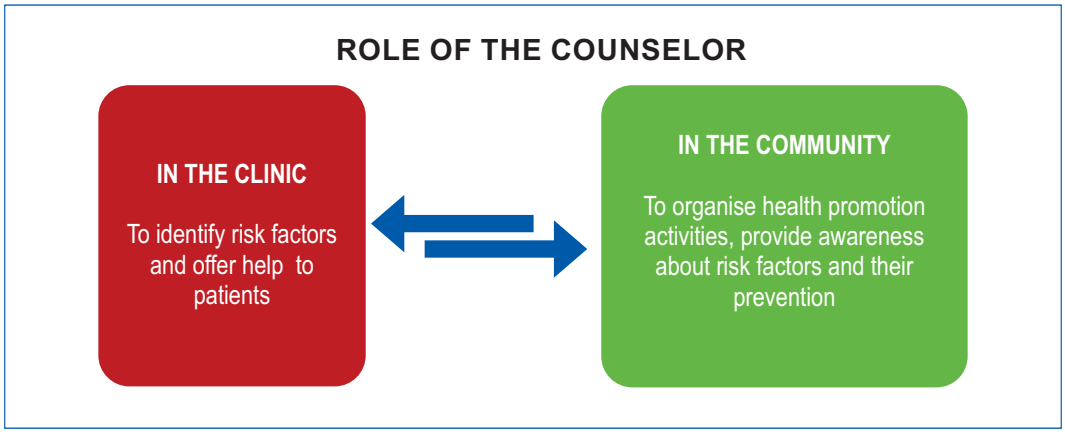
There have been many new initiatives under the NPCDCS programme. Population-based screening has been initiated. Interventions are now being offered for Chronic Obstructive Pulmonary Diseases (COPD), Chronic Kidney Diseases (CKD), as well as collaboration with many other programmes in the country. These include the Revised National Programme for Tuberculosis (RNTCP), National Mental Health Programme (NMHP), the National Health Mission (NHM), AYUSH and programmes on maternal health dealing with gestational disorders.

Under the NPCDCS programme, all persons above the age of 30 years need to be screened for NCDS and risk factors

1.6 Role of Counselor in facilitating behaviour change

The Counselor can play a vital role in the reduction of health risks and the promotion of healthy lifestyles. She/He can influence lifestyle changes where modifiable risk factors (such as high-fat diet, sedentary lifestyle etc.) are concerned. The idea here is to point out that while the non-modifiable factors are few (e.g. age, genetic predisposition), the modifiable factors are numerous. Though NCDs may occur in people who are predisposed by heredity, yet reducing the risk factors may prevent the onset, or reduce the severity of the problems associated with NCDs.

Behaviour change occurs when a person understands the risks of continuing a behaviour (like having unhealthy eating habits, or using tobacco), understands the benefits of changing such behaviours (reducing weight, lowering blood pressure which in turn can reduce heart disease or diabetes) and gets support to change behaviour and lifestyle. A Counselor can help the person in bringing about such



behaviour change. This may be possible both in a primary health care facility, as well as through building awareness at the community level about the importance of lifestyle changes and encouraging people towards early screening for NCDs.

The primary roles of the Counselor are:

1. Providing counseling on lifestyle management to high risk individuals and addressing risk factors at the population level;
2. Generating health awareness at the community level about the importance of healthy lifestyle;
3. Assisting the patients with NCDs in disease counseling and follow up care for treatment adherence.

Summary

- Non-Communicable Diseases (NCDs) include conditions which do not spread on from person to person such as cardiovascular diseases, diabetes, cancer, chronic respiratory diseases, neurological disorders like epilepsy and common mental health disorders (like depression and anxiety).
- Common modifiable risk factors for NCDs include tobacco use, alcohol use, unhealthy diet, physical inactivity, stress.
- Levels of NCD prevention: Primordial prevention (keeping populations healthy); Primary prevention (taking action before onset of risk factors); secondary prevention (screening, medical examination, referrals for early interventions to prevent complications).
- The role of the Counselor in NCD prevention/ reducing their impact is three-fold: 1) Providing counseling on lifestyle management and addressing risk factors; 2) Health awareness at community level about the importance of healthy lifestyle; 3) Assisting the patient with NCD through disease counseling and follow up care.

UNIT 2

BASIC COUNSELING SKILLS

In order to be able to reduce the risk factors for NCDs, it is important for the Counselor to communicate in a meaningful manner so that a person becomes motivated to change his/her lifestyle.

This Unit focuses on how to build a good rapport with the person being counseled, the stages of counseling, how to involve families and how to carry out programme interventions to facilitate behaviour change in the community.

2.1 What is Counseling?

Counseling is a process of helping people cope with problems. The duration of counseling sessions can vary depending of the nature of the problem.

2.2 Personal qualities of an effective Counselor

- Self-awareness (exploring one's own life situations and being aware of one's own strengths and limitations).
- Warmth (showing interest, a caring attitude).
- Empathy (to see the world as the individual sees it).
- Genuineness (true desire to help).
- Non- judgmental attitude (keeping aside personal opinions, attitudes and values).

2.3 Basic counseling skills

Skill	Tips on how to communicate
Active listening	Maintain eye contact Have a kind tone to your voice Express interest by leaning forward, nodding
Questioning	Use more open-ended questions (questions that give the person a chance to further explain- for e.g. 'tell me about your childhood')

Encouraging	Through verbal ways like saying 'hmm', 'go ahead'and non-verbal like nodding
Paraphrasing	Conveying what you understand from what the individual has said. *E.g. When you feel anxious, you tend to use tobacco. Though you know it is not a good thing to use tobacco because it will worsen your heart condition and diabetes, you are wondering what else you can do when you feel anxious. Have I understood this correctly?*
Reflecting feeling	Identifying the underlying emotions behind the individual's story
Summarising	Putting together briefly the main points

Counselor should AVOID the following:

- Moralizing
- Making false assurances
- Making unrealistic promises
- Label a person (e.g. alcoholic')
- Focusing on negatives
- Focusing yourself and the individual being counseled

2.4 Stages of counseling

1. INITIATING THE SESSION: The first session is important to build trust and a working relationship. Explain the purpose of the session, number of sessions, confidentiality, what can be achieved and how the individual can benefit from the process.

   Greetings. My name is XXX and I am a Counselor. My job is to try and help you to find ways of improving your health and lifestyle. I can also help you handle your health condition better. For this, I would be asking you some questions related to your health, and meeting you a few times so that we can together discuss this.

2. UNDERSTANDING THE PROBLEM: Active listening and asking appropriate questions allow a proper understanding of the problem.

3. MUTUAL GOAL SETTING: The Counselor actively helps the individual to set realistic goals based on what changes are desirable.

4. WORKING STAGE: During this stage, the Counselor helps the individual to work towards the set goals. Problem solving is an important part of this stage. Trying out new ways of coping, making changes in diet and exercise, quitting alcohol and tobacco use are some examples. Referrals to professionals related to risk factors may be done in this phase (Medical Officer in primary care, Yoga instructor, Dietician wherever available). A directory of services and contact persons should be maintained (local and district level) for referrals. Follow up and home visits with help from the Community Health Worker at the Primary Health Centre are important linkages.

PROBLEM SOLVING

- Exploring alternatives
- Making a choice
- Trying out the alternative
- If it does not work, moving on to the next best alternative

5. TERMINATING: The Counselor and individual can decide to terminate sessions based on medical report of disease progression and the Counselor's own observation.

   Example: The Counselor can say '….We have a few sessions left. Let us discuss the progress made and what else needs to be done. We can discuss follow up dates …'

   Booster sessions are useful to motivate individuals to work through difficulties and to check their progress. Follow up is done via phone calls, electronic messages (email, SMS) or home visits.

2.5 Counselors' role at different levels

2.5.1 At the individual, group and family level

Motivating an individual for healthy lifestyle

All individuals are in different stages of readiness to make positive change in their present risky lifestyles. Some people may be ready to change, some not ready to change and others unsure if they want to change. An important role of the Counselor is to motivate the person to change wherever required.

Steps to be taken based on the Stages of readiness

READY	DO explore pros and cons of services/ referral; discuss alternatives and choices (give a menu of choices); emphasize autonomy (e.g. you know what is best for you); pair optimism with back-up (e.g. if this does not work, you can call me).
UNSURE	DO listen reflectively, ask open-ended questions, explore pros and cons of change (e.g. what happens when you smoke? what will happen if you do not smoke?).
NOT READY	DO listen, show concern, explore pros and cons of change, give feedback, offer information and support, plan followup contact.

Strategies for individual/ patient education and counselling with which the counselor should be familiar:

- Frame the teaching to match the individual's perceptions.
- Fully inform individual of the purposes and expected effects of interventions and when to expect these effects.
- Suggest small changes rather than large ones.
- Be specific.
- It is sometimes easier to add new behaviours than to eliminate established behaviours.
- Link new behaviours to old behaviours.
- Use your authority as a professional in a sensitive way.
- Get explicit commitments from the individual.
- Use a combination of strategies.
- Involve other health staff.
- Monitor progress through follow up contact.

Counseling in groups

Effective counseling can often be done in a group setting. It is ideal to have about 6-8 persons in a group. Group counseling not only helps an individual to learn from the counselor, but also other group members. Group counseling themes can be around healthy lifestyles, recognizing risk factors early and ways of modifying them, lifestyle modifications to manage the disease and managing disease complications effectively.

Health education for families

Many people in India still live in extended or joint families. The family is important for several reasons. Older family members often make decisions that influence the risk factors for children (e.g. diet, physical activity). If one of the members in the household is spending a lot of money on risk factors such as alcohol or tobacco, this may not only affect the person, but the rest of the family as well.

Family members accompany a person with health problems to the primary care facility. Involving the family members can help in addressing the risk factors in the person at risk/with diagnosed NCD and will also make the family members aware of the importance of a healthy lifestyle. Family can also help person suffering from NCDs in drug adherence and motivating for regular visit to health facility to avoid disease complications.

Emphasizing the importance of follow up to individual and family

It is important that the Counselor emphasizes the importance of follow up, the need to persist with continued attempts for behavior change even when not successful in the beginning, encourages attempts made by the person to reduce the risk factors, and help the person to learn new ways of change if older ways have not worked. Active follow up can act like a booster for avoiding relapse and maintaining positive behavioral change. Follow up counseling can

Setting the stage for counseling

Identify a suitable place for counseling, ensuring privacy and confidentiality

Explain the purpose of counseling and set the goals of counseling, the approximate number of times you may need to see the person, fix up a time for the next appointment.

Spend at least 15-20 minutes during each session or longer if required.

occur through face-to-face sessions, telephone, mobile messaging or home visits. Follow up is also required for high-risk individuals and person suffering from NCDs. This includes counseling on drug adherence, self-care, and preventing complications.

2.5.2 Counselor's role in health promotion activities in the community

Community participation helps to strengthen family support and social network for management of diabetes and hypertension, and for home-based management of mental illnesses. for management of diabetes and high blood pressure and for community-based management of mental illnesses. This can reduce demands on follow up services and institutional care.

Levels of community prevention:

1. Primary prevention: When action is taken before the onset of risk factors i.e. through education activities in the community (in schools, self–help groups, women's groups, farmers, youth groups, factory workers etc.).
2. Secondary prevention: Screening, medical examination and referrals for early interventions for high blood pressure or excess weight helps to reduce risk factors from becoming complicated and developing into NCDs.

Methods of health promotion:

- Collaborate with existing organizations such as with rural societies, traditional healers, youth groups, senior citizens with spare time, village leaders, panchayat members, mahila groups, groups like the Lions and Rotary Clubs, charitable and religious organizations etc.
- Involve local NGOs- Some NGOs may have recreation centres, gyms, activity groups, community

Community education for a risk factor such as alcohol use includes:

- Removing wrong beliefs about the positive effects of drinking.
- Providing facts on impact of alcohol use and need for community involvement.
- Correcting wrong beliefs and giving accurate information about treatment.
- Awareness programmes should include not only alcohol (as risk factor) but other issues like improving quality of life.
- Community members should be encouraged to visit treatment sites and persons should be identified to provide support after treatment.

centres, vocational training, micro credit schemes, employment opportunities, which can be effectively utilized.

- Involve mass media.
- Arrange awareness programmes for schools, colleges, workplaces and other vulnerable communities.
- Activities for health promotion for risk factors and NCDs includes psycho education, campaigns, screening special films, exhibitions, posters, debates, talks by experts, conducting health camps, writing newspaper articles, street plays, broadcasting information, songs, poems etc.
- Engage local government agencies to strengthen resources for health promotion. Train volunteers to increase local resources.

Summary

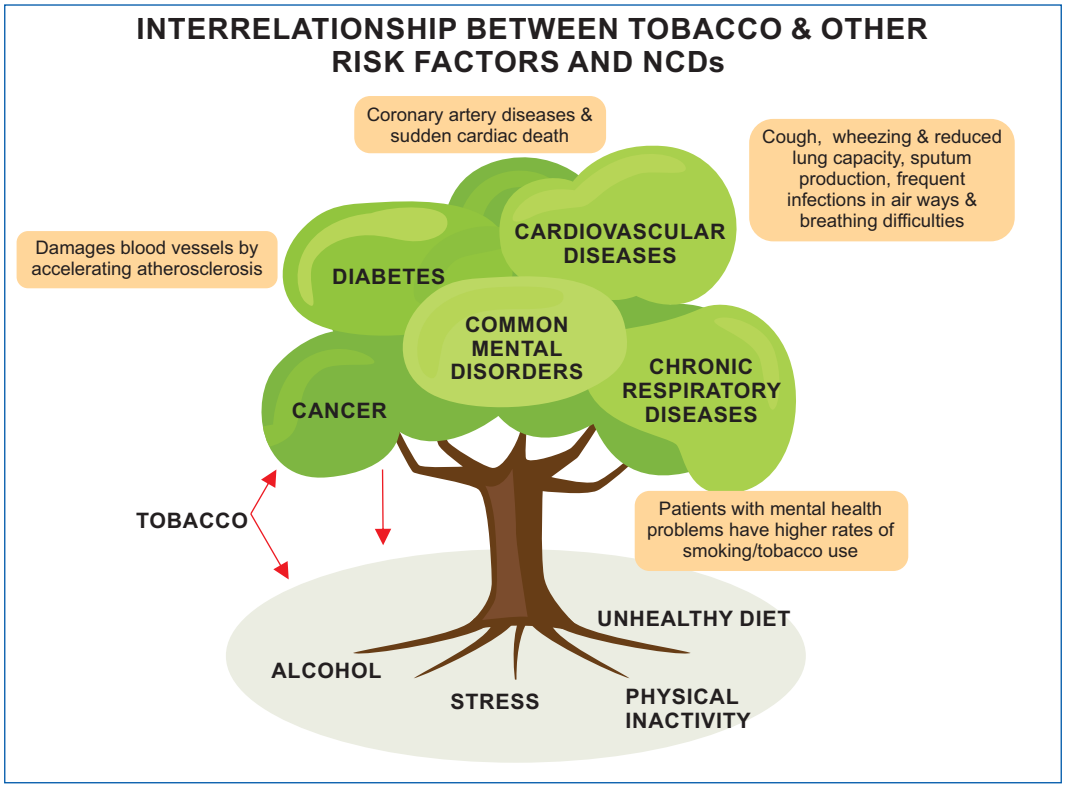
- Self-awareness, warmth, empathy, genuineness, non-judgmental attitude, unconditional positive regard, are some essential qualities of an effective Counselor.
- Active communication skills are important for effective counseling.
- 5 stages of counseling: Initiating the session, understanding the problem, mutual goal setting, working stage, terminating the session. Follow up is important.
- Motivating the individual helps to make a positive shift and change his/ her present risky lifestyle. Strategies to motivate depend on the individual's readiness to make the change.
- Involving family members and ensuring their cooperation can be most effective in achieving NCD control.
- Some community health promotion activities: a) Collaborate with existing organizations & local NGOs; b) Arrange awareness Programmes; c) Train volunteers; d) Plan campaigns, screening special films, exhibitions, posters, debates, screening special films talks by experts, health camps, street plays.

UNIT 3

TOBACCO USE

Tobacco is a plant whose leaves are dried and used in various ways. It may be smoked in the form of cigarettes or bidis. Smokeless tobacco is commonly chewed as gutka, khaini, mawa, or inhaled as snuff. Electronic cigarettes (e-cigarettes) or electronic nicotine delivery systems are newly introduced devices that do not burn or use tobacco leaves but instead vaporise a solution the user then inhales. E-cigarettes are also gaining popularity in India specially in urban areas.

In India, more than 28% of adults in India use tobacco in either the smoking or smokeless form. Khaini and bidi are the most commonly used tobacco products. Three in every 10 adults who work indoors were exposed to second-hand smoke at their workplace and 40% of Indians are exposed to second-hand smoking at home..



3.1 Why do people use tobacco?

Tobacco is culturally accepted in many societies. It has been a common source of relaxation, a common way to reduce tension and sometimes considered as a natural laxative. However, recently, more and more people have come to know about the harm caused by tobacco.

Tobacco and linkages with other risk factors

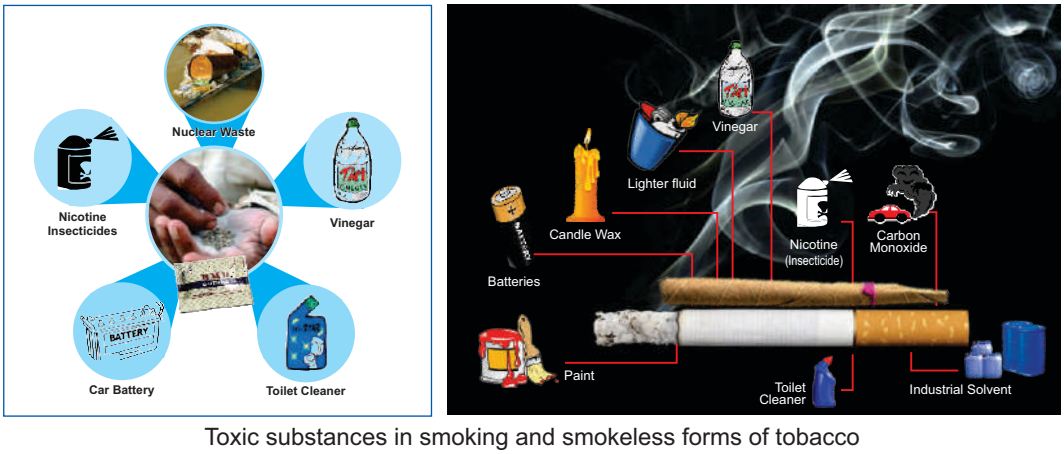
- Tobacco use can reduce appetite, lead to loss of weight and poor nutritional intake.
- People who smoke are more likely to drink alcohol.
- People use tobacco to reduce stress without realizing that such perceived benefit comes at the cost of various adverse health effects..

3.2 What happens to the body when a person uses tobacco?

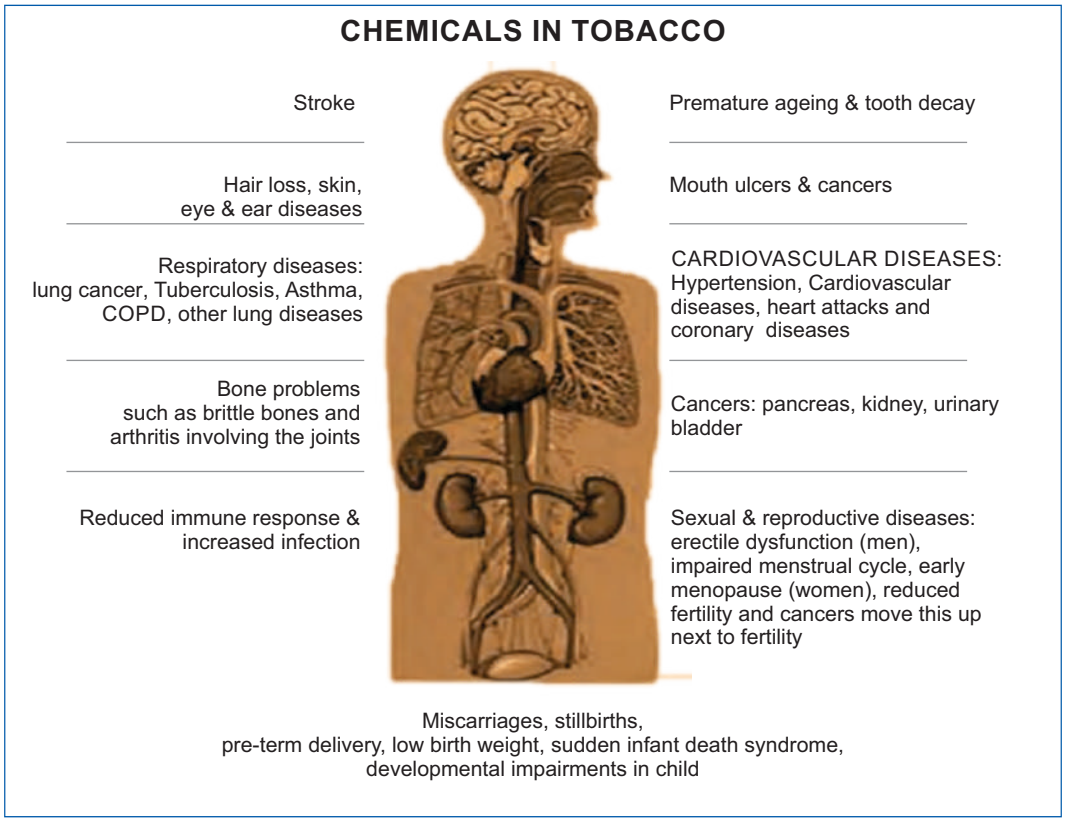
There are 4000 chemicals in one cigarette and 3000 chemicals in one gutka packet. At least 28 of these chemicals in tobacco smoke and 69 in smokeless tobacco are known carcinogens (chemicals than can cause cancer). Tobacco is known to cause several adverse health effects in humans.

Effects of secondhand smoke: When there is an active smoker in a room, others around are also exposed to the same toxic gases as the smoker. This is called Passive Smoking and is also very dangerous as the person inhales the toxins present in the smoke.

3.3 Relationship of tobacco with NCDs



Toxic substances in smoking and smokeless forms of tobacco



Adverse effects associated with tobacco use

Tobacco and NCDs

Cardiovascular Diseases: Tobacco use, especially in the form of smoking has been found to lead to coronary artery diseases and sudden cardiac death.

Cancers: Smoking is the major cause of lung cancer, oral cancer and cancers of the stomach, liver, pancreas and kidneys. In addition, exposure to secondhand tobacco smoke can also cause lung cancer.

Respiratory diseases: Tobacco is associated with chronic respiratory diseases. Cough, wheezing, and reduced lung capacity are common in tobacco users.

Mental health disorders: Individuals with mental health problems have higher rates of smoking/tobacco use and are prone to serious health problems both on account of their mental illness and on account of tobacco use.

Dangers of smokeless tobacco

India is one of the largest consumers of smokeless tobacco. Ninety percent of the cancers of the oral cavity and pharynx are caused by tobacco use in some form, and more than half by smokeless tobacco use. Apart from oral cancer, smokeless tobacco use also increases the risk for heart related problems like hypertension, heart attacks and strokes. Smokeless tobacco use has also been associated with diabetes, tuberculosis, asthma, cataract and infertility. Smokeless tobacco use in pregnant women increases their risk for anaemia, still birth and can cause low birth-weight among children. The use of areca nut (often along with smokeless tobacco) is associated with oral submucous fibrosis (OSF), a high-risk precancerous condition, which has been increasing among Indian youth.

3.4 Why is quitting tobacco use so hard?

Nicotine is a very powerful addictive substance. Nicotine is the chemical in tobacco that leads to pleasure by releasing chemicals like dopamine in the brain. Gradually the brain needs more nicotine to get this pleasure. Over time, when the brain does not get enough nicotine, it starts sending distressing signals in the form of craving, restlessness and irritation. This makes it very hard for the user to quit.

3.5 Role of the Counselor in enabling tobacco users to quit

3.5.1 At the Individual level

Step 1 - ASK:

- Your first step should be to ask EVERY individual you see, if he/she uses tobacco – either in smoking or smokeless form. If yes, ask for the amount and frequency of use (by using Fagerstrom Nicotine Dependence Questionnaire provided below).

1. How soon after you wake in the morning do you smoke or first use tobacco?
a. With in 5 minutes 3
b. 6 to 30 minutes 2
c. 31 to 60 minutes 1
d. More than 60 minutes 0
2. Do you find it difficult not to use tobacco where tobacco is forbidden?
a. Yes 1
b. No 0
3. Which of cigarettes would you most hate to give up?
a. First thing in the morning 1
b. Any other time 0
4 Do you use tobacco when you are sick enough to have to stay in bed?
a. Yes 1
b. No 0
5. How many cigarettes do you smoke a day?
a. 10 or less 0
b. 11-20 1
c. 21-30 2
d. 31 or more 3
6. Do you use tobacco more in the morning than the rest of the day?
a. Yes 1
b. No 0

Scoring = The highest possible score = 16; the closer to zero your score, the less dependent you are on tobacco; the higher the score, the more strongly you are addicted.

2. SET OF QUESTIONS FOR SMOKELESS TOBACCO USERS

1. After a normal sleeping period, do you use smokeless tobacco within 30 minutes of waking?					
a. Yes	1	b. No	0		
2. Do you use smokeless tobacco when you are sick or have mouth sores?					
a. Yes	1	b. No	0		
3. How many times do you use per week?					
a. Less than 2 times	0	b. More than 2 times	1	c. More than 4 times	2
4. Do you intentionally swallow your tobacco juices rather than spit?					
a. Never	0	b. Sometimes	1	c. Always	2
5. Do you keep a dip or chew in your mouth almost all the time?					
a. Yes	1	b. No	0		
6. Do you experience strong cravings for a dip or chew when you go for more than two hours without one?					
a. Yes	1	b. No	0		
7. On average, how many minutes do you keep a fresh dip or chew in your mouth?					
a. 10-19 minutes	1	b. 20-30 minutes	2	c. More than 30 minutes	3
8. What is the length of your dipping day (total hours from first dip/chew in a.m. to last dip/chew in p.m.)?					
a. Less than 14.5 hours	0	b. More than 14.5 hours	1	c. More than 15 hours	2
9. On average, how may dips/chews do you take each day?					
a. 1 - 9 times	1	b. 10 - 15 times	2	c. >15 times	3

Scoring = The highest possible score = 16; the closer to zero your score, the less dependent you are on tobacco and the higher the score, the more strongly you are addicted.

Based on the score, the level of addiction can be low (<4), medium (4-6) or high (>6)

- Also ask if he/she uses other substances – alcohol, cannabis (ganja), sleeping tablets, etc. If yes, refer to the Medical Officer.

Step 2 - ASSIST: Use counseling skills to facilitate behavioral change:

- Interpret Fagerstrom scores to the individual.
- Educate: Discuss health effects of tobacco, other risk factors, and NCDs.
- Link the individual's present medical condition to tobacco use, and provide a strong personalized message (e.g. your BP is high, so you need to quit tobacco), keeping in mind his/her life situations (e.g. the individual may have school going children, or may be the sole breadwinner of the family). Use diagrams if necessary, to facilitate understanding.
- Use a Balance Sheet to discuss pros and cons of using/ quitting tobacco (sample is provided below).
- Give relevant education materials in local language which are available at the health facility.

USE A BALANCE SHEET

PROS & CONS OF TOBACCO USE

GOOD THINGS ABOUT TOBACCO USE?	BAD THINGS ABOUT TOBACCO USE?
• It relaxes me. • It helps me concentrate and work better. • It helps me socialize better.	• It ruins my health. • My family also coughs when I smoke. • The house is full of smoke • I waste my money • My breath smells • My teeth are stained • I look old and tired • I burn holes in my mattress and shirts • My family gets upset when I smoke

USE A BALANCE SHEET

PROS & CONS OF TOBACCO USE

GOOD THINGS ABOUT GIVING UP TOBACCO?	BAD THINGS ABOUT GIVING UP TOBACCO?
• I will be healthier, feel better, breathe easier, cough less. • My risk of lung cancer, BP and other health problems will come down. • My teeth will be whiter, healthier, and my breath will be fresh. • My appearance will improve, wrinkles and ageing of skin will reduce. • I won't have to worry about impotence. • I will save money. • My family wants me to quit: they will be happy if I do so. • I will set a good example to my children.	• I may lose friends. • I may suffer from severe withdrawals. • I might get easily tense and stressed.

Balance sheet for counselling on tobacco use

When the individual is ready for change:

SET A QUIT DATE

- Discuss with the individual an appropriate time to quit (e.g. the person's birthday or child's birthday). Set about 15 days of time to quit from the time

of meeting the Counselor.

- Reduce tobacco use daily (from 10 to 9 bidis; 9 to 8 and so on before the total quit date).
- Help the individual to identify and handle high risk situations (e.g. smoking first thing in the morning, drinking coffee/ tea, after food, being with other smokers, taking a break at work and feeling bored).
- Discuss 4 Ds that are useful when craving occurs: Delay, Distract (use cardamom (elaichi), cloves (lavang), peanuts), Drink water, Deep breathing.
- Learning to say 'NO' to tobacco, is an important step that the individual should practice when offered tobacco, Some tips to say NO are given below:
  - Say NO first.
  - Respond fast, use eye contact and have a clear tone and show that you are serious.
  - Don't make excuses and don't feel guilty for not agreeing to use tobacco.
  - Leave the situation quickly if you feel you may be forced to use tobacco.
- Learning to handle negative mood states (e.g. feeling angry, bored, sad, restless) in positive ways is another step.
- Tips for healthy lifestyle should be planned (e.g. prayer, staying with non-tobacco users, following a balanced diet, ensuring good sleep and exercise, time management, practicing relaxation).

FOR THOSE WHO DO NOT WANT TO CHANGE: Continue motivation during follow up and refer to Medical Officer for health related issues. Counselor can find out the roadblocks which the individual is experiencing with respect to quitting and help him/her to overcome these. This process will help the individual to get ready for quitting tobacco use. Repeat the assessment of readiness to quit tobacco use at every time that the individual visits the health facility. If not ready to quit, repeat intervention at a later stage.

Involve the family:

It is now understood that there may be a genetic risk to develop addiction, once a person starts the use of tobacco. Further, younger people in a family start tobacco use when there is a 'role model' using tobacco. Thus, involving the family member of the tobacco user is important to:

- Educate them about the risks of tobacco use on health.

- Get them to support the tobacco user in his or her quit attempt.
- Address any possible risk factors for tobacco use (e.g. stress at home).
- Motivate tobacco using family members also to quit.

Step 3 - ARRANGE:

- Refer the individual to the Medical Officer for his/her medical problems and for medication to assist tobacco cessation.
- Inform the individual about follow up dates and monitor progress.
- Coordinate with Community Health Worker for home visits, if necessary.

3.6 Tobacco-specific health promotion activities in the community

- Organize specific outreach programmes at local youth clubs, educational institutions and recreational facilities to inform the public about the dangers of tobacco use.
- With active public support, organize campaigns to establish smoke and tobacco-free schools, restaurants, offices, shops, and recreational facility premises.
- Provide posters conveying anti-tobacco messages which can be put up in public places.
- Work through women's and youth associations, media, schools, government programmes for rural development, nongovernmental organisations (NGOs), etc. to achieve extensive coverage of the anti-tobacco movement at the grassroot level.
- Pay particular attention to vulnerable groups such as women and children (e.g. talk about the effects of secondhand smoke at antenatal clinics).

3.7 Tobacco control in India

Several steps have been taken to reduce tobacco related harm in our country. The Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act , 2003 or COTPA, 2003 is an Act of Parliament in India. The key features of the Act are that it:

- Bans smoking in public places.
- Bans the sale of tobacco products to minors.
- Bans advertising of tobacco products.
- Makes it compulsory to display health warnings on tobacco products.

National Tobacco Control Programme is implemented in all States/UTs for raising awareness about harmful effects of tobacco and implementation of the provisions mentioned under COTPA. Most states have banned the sale of gutka and pan masala containing tobacco. Tobacco Cessation Centres have been set up under the NTCP to provide regular tobacco cessation services at the out-patient department of district hospitals.

It very encouraging to note from the National Family Household Survey of 2016 (NFHS 4), that tobacco use among men has reduced from 50% to 47% in the 13 states surveyed. Together with the other measures, effective counseling about tobacco related harm, preventing use, helping persons quit tobacco will all be important to further reduce this important risk factor for NCDs.

3.8 mCessation and National Tobacco Quitline

National Tobacco Quitline has been set up which aims to provide telephonic counselling to those desiring to quit tobacco. The toll-free number 1800-11-2356 is a national number and can be accessed from all tele-service providers. Similarly mCessation initiative provides evidence-based behavioural change through text messages on mobile phones, which includes health information on tobacco use hazards, tips on quitting, and encouragement for those attempting to do so. The unique feature of the programme is that tobacco users who want to quit, can register by giving a missed call to 011-22901701, or by registering at:

http://www.nhp.gov.in/quit-tobacco

Provisions under COTPA, 2003

Summary

- Tobacco is used in both smoking and smokeless forms. However, both forms result in exposure to carcinogenic chemicals that can be deadly.
- Nicotine is the chemical present in tobacco that results in a powerful dependence.
- Tobacco use causes a wide range of illnesses, including lung, oral and other cancers, chronic respiratory conditions, diabetes, cardiovascular illnesses, infertility, mental health conditions. Additionally, tobacco use poses a significant risk to family members and others who may inhale the smoke emitted by the user.
- Three steps can be effectively used to counsel users to quit: 1) Ask 2) Assist in quitting 3) Arrange for referrals and follow up.
- Health promotion activities such as organizing community campaigns, disseminating health information through posters, working with local groups and NGOs, may be effectively used as part of the anti-tobacco movement.
- The Cigarettes and Other Tobacco Products Act (COTPA) is an Act which bans smoking in public places and also has other regulations in place to control tobacco use.
- National Tobacco Quitline and mCessation are new initiatives where people can get tips to quit tobacco.
- NTCP is implemented in all States/UTs for raising awareness about harmful effect of tobacco and implementation, implementation of provisions mentioned under COTPA.

UNIT 4

ALCOHOL USE

The use of alcohol has increased in many developing countries, including India. Alcohol use is linked with other risk factors such as tobacco use, unhealthy diet, physical inactivity and stress. Alcohol use has been linked to many cancers and many types of cardiovascular diseases. In India, alcohol related problems account for every fifth hospital admission. During the last decade, according to the National Sample Survey Office (NSSO), per capital alcohol consumption has increased by nearly 28% in rural areas and 14% in urban areas.

4.1 Why do people use alcohol?

People may use alcohol due to a variety of reasons. Some persons who start alcohol using early in life are usually those who are impulsive (like wanting things immediately), those who enjoy doing risky activities and those who use alcohol to cope with stress. Some drink alcohol as a pastime often due to lack of recreational activities or hobbies. Social factors include peer pressure (friends who drink), mass media promoting alcohol use in cinema, television, (role models like film stars), easy availability of alcohol in the market and permissive norms for drinking in the family and society.

Certain parts of the brain get excited when the person drinks and the person initially gets this pleasurable feeling. However, as time goes by, time goes by, the person needs to increase the amount of alcohol to get the same effect. This makes the person drink more. An early sign of dependence is the need to drink first thing in the morning, and experiencing withdrawal symptoms when drinking is suddenly stopped.

4.2 Myths and Facts about alcohol use

Myths (Wrong beliefs)	FACTS
Alcohol relieves cold and cough	Alcohol produces a sensation of warmth due to widening of blood vessels. Alcohol produces a sense of well-being, which is wrongly interpreted as relief from the cold.
Alcohol relieves body aches and pains	Alcohol does not relieve body pains. The feeling is just due to the general sense of well-being that alcohol produces.

Alcohol enhances sexual performance	Chronic alcohol use decreases sexual desire and impairs the person's ability to perform the act. Intoxication can lead to poor judgment, about sexual activity, unprotected sex resulting in exposure to HIV and other sexually transmitted diseases.
Alcohol makes the mind clear and sharp	Alcohol produces a sense of well-being but impairs the person's judgment (so that the person cannot differentiate between what is right and wrong). This makes him feel that he is thinking and performing very efficiently, whereas he is not.
Alcohol makes a person brave, helps to speak one's mind	Alcohol produces this effect by impairing judgment. The person cannot judge the appropriateness and consequences of his thoughts and actions. So he often ends up saying and doing things which he would consider wrong, when sober.
Alcohol improves work performance	In the long run, alcohol reduces work performance and is associated with accidents, absenteeism and poor work performance as well as poor relations with co-workers.
Alcohol induces good sleep	Alcohol disrupts the natural sleep cycle and decreases the efficiency of sleep. Alcohol-induced sleep leaves the person tired and drowsy in the morning.
Alcohol keeps a person warm, especially during winter and rains	Alcohol widens blood vessels which cause a sensation of warmth. This widening of blood vessels is harmful as it causes the body to lose heat, and actually reduces body temperature. This is dangerous in cold weather as it may lead to frostbite or even death due to hypothermia (reduced body temperature).

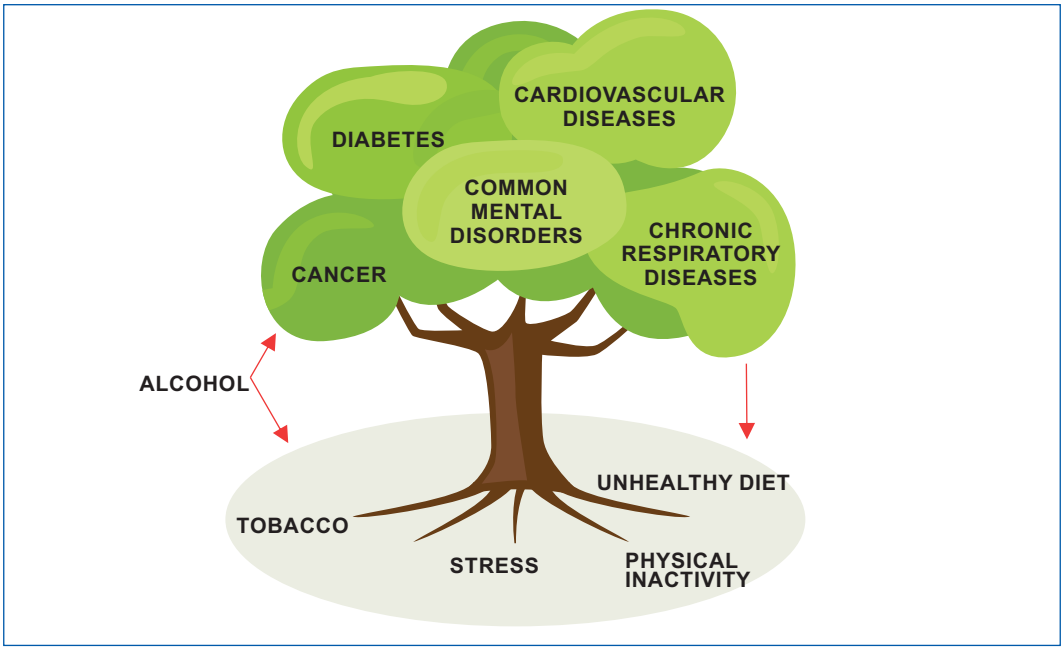
4.3 How much drinking is too much?

There is No SAFE LIMIT for alcohol use

Counselors should NEVER issue guidelines to drink (in terms of prescribing the amount that may be consumed safely, saying that alcohol in limited quantities is good for the heart, etc.) because it may lead some persons to increase intake of alcohol or it may even motivate people to drink who are otherwise non-drinkers.

Alcohol Dependence: a strong desire to consume alcohol, difficulties in controlling its use, persisting in its use despite harmful consequences, a higher priority given to alcohol use than to other activities and obligations, increased tolerance and a physical withdrawal state.

4.4 Alcohol and linkages with other risk factors



Interrelationship among alcohol and other risk factors and NCDs

Tobacco: Studies have found that people who drink are more likely to smoke and people who smoke are more likely to drink. Heavy alcohol users indulge in smoking as well, putting themselves at high risk for tobacco-related complications including multiple cancers, lung disease, and cardiovascular disease.

Diet: Alcohol contains high levels of empty calories with no nutritional value. Hence people who drink tend not to eat properly and are at risk for malnutrition. Alcohol also prevents the body from fully absorbing and using vitamins and nutrients in the diet.

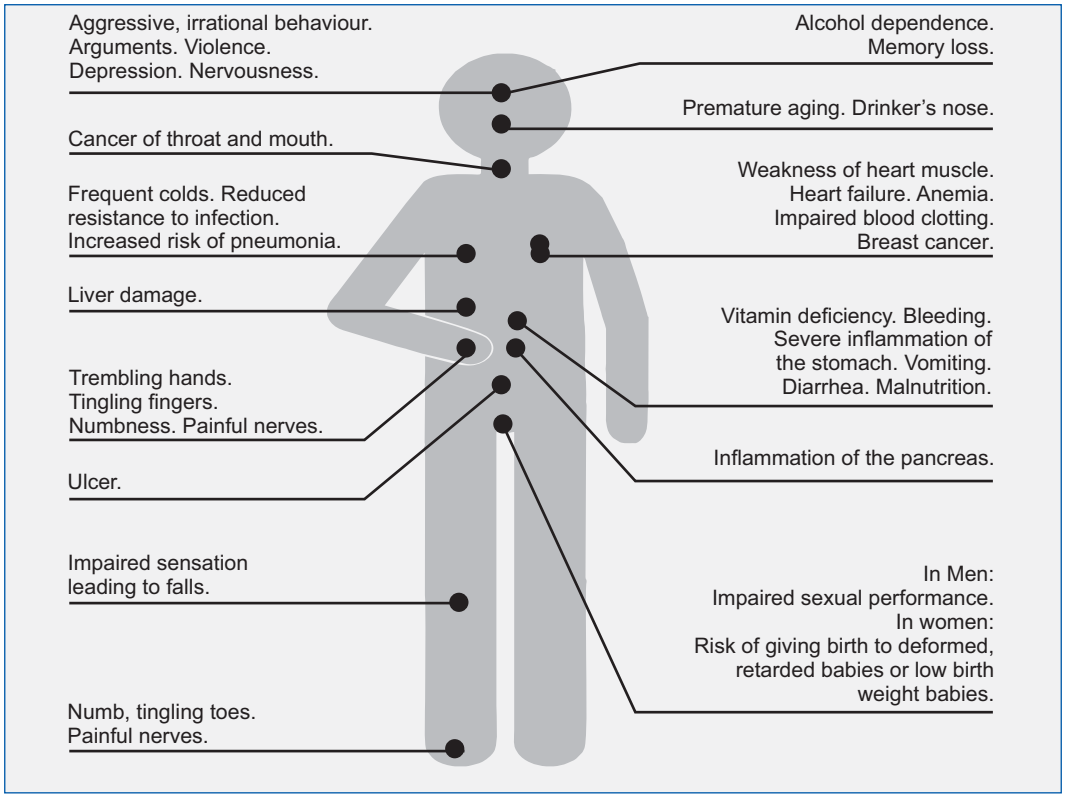
Stress: Demanding work conditions, boredom, interpersonal conflicts, and emotions such as anger, fear, and sadness, as well as happiness, can lead to alcohol use.

Physical inactivity: Alcohol disrupts the natural sleep cycle and depletes the essential nutrients in body which leads to lethargy and have tendency for reduced physical activity.

4.5 Alcohol and linkages with other NCDs

There is a strong link between alcohol use and non-communicable diseases, particularly cancer, cardiovascular disease, stroke, liver disease, pancreatitis and diabetes. Alcohol use also increases the risk of communicable diseases like Tuberculosis, HIV and Hepatitis.

In addition, alcohol use has been linked with impotence in men, and decreased fertility. Among women who drink, there is increased incidence of stillbirths, pre-term deliveries, low-birth-weight babies, birth defects and mental retardation in the baby.



Harm from the use of Alcohol

4.6 Role of Counselor in Alcohol Use Disorders

4.6.1 At the individual level

Step 1 - ASK:

- Your first step should be to ask EVERY individual you see, if he/she uses alcohol.
- If yes, use Alcohol Use Disorders Identification Test (AUDIT-C) assessment tool to identify hazardous users (risky pattern of drinking). The AUDIT –C assessment tool is provide below.

1. How often do you have a drink containing alcohol?		
	a. Never	0
	b. Once a Month or less	1
	c. 2- 4 times a month	2
	d. 2 -3 times a week	3
	e. 4 or more times a week	4
2. How many standard drinks*containing alcohol do you have on a typical day when drinking?		
a.	1 – 2	0
b.	3 – 4	1
c.	5 – 6	2
d.	7 – 9	3
e.	10 or more	4
3. How often do you have six or more drinks on one occasion?		
a.	Never	0
b.	Less than monthly	1
c.	Monthly	2
d.	Weekly	3
e.	Daily or almost daily	4

4

(adaptation of AUDIT-C score from WHO The Alcohol Use Disorders Identification Test manual, 2001)

*Standard drink:

30 ml spirits (Commonly IMFL, whisky, brandy, rum, gin or vodka)
110 ml (1/3 bottle) strong beer
330 ml (1/2 bottle) beer
1 glass of handia/toddy/local liquor/arrack/desi sharab/feni

Interpretation and actions based on AUDIT –C score

Score	Interpretation	Intervention
0-3	Low risk drinking	Simple advice
4-5	Moderate-risk drinking	Simple Advice plus Brief Counseling Continued monitoring
>5	Hazardous drinking	Referral to Specialist for diagnostic evaluation and treatment Continued monitoring

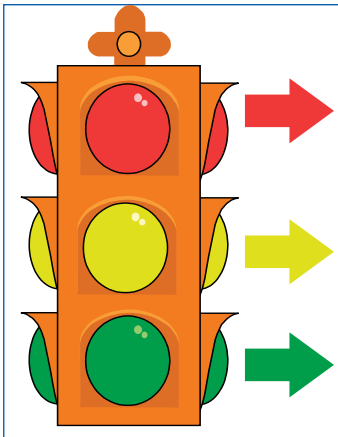
A note on other drugs

The use of other drugs, including cannabis, opioids, inhalants, prescription medicines and other chemical substances to get a high is increasing in our country. While asking about tobacco and alcohol, the Counselor should ask about the use of any mind altering substances.

- Also ask if he/she uses other substances – alcohol, cannabis (ganja), sleeping tablets, etc. If yes, refer to the Medical Officer.

Step 2 - ASSIST: Use counseling skills to facilitate behavioral change:

The traffic signal presented below is a symbol for levels of alcohol use and the steps to be taken by the Counselor. The Counselor can use the traffic signal to explain how alcohol use can become a problem through the different colours. Based on AUDIT-C scores, the Counselor will take specific steps for harmful use (use that results in health damage- physical or mental), hazardous use and alcohol dependence, and use brief counseling.



*A person with alcohol dependence: ASK about withdrawal symptoms, provide brief counseling counseling & refer to Medical Officer; monitor progress

Great risk of developing alcohol dependence (harmful and hazardous use) - provide brief counseling counseling & refer to Medical Officer; monitor progress (score of 4 or more in AUDIT-C)

A person who does not use alcohol at present: educate about consequences of alcohol use to avoid future risk

Traffic signal approach for alcohol use counseling

Some points for counseling:

- Interpret AUDIT-C scores to the individual.
- Educate: Discuss health effects of alcohol, other risk factors, and NCDs.
- Link the individual's present medical condition to alcohol use, and provide a strong personalized message (e.g. your BP is high, so you need to quit alcohol), keeping in mind his/her life situations (e.g. social stigmatization due to drinking habits, making him/her imagining situation where someone has encountered an accident and life thereafter (alcohol users are more prone towards accident etc.). Use diagrams if necessary, to facilitate understanding.
- Use a Balance Sheet to discuss pros and cons of using/ quitting alcohol (below).
- Give relevant education material in local language.
- Refer persons with a past history of complications during withdrawal (fits, confusion) or those who have severe withdrawal symptoms on stopping alcohol (shaking of hands, sweating, severe sleep disturbance) to the Medical Officer for further evaluation and management.

Balance Sheet for counseling an individual with alcohol use	
GOOD THINGS ABOUT DRINKING e.g. Helps me to be with friends; I get relief from stress	WORRIES ABOUT GIVING UP DRINKING My friends will leave me, I will be alone!; I will lose respect among my friends
GOOD THINGS ABOUT GIVING UP DRINKING e.g. will sleep better; will be happier; will save a lot of money; relationships will improve; will stay younger for longer; will achieve more in life; will be better at job; probably find it easier to stay slim, since alcoholic beverages contain many calories; less likely to feel depressed and to commit suicide; other people will respect; less likely to get into trouble with the police; be less likely that I will die in a motor accident; will die of liver disease will be dramatically reduce; will live longer--probably between five and ten years.	BAD THINGS ABOUT DRINKING I feel worse the next day, I feel like vomiting and don't eat; I drink and drive and can meet with an accident; My BP will get worse, My sleep is disturbed and I don't eat well; I look older than before; I get angry and shout after drinking; My hands are shaking and I am forgetting things; Friends desert me when I run out of money; I can't go to work the next day as I have a headache; I run into debts; My family gets very upset when I drink.

Relapse prevention in alcohol dependence:

The Counselor should discuss relapse (return to previous state of drinking after quitting) prevention for individuals who have progressed to dependence (red light). The following issues need to be discussed:

1. Identifying & handling high risk situations: People are likely to drink more in the following situations- after work, weekends, after receiving pay, with particular people/friends; parties, dinner parties, festivals, when others are drinking, sight of a bar; feeling lonely, tension, mood boredom, sleeplessness, arguments, criticism, feelings of failure, etc. These situations are highly individual-specific and must be identified carefully.
2. Managing craving (urge to drink)
   - 4 Ds: Delay, Distract, Drink water and Deep breathing
   - HALT (Hunger, Anger, Loneliness and Tiredness): Avoiding HALT situations reduces the likelihood of craving.
3. Drink refusal skills
   - Learning to say 'NO' to alcohol is an important step that the individual should practice.
4. Handling negative mood states
   Negative mood states like anger, anxiety, fear, and sadness, guilt, getting upset or bored easily, irritability, tiredness and restlessness are associated with relapse. The individual needs to learn to handle such emotions without resorting to alcohol use.
5. Tips for healthy lifestyle (what the Counselor can discuss with the patient)
   - Begin and end your day with prayer and/or reflection.
   - Cultivate a best friend whom you can really trust.
   - Minimize peer influence that is adverse.
   - Spend time with family and children.
   - Take a healthy balanced diet.
   - Follow a regular fitness plan.
   - Be positive in attitude.
   - your attitude to join community activities or a group (in the library, religious place, voluntary organization, sports club etc. or adult education course like crafts, painting, etc.).

For persons with severe addiction, who are unable to quit, refer them to the Medical Officer, who may prescribe medicines to prevent relapse. These include medications that reduce craving (Acamprosate, Naltrexone and others) and medications that can cause an adverse reaction with alcohol (Disulfiram)

Step 3 - ARRANGE:

- Many people may be resistant to make changes and the reason for resisting are: not being aware that their drinking is excessive; not having understood the connection between drinking and health/social problems; not understanding the benefits of giving up drinking; and not able to devote the time and effort required for treatment. Such individuals should be referred to the Medical Officer for deaddiction/ treatment for a medical problem/ for medication to assist in quitting alcohol.
- Inform the individual about follow up dates and monitor progress.
- Assist Community Health Worker in making home visits for follow-up.

4.6.2 Family level:

- Educate about the harms from alcohol use and handling high risk situations.
- Explain to the family about addiction their role in supporting change, rather than blaming the individual.
- Identify and address any cause in the family that is responsible for continued alcohol use in the individual.
- Provide information and support to anyone else in the family who may be using alcohol.

4.7 Alcohol prevention - specific health promotion activities in the community

- Organize specific outreach programmes at local youth clubs, educational institutions and recreational facilities to inform the public about the dangers of alcohol use.
- Provide posters conveying anti-alcohol messages which can be put up in public places.
- Work through women's and youth associations, media, schools, government programmes for rural development, nongovernmental organisations (NGOs), etc. to reach the entire community.

Summary

- Alcohol use causes a wide range of illnesses and is an important risk factor for NCDs.
- Counselors must Ask about details of alcohol use, Assist them for behaviour change, and Arrange for referral and follow-up.
- Relapse prevention is a critical component of follow-up.
- Community intervention should include awareness about the harms from alcohol use.

UNIT 5

UNHEALTHY DIET

Unhealthy diet is one of the leading causes of NCDs. There is a rapid change in traditional diet to energy rich, nutrient poor foods that are high in fat, sugar and salt. NCDs stem from such diets. In India, we face the problem of both undernutrition as well as excessive and over-nutrition. Over-nutrition is becoming a problem especially in urban areas. According to WHO, one-fourth of adult population and one-fifth of school going children are overweight in India.

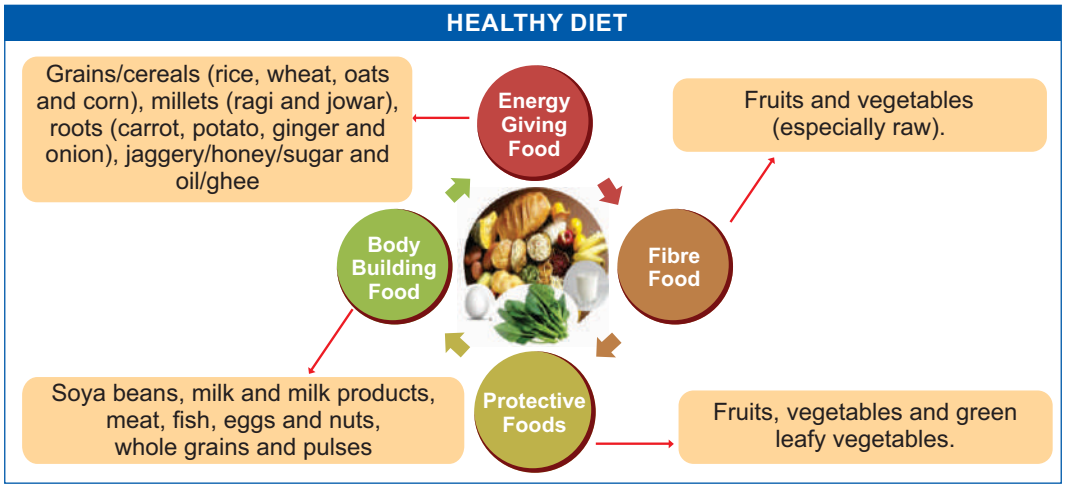
Healthy diet reduces the risk of heart diseases, as well as diabetes. Healthy diet also leads to a better quality of life, lesser psychosocial problems and higher productivity.

5.1 Healthy and unhealthy diet

Healthy diet is one which provides all the nutrients and energy in required amounts and proper proportions.

Healthy diet can easily be achieved through the blend of the four basic food groups:

1. Energy giving foods.
2. Body building foods.
3. Protective foods.
4. Fibre food.



Energy intake from fat should be limited to 30% of total calorie intake. Similarly, energy intake from sugar should be limited to 10% of total calorie intake. Daily intake of salt should be limited below 5gms/day and extra salt during meals should be avoided.

Unhealthy foods include fats (especially of animal origin), "fast" foods (which are low in fibre and vitamins), foods high in salt and fats (e.g., fried potato chips/samosas/pakoras) etc.

In many Indian homes, dietary habits are controlled by cultural factors, financial situation, and poor awareness about healthy diets. Vegetables and fruits are generally expensive and many families cannot afford four servings of fruits and vegetables (total of 400gms) on a daily basis. High salt and fat-containing preserved foods like pickles and fried food are commonly used throughout the country. In urban areas, fast foods have taken over traditional foods and this is also occurring now in rural areas.

5.2 Diet for different groups

The recommended quantity /type of food needed to meet the requirement of nutrients and energy vary with age and gender. The details are provided below:

Group	Particulars	Body Wt.kg	Net Energy Kcal/d	Protein g/d	Visible Fat g/day	Calcium mg/d	Iron mg/d
Man	Sedentary Work	60	2320	60	25	600	17
	Moderate work		2730		30		
	Heavy work		3490		40		
Woman	Sedentary Work	55	1900	55	20	600	21
	Moderate work		2230		25		
	Heavy work		2850		30		
	Pregnant woman		+350	82.2	30	1200	3.5
	Lactation 0-6 months		+600	77.9	30	1200	25
	6-12 months		+520	70.2	30		

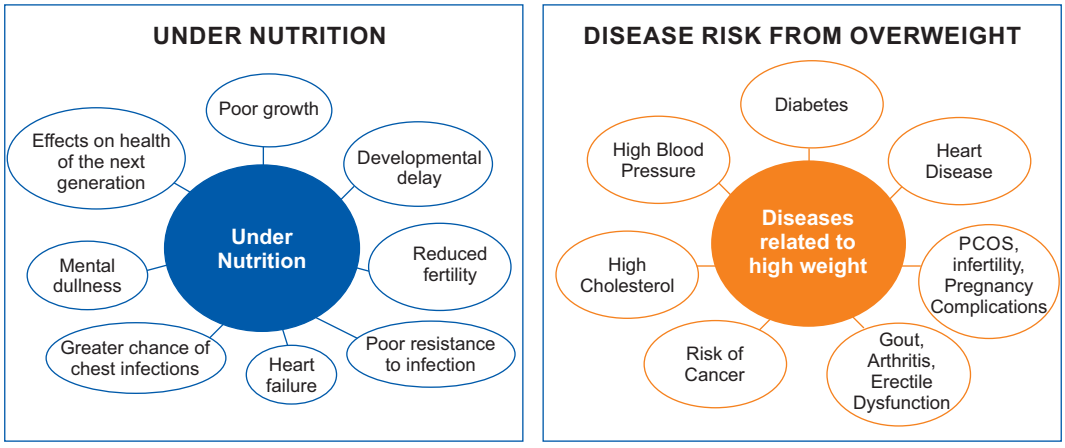
Infants	0-6 months	5.4	92 Kcalkg/d	1.16 g/kg/d	-	500	-
	6-12 months	8.4	80 Kcalkg/d	1.69 g/kg/f	19		46 ug/kg/day
Children	1-3 years	12.9	1060	16.7	27	600	09
	4-6 years	18	1350	20.1	25		13
	7-9 years	25.1	1690	29.5	30		16
Boys	10-12 years	34.3	2190	39.9	35	800	21
Girls	10-12 years	35.0	2010	40.4	35	800	27
Boys	13-15 years	47.6	2750	54.3	45	800	32
Girls	13-15 years	46.6	2330	51.9	40	800	27
Boys	16-17 years	55.4	3020	61.5	50	800	28
Girls	16-17 years	52.1	2440	55.5	35	800	26

Recommended Daily Allowance for Indian Population (National Institute of Nutrition)

National Institute of Nutrition Guidelines 2010

Diet for different age groups

5.3 The problem of undernutrition and overnutrition



India is presently dealing with this 'dual' nutrition problem. Age standardized prevalence of overweight in India has been estimated around 22 percent according to Global Status Report on NCDs, 2014. Poverty is an important cause for poor nutrition. Use of alcohol and tobacco in many households diverts money that could have been used to provide a more nutritious diet to women and children.

The effects of undernutrition in the womb and in early childhood are known to cause growth retardation, mental retardation, greater susceptibility to infection, and many other health problems. It is also known now that childhood malnutrition is actually a risk factor for the development of NCDs later in life.

On the other hand, overnutrition is also a problem, particularly in the urban areas. This is mainly due to changing dietary patterns with increased consumption of 'junk' / fast foods or food high in Fats, Salt and Sugar such as chips, fried snacks, cakes, white bread, namkeen, papad, packaged noodles, packaged soups, candies, salted biscuits, fruit drinks with artificial sweeteners, soda, energy drinks, chocolate bars, ice creams, deep fried Indian snacks (samosa, pakora), together combined with sedentary jobs (e.g. IT sector) and lifestyle which place an enormous burden on the individual in terms of long working hours, sleep deprivation, etc.

5.4 Diet and linkage with other risk factors

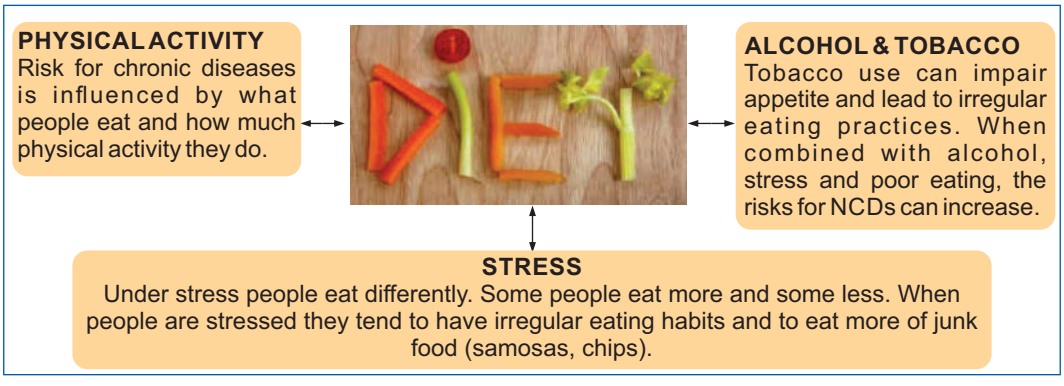
Physical activity: Diet therapy alone is not sufficient and needs to be combined with exercise as the major fraction of daily energy expenditure among obese/overweight

individuals comes from their resting metabolism. The details about physical activity are provided in the next section.

Alcohol: Alcohol contains high levels of empty calories with no nutritional value. People who drink tend not to eat properly and are at risk for malnutrition. Alcohol also prevents the body from fully absorbing and using vitamins and nutrients in the diet Also, persons who drink alcohol are more likely to eat fried items (chips, vadas, samosas and kababs).

Tobacco: Tobacco use can impair appetite and lead to irregular eating practices. When combined with alcohol, stress and poor eating, the risk for NCDs increases significantly.

Stress: When people are under stress, what they eat and how much they eat is often affected. Among some persons, there is a tendency to eat more, including junk food (samosas, chips) , while some others may skip food when under stress.



Linkage of unhealthy diet with other NCD risk factors

5.5 Diet and NCDs

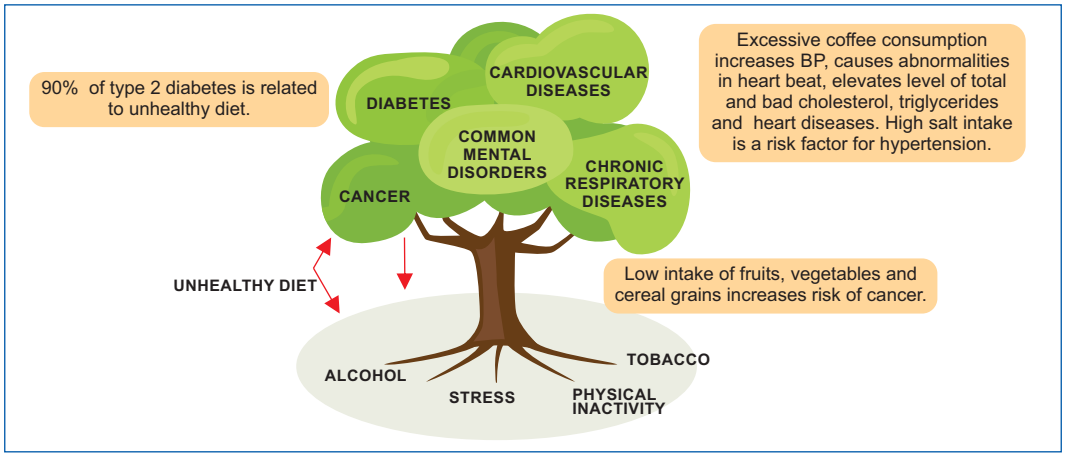
A healthy diet (fruits, vegetables, legume and whole grain) appears to be a protective factor for NCDs and increased intake of fruits and vegetables reduces the risk of cancer, hypertension, diabetes, cardiovascular diseases, stroke and obesity.

Cancer: Intake of fruits, vegetables and cereal grains reduce risk of various lung cancers, whereas animal protein foods and dairy products are found to be predisposing factors for cancer. Foods that contain antioxidants (orange, carrots, leafy vegetables and sweet potatoes), phytochemicals and omega-3 fatty acids (seafood) decrease the risk of cancer.

Cardiovascular diseases & stroke: Salt intake higher than 5 grams/day has been identified as a risk factor for hypertension. A diet that includes fruits, vegetables, walnuts, almonds, whole grains and soya bean oil is effective in preventing primary and secondary coronary artery diseases. One of the major risk factors for cardiovascular diseases and stroke is high levels of bad cholesterol. Excess coffee consumption is known to increase blood pressure and cause abnormalities in heartbeat.

Diabetes: Diet has as an important role in diabetes. High consumption of brightly coloured fruits and vegetables such as oranges and tomatoes, whole grains and cereals and beans (phytochemicals) decreases risk of diabetes. Asian Indians have increased genetic risk for diabetes. This risk is worsened by dietary factors such as high calories, fat and sugar intake, low consumption of fibre rich food.

Diseases which are associated with obesity and overweight: type 2 diabetes; gall bladder diseases; hypertension; dyslipidemia; cancer (breast, endometrial, colon and others); reproductive abnormalities/impaired fertility; fatty liver; sleep apnea; breathlessness; respiratory disease; hernia; social isolation and depression; day – time sleepiness and fatigue, osteoarthritis; psychological problems.



Interrelationship between unhealthy diet and other risk factors and NCDs

5.6 Role of Counselor in promoting healthy dietary practices

5.6.1 At the individual level

Step 1 - ASK:

Counselor should ask ALL individuals who report with health problems about their dietary habits.

After building rapport, the Counselor proceeds to ask questions about his/her diet.

WHAT TO ASK?

1. Ask the individual about his/her routine diet (using 24 hour recall method) and use the unhealthy diet checklist and mark responses (checklist is given below).
2. Calculate Body Mass Index (BMI) from recorded height and weight as given below:
   BMI= weight (kilogram) ÷ height (meters).^{2}

BMI values (kg/m2)	Classification
<18.5	Underweight
18.5 to 24.9	Normal
25 to 29.9	Overweight
>30	Obese

The ASHA worker has been trained to measure waist circumference (cut-off for Men: 78 cms; for women 72 cms), which is also useful to provide feedback on diet and weight management.

- Assess the unhealthy dietary habits like increased intake of energy-dense food but low in vitamins, minerals and other micronutrients using dietary cheklist.

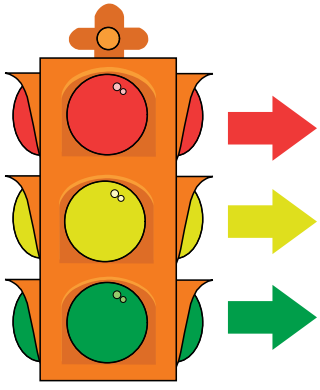
Dietary Checklist:

Sl No	Food items	Yes/No	If yes, then how often
1.	I drink pepsi/cola/sprite/soda/other aerated drinks.		
2.	I use excess sugar.		
3.	I use excess salt.		
4.	I eat papads/pickles/chips/salted biscuits.		
5.	I use ghee/butter/vanaspathi.		
6.	I eat fried foods (like chips, kabab, samosa, vada, gobi manchurian, fried fish, chats, bonda).		
7.	I eat junk food (like chocolates, ice cream, chips).		
8.	I eat polished items (white rice and maida).		
9.	I eat red meat.		
10.	I eat fast/processed food.		
11.	I drink excess coffee and tea (more than 4 to 6 cups).		
12.	I drink tea/coffee at least for one hour before and after meals.		
13.	Others (if any, mention).		

- Assess the co-morbid conditions with overweight and obesity in consultation with medical officer (such as elevated levels of lipid profile, diabetes, blood pressure).

Step 2 - ASSIST: Use counseling skills to facilitate behavior change:

- Communicate BMI score using the traffic light (below) and discuss what the individual ate in the last 24 hours using the checklist on unhealthy diet (above).
- Educate: Discuss health effects of unhealthy diet, other risk factors, and NCDs.
- Link the individual's present medical condition to unhealthy diet, and provide a strong personalized message (e.g. your blood sugar levels are high, so you need to cut down on calories), keeping in mind his/her life situations (e.g. problems he /she faces due to obesity or overweight; imaginary situation about quality of life, if he/she suffer from heart disease or diabetes etc.).
- Use a Balance Sheet to discuss pros and cons of eating healthy/ unhealthy diet (below).
- Give relevant education material about healthy diet in local language.



Underweight (<18.5 kg/m^2) & Obese (>30 kg/m^2): Brief counseling & referral to Medical Officer

Overweight 25 to 29.9 kg/m^2 : Brief counseling

Normal 18.5 to 24.9 kg/m^2 : Educate about health consequences of unhealthy diet

Traffic signal approach for counseling individuals with unhealthy diet practices counseling

The traffic signal indicates what steps need to be taken by the Counselor, depending on the interpretation of the individual's Body Mass Index:

Colour	Interpretation of BMI	Intervention
Red	Underweight (<18.5 kg/m^2) Obese (>30 kg/m^2)	Brief counseling & referral to Medical Officer Continuous monitoring
Yellow	Overweight (25 - 29.9 kg/m^2)	Brief counseling Continuous monitoring Limit oily foods and heavy meal after 7pm
Green	Normal (18.5 - 24.9 kg/m^2)	Educate about health consequences of unhealthy diet.

Balance sheet approach for counseling individuals with unhealthy diet practices	
GOOD THINGS ABOUT MY DIET e.g. Helps me to be with friends; I love samosas and other snacks.	WORRIES ABOUT CHANGING MY DIET e.g I will have to give up all the food I love to eat; My doctor has asked me to lose weight and I can't follow the diet changes; I will not be able to have fun and enjoy life like I did before.
GOOD THINGS ABOUT CHANGING MY DIET e.g. I feel great each day and go to work regularly; I eat and sleep well; My weight will reduce; I will look fresh, younger and slim; I can play games; I can save money and avoid medical bills and feel healthy.	NOT SO GOOD THINGS ABOUT MY DIET e.g. I feel worse the next day;I have severe stomach pain; I can't breathe properly and can't play sports; I feel like vomiting; My friends tease me about my weight; My weight will increase; I look fat; I get angry when there are no snacks and fried items; I run out of money buying junk food; My family gets very upset when I eat junk food.

Assist in meal planning:

Based on the present health condition of the individual, use meal planning (below) to explain what to eat, how much to eat and what to avoid. The diet plan should be formulated keeping in mind the individual's economic and cultural background (what he/she can afford to eat). Also emphasize the importance of having breakfast regularly: breakfast is known as brain food and reserves energy for the entire day. Cereals, grains, millets, fruits, vegetables are ideal.

Explain the following to the individual who is overweight and obese-

- A sudden return to normal body weight may be difficult.
- A 10% weight loss can be an initial realistic goal.
- Changing eating habits is challenging.
- Start with two or three specific changes e.g.: Fruit instead of sweets; mustard oil or sunflower oil instead of butter, palm oil.
- Limit fatty meat, dairy fat and cooking oil (less than two tablespoons per day).
- Replace other meat with chicken (without skin).
- Reduce the serving or portion size.
- Encourage different eating patterns (e.g. slowing the rate of eating and limiting the time and place of eating).
- Daily intake should be roughly divided into:
  - One quarter of fruits; One quarter of vegetables; One quarter of carbohydrates; and One quarter consisting of: milk and dairy, meat, fish and alternatives, fats and sugary food (smallest portion).
  - Three meals and three snacks, with an emphasis on healthy snack choices.
  - Change the meal composition (with more vegetables, fruits and fibres).

PROMOTE HEALTHY DIET: Meal planning

Early Morning	Breakfast	Mid-day	Lunch	Tea	Dinner
Tea-with milk	Upma/Rice bath/3 Idlies/2 Dosas	1 seasonal fruit	1 bowl raw vegetable salad (e.g.cucumber)	Tea/ Coffee	Salad fruits
Small quantity of nuts (peanuts/chana/ badam)	1 glass skimmed milk		1 big cup green leafy vegetable (bhaji/palya)	2 Biscuits /seasonal fruits	Vegetable (bhaji/palya)
	1 egg/ vegetable curry/pulses		Fish/dal 1cup		1 cup dal/2 chicken/ fish pieces
			Raita/curd (use skimmed milk)		2 rotis/rice 2 medium cup
			2 rotis (wholewheat) /Rice 2 medium cup (partially or unpolished)		
Drink minimum of 1.5 to 2 liters of water every day to keep your body well hydrated					

The list of food items in the table above is general advice on what to use and what to avoid in one's diet. Diet should be individualized and tailored for each person (e.g. if suffering from diabetes/ heart disease). It is essential that in the period of rapid growth, such as childhood and adolescence, intake of vitamins and minerals, such as iron or calcium, are not compromised.

List of food items

Food Items that need to be consumed more	Food items that need to be avoided
• Fruits and vegetables • Whole grains and pulses • Fresh lime, butter milk, coconut water and fresh juice • Milk with cream removed (skimmed) • If non vegetarian, 2-3 portions of fish/chicken per week • Nuts (small quantity everyday) • Water	• Aerated drinks like pepsi, cola, sprite, soda and others colored drinks • Excess sugar & salt • Pre-packed food (readymade) • Papads, pickles, chips, salted biscuits • Ghee, butter and vanaspathi • Fried foods • Junk foods • Polished items such as white rice and maida • Red meat • Fast/processed food • Excessive use of coffee and tea

The Medical Officer should be consulted before the diet is discussed with the patient.

Step 3 - ARRANGE:

- Refer the individual to the Medical Officer for any medical assistance in situations such as failure of previous attempts of weight loss, evidence of having participated in at least 6 different weight loss interventions, each for at least 3 months.
- Inform the individual about follow up dates and monitor progress.
- Assist Community Health Worker in making home visits as needed.

5.6.2 Family level:

Sometimes, it is the head of household who decides what rations should be bought and even what should be cooked. In many families, the wife, mother or daughter cooks the meal and her awareness is important for healthy meal planning and dietary change. In a family where different family members are at different stages of development, it becomes important to have a detailed discussion and planning in this regard.

- For obese/ overweight children assess the following conditions for better advise for diet change- why parental? activity and inactivity; level of activity compared with peers; hunger and requests for food; eating in front of TV; meal patterns; snack choices; amount of food eaten at a meal, for example, compared to parent; use of food as a reward or comfort.

5.7 Diet specific health promotion activities in the community

- Organize specific outreach programmes at local youth clubs, educational institutions and recreational facilities to inform the public about the importance of a healthy diet, as well as to create awareness on the linkage between unhealthy dietary practices and NCDs.
- Provide posters conveying relevant healthy diet messages which can be put up in public places.

- Organize food exhibitions, possibly with the help of local school children. Explore involvement of teachers and parents and a broad range of other activities to promote a healthy diet and healthy lifestyle.
- Work through educational institutions, women's and youth associations, local panchayat, media, government programmes for rural development, nongovernmental organisations (NGOs), etc. to reach the entire community. Raise awareness about nutritional labelling (checking on the content of a food item that is being bought) among the community.

Summary

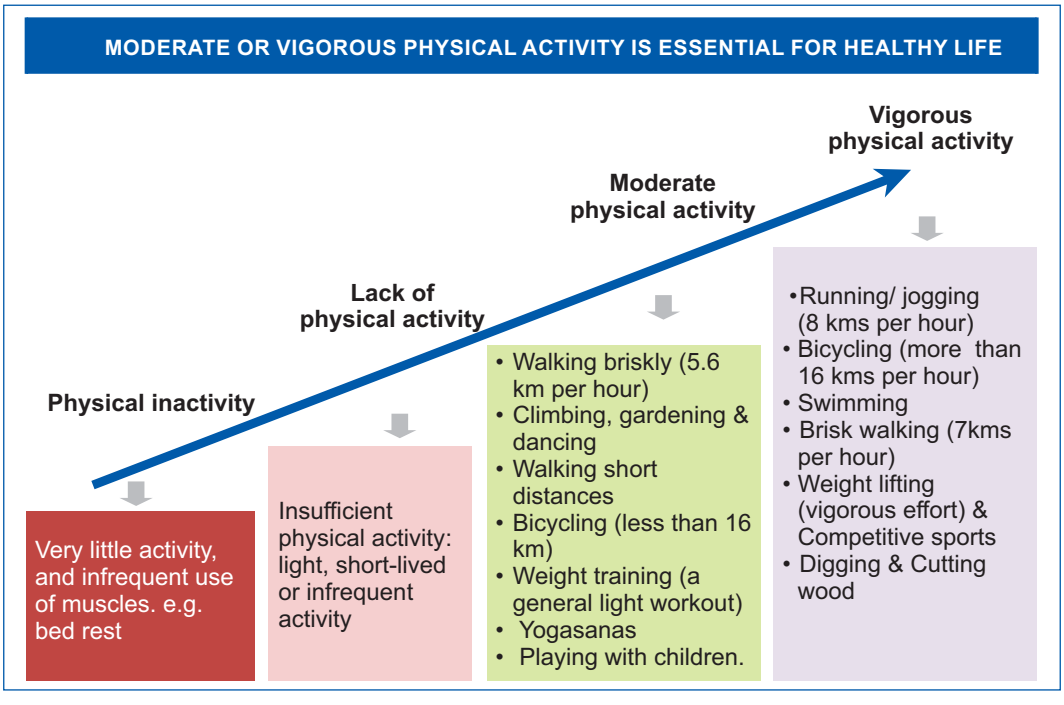
- Unhealthy dietary practices cause a wide range of illnesses, including cancer, diabetes, cardiovascular illness, stroke.
- Healthy diet is one which provides all the nutrients and non-nutrients in required amounts and proper proportions.
- Healthy diet requires the blending of 4 major food groups-energy giving, body building, protective and fibre-rich.
- All individuals must be asked about their dietary practices, explained the importance of healthy diet, advised about dietary habits. Energy intake from fat should be limited to 30% of total calorie intake, sugar to 10% and daily intake of salt should be limited to below 5 gms/day.
- Those with established NCDs must be referred to the Medical Officer or specialist for specific dietary recommendation.
- The community needs to be educated about healthy dietary practices.

UNIT 6

PHYSICAL INACTIVITY

Lack of physical activity is a major modifiable risk factor for NCDs and is a contributing factor for obesity, coronary heart disease, stroke, cancer, type 2 diabetes, hypertension, arthritis, etc. In India, more than two thirds of the adolescents are physically inactive according to WHO Global Recommendations for Physical Activity (Global Status Report on NCDs,2015).

6.1 Range of physical activity



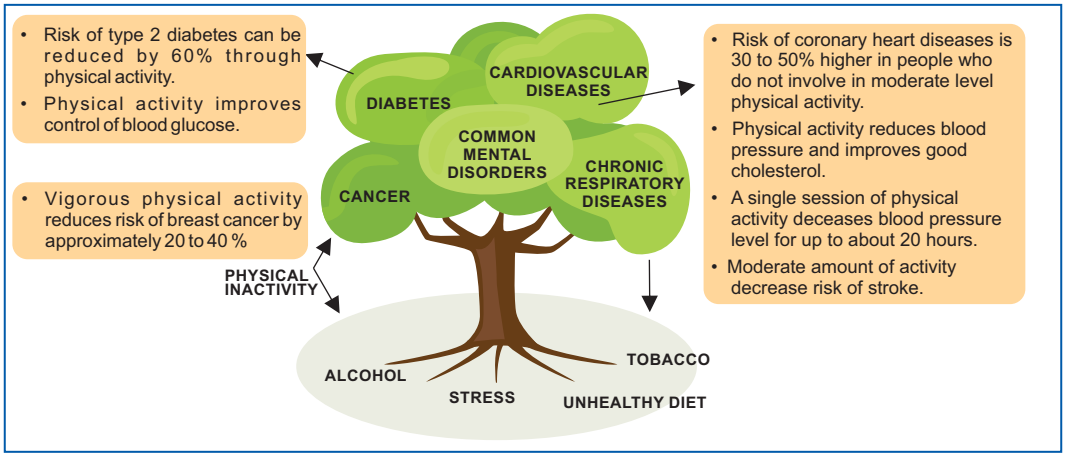
6.2 Possible barriers for physical activity and how to overcome them

Barriers	Solutions
• Lack of motivation • Lack of confidence • Finding exercise boring • Not having the convenience to exercise (e.g. space) • Fear of injury • Lack of encouragement, support and company to exercise	Understand the Possible solutions of physical activity Make a little time each day Try and find some company for exercising Be physically active at home, work and during free time Walk or cycle instead of using a motor vehicle Use stairs instead of lift

6.3 Physical inactivity and linkage with other risk factors

Diet: Unhealthy diets and physical inactivity are leading causes for NCDs. Risk for chronic diseases is influenced by what people eat and how much physical activity they do. Factors like lack of physical activity combined with an unhealthy diet lead to overweight and obesity.

Tobacco & alcohol: People who are physically active tend to smoke and drink less. A study report among adolescents shows a direct correlation between smoking and decreased physical activity.



Interrelationship between physical inactivity and other risk factors and NCDs

Stress: Exercise is a healthy way to manage stress even if it is for short periods (e.g. walking, exercising, yoga). Poor mental health conditions like depression and anxiety may reduce physical activity thus leading to other NCDs.

6.4 Physical activity and linkages with NCDs

Heart diseases and stroke: The high rates of coronary heart diseases and stroke are largely due to poor diet, lack of physical activity, and tobacco use. The risk of getting heart disease is 30-50% higher in individual who are physically inactive.

Cancer: Physical activity reduces the risk for colon cancer and breast cancer among women.

Diabetes: In India, there is high prevalence of type 2 diabetes. Physical inactivity is an important risk factor for diabetes.

6.5 Role of Counselor in promoting physical activity

6.5.1 At the Individual level

Step 1 - ASK:

Counselor should ask ALL individuals who report with health problems about their physical activity.

WHAT TO ASK?

Ask the individual about his/her routine physical activity.
Check Body Mass Index (BMI) by calculating the BMI & scoring it. The method to calculate BMI is given below and the scores are interpreted:

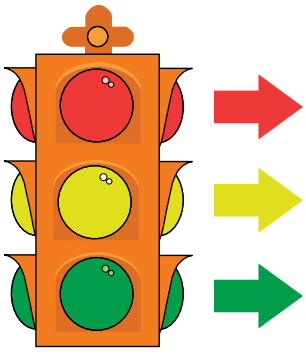
BMI= weight (kilogram) ÷ height (meters) ^{2}

BMI values (kg/m2)	Classification
<18.5	Underweight
18.5 to 24.9	Normal
25 to 29.9	Overweight
>30	Obese

Step 2 - ASSIST: Use counseling skills to facilitate behavioral change:

- Communicate BMI score using the traffic light (below).
- Use a Balance Sheet to discuss pros and cons of getting enough physical activity (below).
- Any advice given about the level of physical activity that the individual can carry out should be given preferably after consulting with the Medical Officer, particularly keeping in mind his/her age and medical condition.
- Give relevant education material about the levels and ways of doing physical activity in local language.

The traffic signal indicates what steps need to be taken by the Counselor, depending on the interpretation of the individual's Body Mass Index:



Obese (>30 kg/m^2): Brief counseling and referral to Medical Officer

Overweight (25 to 29.9 kg/m^2): Brief counseling

Normal (18.5 to 24.9 kg/m^2): Educate about health consequences of physical inactivity and benefits of physical activity

Traffic signal approach for counseling individuals with physical inactivity

Colour	Interference of BMI	Intervention
Red	Obese (>30 kg/m^2)	Brief counseling & referral to Medical Officer Continuous monitoring
Yellow	Overweight (25 - 29.9 kg/m^2)	Counseling about measures to increase physical activity and about health consequences of physical inactivity Continuous monitoring
Green	Normal (18.5 - 24.9 kg/m^2)	Educate about benefits of physcial activity and opportunities to be more active

The daily recommendations for physical activity are (based on WHO Global Recommendation on Physcial Activity for Health):

Age Groups	Recommendations	Remarks
5-17 years	At least 60 minutes of moderate- to vigorous intensity physical activity daily Most of the daily physical activity should be aerobic. Vigorous-intensity activities should be incorporated, including those that strengthen muscle and bone, at least 3 times per week.	Amounts of physical activity greater than 60 minutes provide additional health benefits.
18-64 years	At least 150 minutes of moderate-intensity aerobic physical activity throughout the week or do at least 75 minutes of vigorous-intensity aerobic physical activity throughout the week or an equivalent combination of moderate- and vigorous-intensity activity.	Aerobic activity should be performed in bouts of at least 10 minutes duration Muscle-strengthening activities should be done involving major muscle groups on 2 or more days a week.
65 years and above	Adults aged 65 years and above should do at least 150 minutes of moderate-intensity aerobic physical activity throughout the week or do at least 75 minutes of vigorous-intensity aerobic physical activity throughout the week or an equivalent combination of moderate- and vigorous intensity activity.	Adults of this age group, with poor mobility, should perform physical activity to enhance balance and prevent falls on 3 or more days per week. Muscle-strengthening activities should be done involving major muscle groups, on 2 or more days a week. When adults of this age group cannot do the recommended amounts of physical activity due to health conditions, they should be as physically active as their abilities and conditions allow.

Moderate physical activity: Moderate-intensity physical activity causes small increases in breathing or heart rate if done for at least 10 minutes continuously (such as brisk walking or carrying loads, manual washing of clothes, dry sweeping of floor, wet mopping of floor, drawing water from well, carrying water from tap, carrying water from river or well, manual grinding or pounding of cereals, gardening at home, sports such as- walking briskly (5 kms per hour or faster, but not race-walking), bicycling slower than 15 kms per hour, water aerobics or recreational swimming, most outdoor rural games, dancing etc.

Vigorous physical activity: Vigorous-intensity physical activity causes large increases in breathing or heart rate (like carrying or lifting heavy loads, digging or construction work, sports such as- race walking, jogging, or running, jumping rope, swimming laps, bicycling around 15 kms per hour or faster, football, aerobic dancing) for at least 10 minutes continuously.

Discuss the following during brief counseling:

1. HEALTH BENEFITS OF PHYSICAL ACTIVITY

- Controls body weight.
- Reduces risk of NCDs (type 2 diabetes, high blood pressure, heart disease, osteoporosis, arthritis, cancer).
- Increases the level of good cholesterol (High Density Lipoprotein).
- Builds strong muscles, bones and joints.
- Improves flexibility.
- Wards off depression and reduces anxiety.
- Improves mood, sense of well-being and self-esteem.

2. FOCUS ON HEALTH

Keep the focus of counseling on the present health condition. Link the individual's present medical condition to inadequate physical activity, and provide a strong personalized message. Some of suggested advice is given below:

- At least 30 minutes of physical activity per day for protection from NCDs.
- To lose weight, experts recommend that at least 60 minutes of moderate- to vigorous-intensity physical activity be undertaken on most days of the week.
- Start slowly, the first five minutes should be "warm-up" to give body the necessary time it needs to get used to the activity.
- Continue at a comfortable pace that allows talking without difficulty and not perspire profusely.
- Slow down for the last five minutes of workout to allow blood to return from the working muscles to the heart and for body to return to its resting state.
- Start initially with stretching exercises.
- Focus on increasing duration first, and then increasing intensity.
- If previously sedentary, may start with two or three 10 minute moderately-paced walks per day. If possible, try to exercise in the morning.

- A conservative resistance-training program may be recommended for obese, depending on the current BMI and health condition.
  - Persons, exercises that target the major muscles groups, such as chest, back and shoulders.
  - Begin with one set of 12 to 15 repetitions per exercise and gradually progress to two sets per exercise
  - Always perform exercises in a slow and controlled manner to ensure the targeted muscle performs the work.
- In addition, one should follow a nutritious diet plan and consume fewer calories.
- Level of physical activity required after consuming high caloric foods:

High calorie foods	Caloric value	Physical activity require to burn calories
Aerated drinks (one glass)	150 Kcal	Brisk walking for 2 kms
Samosa (one piece)	200 Kcal	Cycling for 70 minutes
Vada (2 pieces)	180 Kcal	Brisk walking for 2.5 kms
Besan barfi (2 pieces)	400 Kcal	Running for 6 kms
Chat-dahi pokari (5 pieces)	220 Kcal	Swimming or cycling for 45 minutes
Halwa (1/2 cup)	320 Kcal	Badminton, cycling or moderate manual work like digging for 40 minutes
Burger (one piece)	330 Kcal	Swimming or cycling for 1 hour
Pastry (one piece)	300 Kcal	Basketball or highly intense manual work like lifting heavy loads or cutting woodfor 90 minutes

Physical activity is essential for successful long-term weight management.

3. HOW DO I FIND TIME FOR PHYSICAL ACTIVITIES?

Individuals should be encouraged to make exercise and staying active as a part of daily routine (at home, at work and during leisure time) such as:

- Gardening, housework (washing, mopping).
- Combine walking with shopping, gardening and visiting friends.
- Take stairs as far as possible.
- Avoid sitting for long hours in front of TV or video game.
- Walk to nearby shops as part of daily routine (avoid vehicles).

Balance Sheet for counselling on Physical inactivity	
GOOD THINGS ABOUT NO PHYSICAL ACTIVITY & MY PRESENT LIFESTYLE? e.g.I love to watch TV when I come home as I feel relaxed; I get rest after a long day at work	BAD THINGS ABOUT STARTING PHYSICAL ACTIVITY? e.g. I will have less time to watch my TV serials;I will have less time with my family after work
GOOD THINGS ABOUT STARTING PHYSICAL ACTIVITY e.g. I will look young; I will look slim and fit; My blood sugar levels will become normal; I feel great each day and go to work regularly; I will eat and sleep well; My health will feel become normal; I will look fresher and younger; I can save money as my medical bills will reduce; My family and friends will say I look smart.	BAD THINGS ABOUT NO PHYSICAL ACTIVITY AND MY PRESENT LIFESTYLE? e.g I will gain weight and my clothes become tight; My health will get worse; I will waste money on medicines; Since I have health problem, I won't be able to go to work; I will become fat; I will lose my looks; Everyone will make fun of my body.

Step 3 - ARRANGE:

- Refer the individual to the Medical Officer for any medical assistance.
- Inform the individual about follow up dates and monitor progress.
- Assist Community Health Worker for making home visits to high risk individuals.

6.5.2 Involve the family:

Factors in the family which may be responsible for decreased physical activity of an individual

- Family often discourages physical activity in a person with health related problems.
- Different family members need different levels of physical activity.
- There is a poor awareness and opportunities for the family to engage in physical activity.
- Family recreation activity involve little physical activity(like watching TV).

Keeping the above points in mind, the Counselor needs to help the individual and family come up with a practical plan that involves sufficient physical activity and is best suited to their daily schedule.

7.6 Physical activity related health promotion activities in the community

- Organize specific outreach programmes to promote physical activity at local youth clubs, educational institutions and recreational facilities to inform the public about the importance of physical activity, as well as to create awareness on the linkage between lack of physical inactivity and NCDs. Utilize opportunities such as International Yoga Day to promote practice of yoga in the community.
- Provide posters conveying relevant messages which can be put up in public places.
- With support of the medical officer and community health worker, coordinate with local panchayat, schools to build infrastructure to promote physical activity such as low cost open air gyms, sports ground etc.
- Explore possibility of having yoga or exercise session in the health facility on fixed days.
- In coordination with the community health worker and NGOs identify role models in the community to promote physical activity and healthy lifestyle.
- Work through women's and youth associations, media, nongovernmental organisations (NGOs), etc. to reach the entire community.

Summary

- Lack of sufficient physical activity is a risk factor for NCDs.
- Ask all patients to identify if they are physically inactive.
- Assist them in their plan to improve physical activity.
- Help the person identify the barriers to physical activity and suggest ways to overcome them.
- Improve awareness in the community on the importance of physical activity The WHO recommends at least 60 minutes of moderate to vigorous intensity physical activity daily for ages 5-17; at least 150 minutes of moderate intensity physical activity per week with at least 75 minutes of vigorous-intensity aerobic activity for ages above18.

UNIT 7

INDOOR AIR POLLUTION

Indoor air pollution has serious consequences for people, especially those who spend a lot of time indoors. Thus, common victims of household indoor air pollution in India are women, children and the elderly as in most societies, women are in charge of cooking and - depending on demands of the local cuisine - they spend between 3 and 7 hours per day near the stove, preparing food. Indoor air pollution can also occur in the school and workplace.

While indoor air pollution has many hazards, many of the signs and symptoms of indoor air pollution are non-specific and may be difficult to identify among patients. A person's exposure to indoor air pollution is determined by the concentration of pollutant in the indoor environment and by the amount of time spent in the environment. The World Health Organization estimates in India that indoor air pollution is responsible for between 4% and 6% of the national burden of disease.

In India, household sources are a cause of nearly one-third of outdoor pollution as well. Household combustion is also responsible for climate change, as it contributes to carbon emissions and changes the environment, making it more dangerous to humans. The persons living in slum areas and having a common area for cooking and sleeping are affected at most. Most of the 'black carbon' emissions come from household emissions, particularly from kerosene.

7.1 What causes indoor air pollution?

There are a wide variety of agents that cause indoor air pollution. They include:

- Combustion products: These are products that are formed when fuels such as firewood, cow dung cake, charcoal, kerosene etc are used, especially for cooking. If these fuels like firewood etc. are semi dried , they emit more smoke. The burning of plastic material is also extremely dangerous and an important pollutant, indoor and outdoor.
- Organic compounds: These include chemical products that are produced from polishing materials, resins, waxes, cosmetics, etc. Incense sticks, like agarbathis, dhoop and other forms of incense when burnt in areas with poor ventilation can also result in risks to health from indoor air pollution.

- Biological pollutants: These include dust mites, moulds, pollen, infectious agents produced in stagnant water, mattresses, carpets, curtains etc.

7.2 The contents of polluted household air

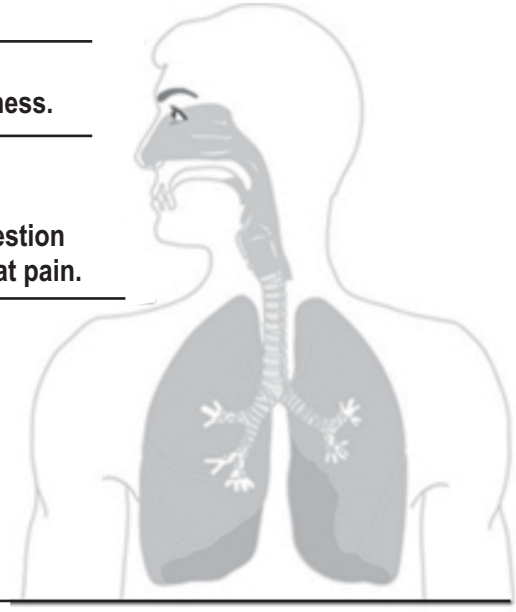
When biomass fuels (such as crop residues, dung, straw and wood) and coal produces are used for cooking, they release toxic gases like carbon monoxide, nitrogen dioxide and Sulphur dioxide and carcinogens, such as benzo[a]pyrene and benzene. Small particles with a diameter of 10 microns or less (PM10) are able to penetrate deep into the lungs. The smallest particles with a diameter of 2.5 microns or less (PM2.5) appear to have the greatest health-damaging potential..

- Common chemical products used in household as well as workplaces have organic compounds such as formaldehyde, pesticides, heavy metals like lead and mercury.
- Material like asbestos which is still used in roofs and radon are well-known cancer producing substances.
- Environmental tobacco smoke (ETS) – as mentioned earlier, this could be from secondary smoking or from particulate matter that settles on carpets, curtains, furniture, clothes and linen.

7.3 Indoor air pollution and its effects on health

There are many dangerous health effects of indoor air pollution. These include:

- Respiratory effects- wheezing, cough, exacerbation of asthma, increased risk of tuberculosis, pneumonia and other respiratory infections, damage to lung function, Chronic Obstructive Pulmonary Disease (COPD), cancers of lung, nose and throat. Women exposed to indoor smoke from high smoke emitting biomass fuels have three times more likely to suffer from COPD, and have two times more risk of developing cancers than women who cook with electricity, gas and other cleaner fuels.
- Eye- Having higher risk of cataract, partial or complete blindness.
- Heart – raised blood pressure, heart attacks.
- Blood- Cancers such as leukaemias.
- Impact on pregnant mothers exposed to indoor air pollution- still births, low birth weight.



EYES
Dryness, itching/stinging, tearing redness.

UPPER RESPIRATORY TRACT
(nose and throat)
Dryness, itching/stinging, nasal congestion nasal drip, sneezing, nose bleed, throat pain.

LUNGS
Chest tightness, drowning sensation, wheezing, dry cough, bronchitis

SKIN
Redness, dryness, general and localized itchiness.

GENERAL
Headache, weakness, drowsiness/lethargy, difficulty concentrating, irritability, anxiety, nausea, dizziness.

MOST COMMON ILLNESS:

HYPERSENSITIVITY
Hypersensitivity pneumonitis, humidifier fever, asthma, rhinitis, dermatitis.

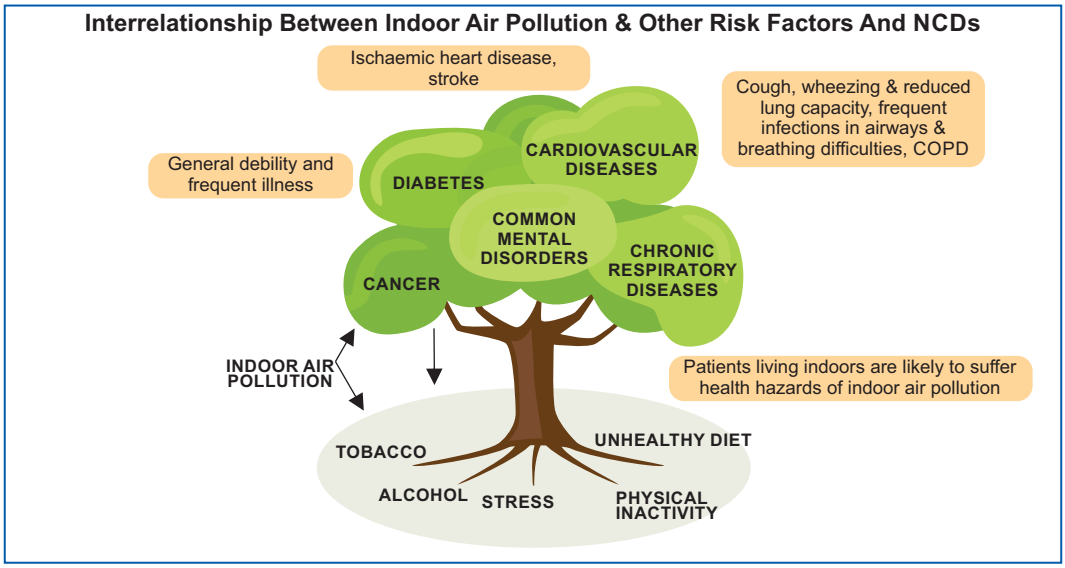
INFECTIONS
Legionellosis (Legionnaire's disease), Pontiac fever, tuberculosis, common cold, flu.

Of unknown chemical or physical origins, including cancer.

Consequences of polluted indoor air

7.4 Indoor air pollution and its relationship to NCDs

It is estimated that nearly 90% of the adult deaths that occur due to household air pollution are because of NCDs. In children, exposure to indoor air pollution doubles the risk of pneumonia and other acute lower respiratory infections. Household air pollution can also increase the risk of other communicable diseases like tuberculosis.



Interrelationship between indoor air pollution and other risk factors and NCDs

7.5 Role of the Counselor to reduce risk from indoor air pollution

7.5.1 At the individual level

It is important that the Counselor asks all patients presenting at the health centre with persistent cough and cold, recurrent respiratory infections, non- specific symptoms and any chronic debility about their living conditions, including ventilation, dampness, dust, chemical and biological hazards and educates them about the harmful effect of indoor air pollution and measures to prevent the risk.

Measures to reduce indoor air pollution

- Use of cleaner fuels (Electricity, LPG or piped gas, solar cookers, biogas).
- Provision of proper chimneys in cooking area.
- Improving ventilation inside house.
- Avoid passive smoking secondhand smoke).
- Keeping the walls and floors dry.
- Preventing water stagnation to reduce the exposure to dust mites and moulds.
- Removing unpleasant/unclean household odors.
- Maintaining indoors cleanliness indoors.
- Not having livestock inside the house.
- Maintaining cleanliness when there are pets inside or around the house.
- Wearing a mask or covering nose and mouth while cleaning the house.

7.5.2 Community Level

Many factors influence people's decision about fuel used for cooking and these include social, cultural and financial factors. However, it is important for the Counselor, with support of community leaders and NGOs to raise awareness in the community about the ill effects of indoor air pollution and about measures to prevent it. Educational materials (e.g. posters) materials can be distributed and displayed at various places to inform people about household air pollution.

The Counselor also needs to be aware of the various subsidies the Government of India offers for clean fuels like LPG, etc. Using alternative clean and affordable cooking energy options where applicable such as solar cooking, electricity based cooking, improved biomass cooking stoves etc can reduce indoor air pollution..

Summary

- Indoor air pollution is a preventable risk factor for many health problems, including NCDs.
- Indoor air pollution can occur from cooking practices using solid fuels like wood and charcoal, poor ventilation, dampness, indoor smoking, dust and biologicals.
- Indoor air pollution can lead to general health problems, increase respiratory infections including tuberculosis, pneumonia etc.
- Indoor air pollution is linked with many NCDs such as lung cancers, COPD etc.
- The Counselor must promote awareness on the causes and dangers of indoor air pollution and help to reduce indoor air pollution.

UNIT 8

STRESS AND OTHER RELATED DISODERS

Common mental health disorders such as stress, depression and anxiety are known to worsen physical ill health including NCDs. Mental illness can also worsen a person's treatment outcome by delaying health seeking and not following the treatment advised. It is estimated that India contributes to 15% of global DALYs attributable to mental, neurological and substance use disorders. As per NMHS (2015-16) in India, one in 20 people over 18 years of age have suffered from depression at least once in their lifetime.

8.1 Stress

Stress is caused by an imbalance between the demands made by the environment and the resources available to meet the demands.

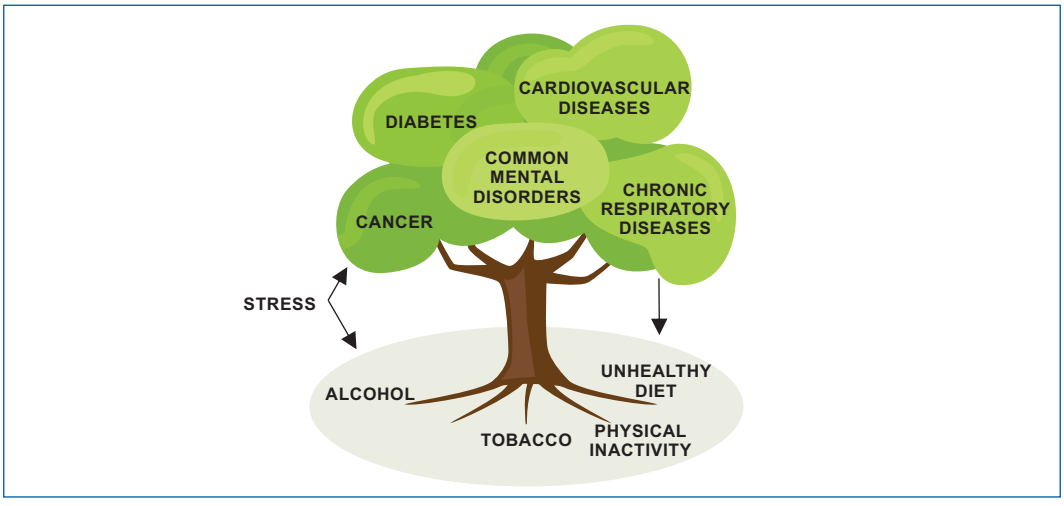
Types of stress:

+	**Positive stress** A certain amount of stress can be good (e.g. a student preparing for an exam)
−	**Negative or unhealthy stress** Too much stress (work and family pressure or too little stress (boredom)

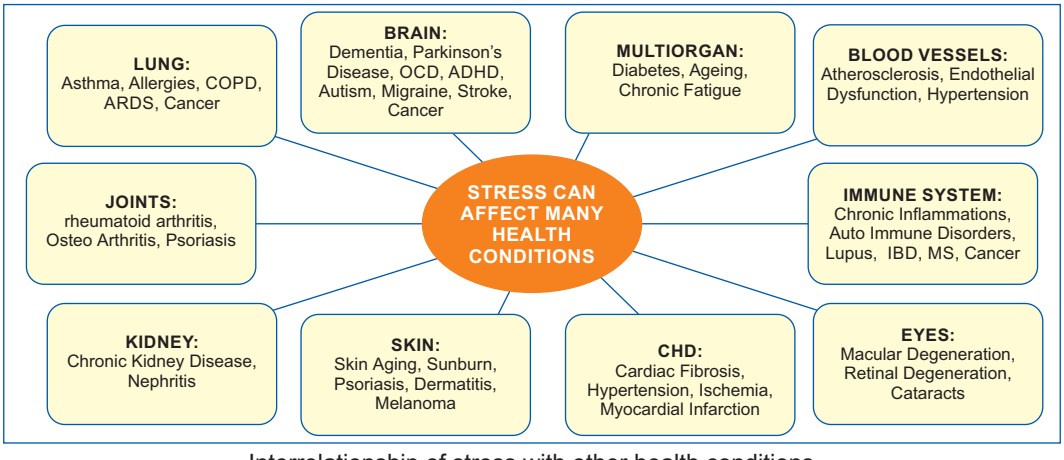
Sources of stress:

- Stress can be generated from the family (e.g. domestic violence), a person's workplace (job stress), or from the community (e.g. difficult living conditions).
- It is also important to remember that the sources of stress may vary depending on the person's age, gender, and background:

- For a child, difficulties may arise when his/her basic needs like food and safety are not met. Loneliness, difficulty in studying, being teased by other children, can lead to stress. Relationship problems can lead to stress among older children.
- Women in India may face stress from factors such lack of autonomy, heavy household demands balancing between home and work, personal safety.
- For adult men, workplace pressures, financial difficulties, may be sources of stress.
- For the elderly, financial difficulties, loneliness, lack of emotional support and inability to get health care can be important sources of stress.



Interrelationship between Stress and other risk factors and NCDs



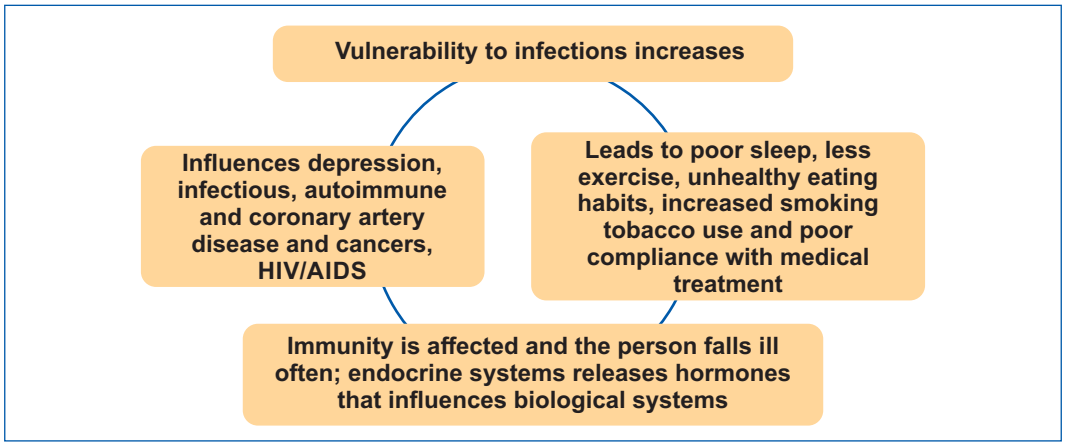
Interrelationship of stress with other health conditions

Stress may present in the form of:

Symptoms of stress:

- Physical symptoms such as headache, muscle tension or pain, chest pain, getting frequent infections, high blood pressure, fatigue, thirst, weight loss or gain, stomach upset, skin disorders, sleeplessness.
- Emotional symptoms like anxiety, restlessness, lack of interest in daily activities, irritability or anger, feeling sad or depressed.
- Behavioral symptoms like overeating, becoming angry for no reason.
- Poor concentration and memory.

8.1.2 The body's response to stress



Effect of chronic stress on health

8.2 Depression and Anxiety:

Depression: Depression is a disorder characterized by persistent sadness of mood, loss of interest in activities, and lack of energy, with associated features such as lack of appetite, sleeplessness, poor self-confidence, etc., present for at least a month or more.

Anxiety: Anxiety is a disorder characterized by prominent tension and a feeling of apprehension about everyday events and problems for at least 6 months or more, associated with palpitations, trembling, difficulty in breathing, chest discomfort, muscle aches, inability to relax, etc.

8.2.1 Common symptoms of depression and anxiety

Depression	Anxiety	
Low mood	Rapid heart beat	Shaking of hand
Loss of interest or pleasure	Sweating	Difficulty breathing
Tiredness	Dry mouth	Feeling of choking
Disturbed sleep and appetite	Stomach uneasiness	Chest pain
Poor concentration	Numbness	Sense of losing control
Feelings of guilt	Feeling dizzy	Flushes or chills
Suicidal thoughts or acts	Worry	Restlessness
	Irritability	Sleep disturbance

8.3 Role of Counselor in helping individuals experiencing stress and related disorders

8.3.1 At the Individual level

Step 1 - ASK:

Ask about symptoms of stress, depression, and anxiety. Individuals may not express to the Counselor that they are feeling stressed/ depressed. Instead, they may present with physical complaints, and the Counselor needs to remember that such complaints may reflect underlying stress/ anxiety/ depression.

Ask for possible factors in the family and environment (workplace, school, community etc.) which might be the cause for stress and other mental health disorders.

Use checklists to identify.

Checklist for Depression

Symptoms should be present for a month or more and every symptom should be present for most of every day. At least one of these following symptoms for most days (most of the time) for at least 2 weeks:

Sl.No.	Symptoms	Yes/No
1	Persistent sadness or low mood; and/or	
2	Loss of interests or pleasure	
3	Fatigue or low energy	
If any of above present, ask about associated symptoms:		
4	Disturbed sleep	
5	Poor concentration or indecisiveness	
6	Low self-confidence	
7	Poor or increased appetite	
8	Suicidal thoughts or acts	
9	Agitation or slowing of movements	
10	Guilt or self-blame	

The 10 symptoms then define the degree of depression and management is based on the particular degree. The interpretation of symptoms is provided below:

Symptoms	Interpretation	Intervention
Any 2 symptoms from 1-3 +Any 2 symptoms from 4-10	Mild Depression	Simple advice plus Brief Counseling Continued monitoring
Any 2 symptoms from 1-3 + Any 3 symptoms from 4-10	Moderate Depression	Simple advice plus Brief Counseling Refer to Medical Officer for diagnostic evaluation and intervention Continued monitoring
All 3 symptoms from 1-3+ 4 symptoms from 4-10	Severe Depression	Refer to Medical Officer for diagnostic evaluation and intervention Continued monitoring

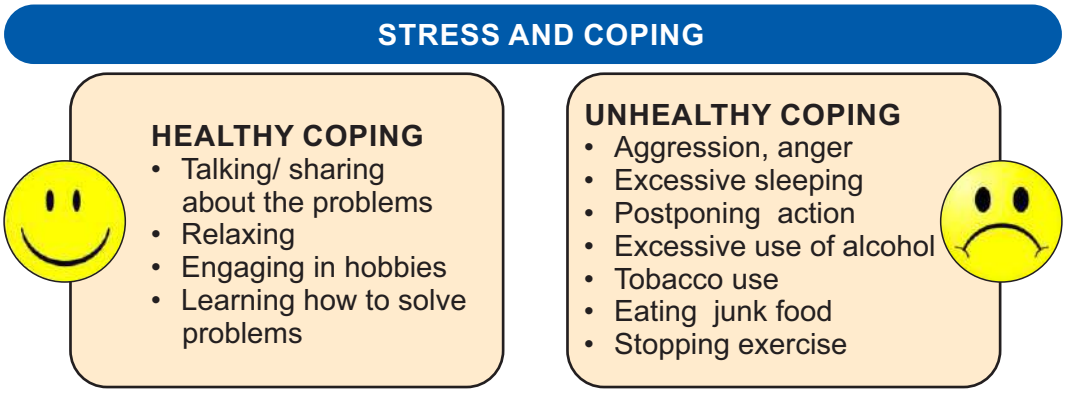
Step 2 - ASSIST:

- Provide education about stress/anxiety/depression, other risk factors, and impact on NCDs.
- Encourage healthy coping and problem solving skills.
- Teach relaxation techniques or encourage the person to do Yoga and other mind relaxing exercises/ techniques.
- Mobilize support from family and friends.
- Discuss healthy lifestyle practices and importance of adequate sleep/rest.
- Discuss about avoiding tobacco/ alcohol, excessive tea/ coffee, junk foods etc. as stress coping measures.

Dealing with Stress:

The best way to address stress is to prevent it from happening again. For this, the Counselor has to help the individual to identify the main problem as it will not be possible to simply eliminate all sources of stress. Wherever possible, specific causes of stress, its effects on the person (physical and emotional problems) and methods to reduce stress are part of intervention. Strengthening the individual's ability to cope by adjusting external demands (where possible) is important. It is best to plan an intervention based on addressing the individual's specific problems and addressing the most pressing ones first.

Encourage healthy ways of coping



TEACHING PROBLEM SOLVING SKILLS

1. State the problem
2. Take one problem at a time
3. Try to answer basic questions:

what when, who and how?

WHAT is the problem?
WHEN does it happen?
WHO is contributing to it or
WHOM does it affect?
HOW can it be tackled?

When an individual is overwhelmed by stress/ anxiety, he/she is unable to think rationally and find solutions to problems. If the person feels that problems are building up and nothing is under control, feelings of helplessness and dejection can develop. The simple steps for problem solving can help the person to think one step at a time and find possible solutions to problems according to priority.

Dealing with depression:

If a person has symptoms of depression, Counselor should show understanding towards the individual and refer to the Medical Officer/ Psychologist (if available). Ask the person directly if he/she is thinking about suicide and ensure that the person is not alone, if the patient expresses suicidal thoughts. Ensure regular contact and follow up.

Step 3 - ARRANGE:

- Refer the individual to the Medical Officer/Psychologist (if available) for any medical assistance.
- Inform the individual about follow up dates and monitor progress.
- Assist Community Health Worker for making home visits to high risk individuals.

8.3.2 Involve the family:

Risk factors, especially stress, tobacco and alcohol use, can harm not only the patient but also the family. It is important to involve the family members while intervening to address stress and common mental disorders during the management of NCDs. Often, family members may not be aware that the individual is stressed or is suffering from a mental disorder. They may think the person is weak, not taking responsibility, or exaggerating. Clarifying about stress and common mental disorders helps them to be more understanding and supportive.

8.4 Health promotion activities in the community specific to reduction of stress and common mental disorders

- In collaboration with Community Health Worker and/or NGOs, organize mental health promotional activities in schools.

- Coordinate with community leaders, NGOs for social support initiatives for elderly populations (e.g. befriending initiatives, community and day centres for the aged).
- Conduct workshops on stress management, self-esteem enhancement, and all-round personality development at suitable venues.
- Provide posters conveying relevant messages which can be put up in public places.

Summary

- Stress and other common mental health problems are modifiable risk factor for NCDs.
- Stress symptoms must be differentiated from depression and anxiety.
- All patients must be asked about symptoms of stress and ways of coping.
- Stress can be reduced by relaxation and learning healthy coping measures.
- Persons with significant depression and anxiety or suicidal risk must be referred to the Medical Officer for assessment and necessary treatment.
- It is important to conduct community awareness regarding stress and coping and help seeking for depression, anxiety and suicidal thoughts.

UNIT 9 ROLE OF COUNSELOR IN NCD PREVENTION AND HEALTH PROMOTION

9.1 Team Approach

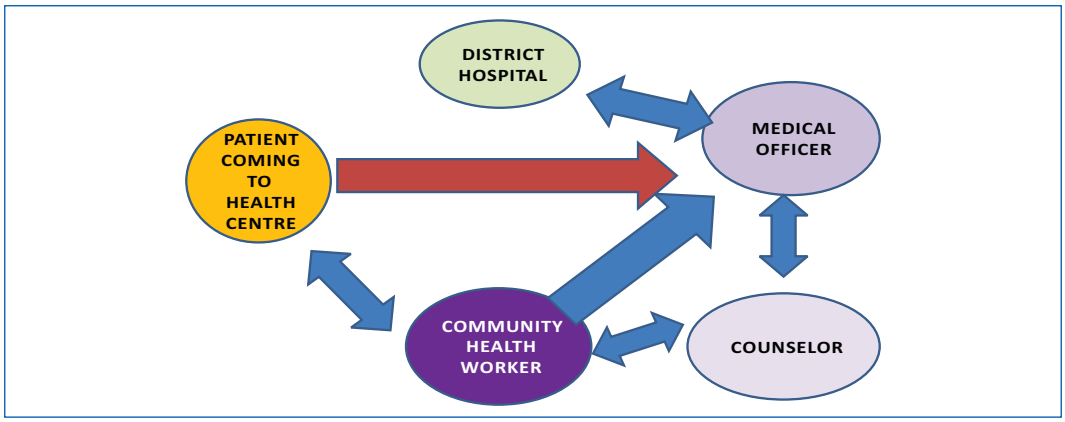
Team work is very important for NCD prevention and management. In this context, team work refers to the combined efforts of a group of professionals who use their varied expertise in an integrated manner, for the common goal of NCD prevention and management, and health promotion.

An individual may visit the Counselor directly or may be referred by Medical Officer or Community Health Worker during his/her visit to health facility. The Medical Officer treats the individual and refers him/ her to the Counselor for further help. The Counselor after counseling the individual can refer him/her back to the Medical Officer for health related issues/ medication and link up with the Community Health Worker for home visits and follow up as per need.

In a health facility, where Counselors are not available, the staff nurse may be trained to provide basic counseling to person with NCDs or with NCD risk factors.

When there is a need for specialized care (beyond the capacity of primary care), the individual is referred to the specialist/ District Hospital by the Medical Officer.

TEAMWORK IN ACTION



The Counselor will use the 3 A approach to help the individual:

COUNSELOR'S ROLE 3 A's

STEP 1: ASK about risk factors leading to NCDs.

STEP 2: ASSIST how to make behaviour changes by educating about risk factors, giving information about healthy lifestyle, mobilizing social supports for behaviour change i.e. healthy coping for stress, encourage proper diet, regular exercise and avoid use of tobacco and alcohol.

STEP 3: ARRANGE for help with Medical Officer for assessment and medication and Community Health Worker for follow up through home visits.

9.2 The Role of the Counselor in the NPCDCS

The National Program for the Prevention and Control of Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) was launched with an aim to reduce risk for the prevention of NCDs and the early diagnosis and appropriate management of common NCDs.

At the NCD clinics of district hospitals and community health centres, Counselors are recruited under NPCDCS to provide services for NCD prevention and control.
Counseling services are :

1. Health promotion initiatives (for healthy population) in the community, educational institutions and workplace for people with no evident risk for NCDs- this group requires interventions for sustaining a healthy, risk-free community.
2. For persons with risk factors for NCDs (for pre-disease population) such as tobacco use, alcohol use, unhealthy diet, stress, physical inactivity, high blood pressure, high blood sugar, high lipids, high BMI- this group requires education about risk factors and interventions for risk factor mitigation.
3. For patients with diagnosed NCDs (for diseased population) - This group requires counselling for management, as well minimizing the complications of the NCD. well as to minimize the complications of the NCD Here, the Counselor also needs to stress on treatment adherence and regular follow-up.

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Counselors are expected to maintain the data base of the individuals counseled in NCD clinics as well in outreach activity. At the end of month a compiled report needs to be shared with the Medical Officer for preparing NPCDCS monthly report of the facility.

9.2.1 Assessment and counselling as part of health promotion:

a. Explaining the purpose:

The Counselor needs to introduce her/himself and explain the purpose of the assessment. "There are many lifestyle factors that can affect our health and well-being. Can I ask you some questions in this regard"?

b. Asking the questions/exploring feelings:

"I will be asking you some questions I routinely ask people. These relate to your diet, exercise, stress levels and the use of substances like tobacco and alcohol. I will go through each of them one by one. There are no right or wrong responses. Please answer openly as this will be important for me to be able to counsel you appropriately.'

c. Going through the questions systematically:

The Counselor must go through each risk factor systematically. The order of asking about the risk factor may vary depending on the individual being interviewed. For e.g. in a child the questions may start with diet or physical activity. In an adult with respiratory problems, the questions may start with tobacco. It is more important to systematically address exposure to each risk factor or establish whether a lifestyle is unhealthy or not.

d. Giving feedback:

After going through a detailed assessment, the Counselor gives a feedback to the individual on the areas where the individual is adopting healthy lifestyles, the areas which require change in lifestyle and the strategies that can be employed to bring about change. The Counselor might say, 'I think that you are eating balanced diet. But because you are in a job where you are sitting all day, you are not getting enough exercise. Exercise is important to keep you healthy and reduce risk for diabetes and heart disease. Shall we discuss some ways in which you can get physically fit?'

e. Encouraging change:

It is important that the Counselor recognises the efforts the individual has been putting to make lifestyle changes. 'I can see that you have already been making efforts to cut down your weight. That's really good. Perhaps we can work together to improve these gains that you are already having?'

f. Making a Plan:
The Counselor makes a list of the risk factors that the individual needs to work on and develops a collaborative plan of action. This means that the plan is made jointly so that the individual feels responsible for carrying out the plan.

g. Set goals:
Based on the assessment of risk factors and person's readiness help the person to set goals for reducing the risk factors.

h. Prescribing Lifestyle Change:
Just as the doctor may prescribe medications, the Counselor needs to prescribe lifestyle change and make specific, clear suggestions about change in diet, or stopping tobacco or alcohol or getting rid of indoor air pollutants.

I. Follow up
Any plan of change needs follow-up. The Counselor must make a follow up appointment to monitor if the individual has made the changes discussed, what worked and what did not, so that different strategies may be tried. Nowadays, such follow ups can be done even over the telephone or the internet, or through SMS messaging or mobile applications.

9.2.2 Counseling for persons with a positive risk factor:

More than 80% of NCDs are preventable if proper interventions are made to reduce the exposure to behavioral risk factors. Person who has been identified with a positive metabolic or behavioural risk factors, may have already seen the medical officer or another doctor and be aware of the risk factor. It is important for the Counselor to explain what this risk factor means, the consequences of not modifying this risk factor and the advantages of modifying it. For e.g. the Counselor could say, "Your blood sugar is high. It is important to control it, otherwise you can develop problems in your eyes, nerves and heart because of uncontrolled diabetes. But we can prevent these problems if you take care about your diet, get adequate exercise and follow the prescription of the doctor."

Once the physiological risk factor is addressed, the Counselor can go on to ask about the lifestyle risk factors mentioned earlier and go through each systematically. "In addition to controlling your high blood sugar, it is important to also look at lifestyle

factors that may affect your health." The Counselor may then proceed with points a-h mentioned earlier.

9.2.3 Counseling a patient with diagnosed NCD

A patient with NCD is usually referred to the Counselor by the Medical Officer. The patient may be diagnosed with more than one NCD. The real challenge with a patient newly diagnosed with disease is explaining the disease management and motivating the patient to adhere to long term treatment. Patient needs to be educated about the disease and simultaneously he /she should be prepared through counseling to accept the diagnosis and follow the management protocol as advised by MO.

Difference between education and counseling

Education	Counseling
Meaning of diagnosis	Accepting the diagnosis
How can it be managed	How you can manage it
Why take treatment	How treatment can make you feel better
Do's and Don't's for the family	Enabling open communication between patient and family
This is what you need to do	You can do it

Disease counseling in health care setting is a tool to enable desirable treatment outcomes, therefore some of the counseling goals should be focused on the following:

- Patient and family accept the diagnosis.
- Equip them with information on disease management.
- Develop a positive and proactive approach.
- Initiate and maintain lifestyle modification.
- Compliance with therapy.
- Learn to manage complications.

The steps to follow in diagnosed NCD cases are as follows:

a. Explain what the diagnosis means.
b. Identify the possible barriers to treatment and explain to the patient the importance of treatment adherence.

c. Educate the patient about possible complications and ways to handle them. For example, in a patient with diabetes with a foot ulcer, it is important to counsel the patient about foot care and how to hasten healing.

Common NCDs and possible complications

Disease	Probable complications
Hypertension	Heart attack, stroke, heart failure, kidney problems, eye problems, memory problems, depression
Diabetes	Blood vessel and heart problems, nerve damage, kidney damage, eye damage, foot damage, skin problems, hearing problems, depression, memory problems
Chronic Obstructive Pulmonary Disease	Lung infection, breathing difficulty, depression, heart failure, bone thinning
Cancers	Pain, tiredness, fatigue, nausea, bowel problems, difficulty breathing, brain and nervous system problems, depression
Heart Diseases	Heart failure, heart attack, stroke, arterial disease
Mental Disorders	Reduced enjoyment of life, family and relationship conflict isolation, use of tobacco, alcohol and other drugs, suicidality, reduced immunity, heart disease, other medical conditions

d. Talk to the patient about monitoring the physiological risk factors like blood pressure, regular blood sugar check, reducing weight etc.
e. Either in the same session, or in a later session, assess the patient for lifestyle risk factors as mentioned in the earlier section (section 9.2.1).
f. Intensive counseling may be required for patients who face difficulty in adherence to management protocol.
g. Emphasize the importance of follow up for disease control and for risk factor reduction, so that disease complications can be avoided.

Summary

- Team approach refers to the combined efforts of a group of professionals who use their varied expertise in an integrated manner, for the common goal of NCD prevention and management, and health promotion.
- The Counselor needs to work in coordination with the Medical Officer, Community Health Worker, Staff Nurses and other functionaries of the NPCDCS.
- The Counselor plays a major role in providing counseling services not only to patients with diagnosed NCDs but also to those with positive NCD risk factors.
- The Counselor needs to maintain records of behavior counseling being provided and to maintain records of community level activities conducted for prevention and control of NCDs.

ANNEXURE 1

COUNSELING CASE RECORD (UNDER NPCDCS)

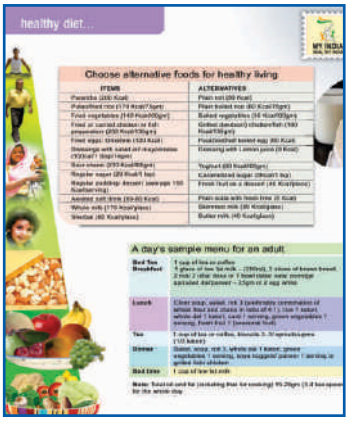
Name of Centre: Date of Assessment: Patient ID: Name of Patient: Son/Daughter of: Age in years Gender: Male/Female/Other Occupation: Contact address: Phone number: Support Person-either family person or neighbor (name and contact):	Name of Counselor:
Referred by:	
Reason for Referral: Advice for healthy lifestyle (no or low risk) Assessment of lifestyle risk factors At risk for NCD referred for counseling Has NCD referred for counseling Others	

Diagnosed Medical Condition	**Risk factors**		
Diabetes	High blood pressure	Height	
Heart Disease	High blood sugar	Weight	
Hypertension	High blood lipids	BMI	
Cancer	Family History of		
Stroke	• Diabetes		
Chronic Kidney Diseases	• Heart Disease		
Respiratory Problem	• Hypertension		
Depression/Anxiety/Other mental health problem	• Cancer		
Any other medical condition	• Respiratory Disease		
	• Mental Disorder		
	Any other		
Lifestyle Risk Factors		Comments	Advice
Tobacco Use	Never/Past/Current	Fagerstrom Score	
Exposure to indoor air pollution	Yes/No	Type/duration of exposure	
Alcohol Use	Never/Past/Current	AUDIT-C score	
Diet pattern	Healthy/unhealthy	No. of serving of fruits and vegetables	
Physical Activity	Adequate/Inadequate	Duration per week	

Mental health status Referred to Date of next counseling	Stress/Depression/ Anxiety/other		
COUNSELOR'S FOLLOW-UP RECORD (NPCDCS)			
Patient ID: Name of Patient:			
Date of follow up			
Adherence to advice regarding risk factors: • Tobacco use • Exposure to indoor pollution • Alcohol use • Unhealthy diet • Physical inactivity • Adherence to advice on treatment protocol: • Drug therapy • Complication screening	Action taken by patient	Comment	Advice given

ANNEXURE 2

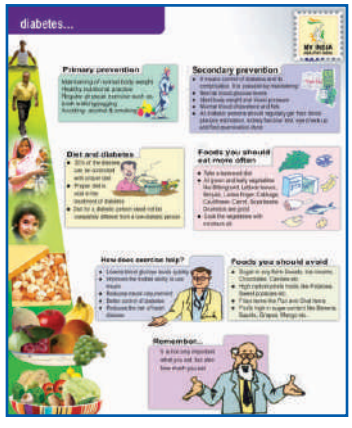
Information flyers about NCD risk factors



***Images for representation purpose only, the original flyers can be downloaded from website-www.mohfw.nic.in**

ANNEXURE 3

Information flyers about common NCDs



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