

THE NCD EPIDEMIC IN INDIA

Our life style depends on Nature and Nurture, needless to say that both have been very adversely affected. We are born with an average life expectancy of 85 years minimum and around 122 years maximum, however because of drastic changes in life style we are dying earlier due to non-infectious diseases (Non-communicable diseases [NCDs]) then due to infectious diseases majority of which are under control.

Among a thousand people, only one dies a natural death; the rest succumb to irrational modes of living.–
Live sensibly

– Maimonides

“I am not a product of my circumstances.
I am a product of my decisions”

– Stephen Covey

The changes in lifestyle (Achar, Bichar, Vyavhar and Ahar) and environment are the main causes of non-infectious chronic diseases. As these diseases progress slowly and gradually, their symptoms appear gradually and steadily, they are chronic in nature, hence they are put in the group of chronic diseases. Cardiovascular Diseases, Diabetes, Chronic Respiratory Diseases and the Cancers are the most important examples of NCDs. Non-communicable diseases (NCDs) are the biggest killers across the world. According to Global Status Report, in 2012, out of 56 million deaths, 38 million deaths (68%) occurred because of NCDs of which more than 40% were premature, before the age of 70. Approximately 80% of the burden of these diseases is borne by low and middle income countries. For the South East Asia Region, WHO estimated that 50.6%

of all mortality and 43.7% of all disability adjusted life years (DALYs) is due to NCDs. WHO indicates that India ranks very high among the nations affected by premature deaths caused by NCDs. It bears the burden of death of more than 5.8 million people because of Cancer, Diabetes, Stroke, Lung & Heart Diseases each year. The risk level has increased significantly due to the lack of prevention and awareness, absence of proper national health policy related to NCDs, poor healthcare financing and infrastructure and the risk factors: tobacco use, physical inactivity, unhealthy diet and the harmful use of alcohol which leads to metabolic/physiological changes like overweight/obesity, raised blood glucose, raised blood pressure and raised cholesterol. Contrary to the belief that people who maintain high levels of fitness are at low risk of being affected by Non-Communicable Diseases compared to those who are unfit and lead an unhealthy life style, we have many such well known examples of people at 20 and 30 years being diagnosed with cancer & heart attack who have been fit and maintaining normal life style. As people of all ages, nationalities and classes are affected an early detection and preventive health screening is required across the globe.

THE MOST IMPORTANT DISEASES AMONGST NCDs

Cardiovascular diseases, such as high blood pressure and coronary artery disease, Diabetes, Various types of cancers, Chronic respiratory diseases, such as Asthma, chronic obstructive pulmonary disease and emphysema,

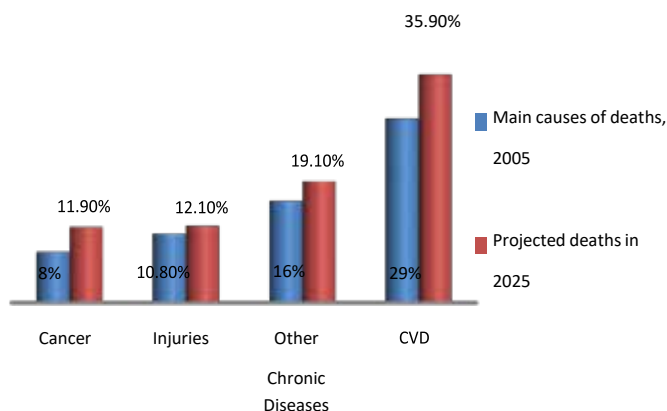


Fig. 1: WHO Data - Main causes of death in 2005 and projections for 2025

Proportional mortality (% of total deaths, all ages, both sexes)

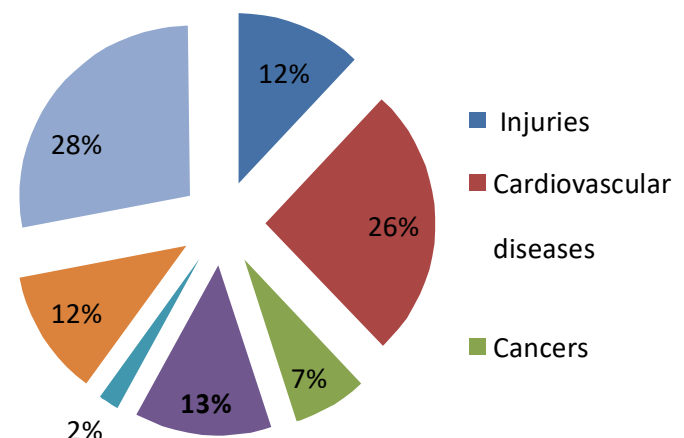


Fig. 2: WHO – Non-communicable Diseases (NCDs) in India, 2014

702 Disease of Digestive System (Peptic Ulcers, GERD) Genitourinary Conditions (Nephritis, Chronic kidney disease) Abdominal obesity Cirrhosis Neuro-Psychiatric Disorders (Stroke, Depression, Dementia, Anxiety, Stress etc.

BEHAVIORAL RISK FACTORS

The major cause of NCD is behavioral risk factors like eating unhealthy foods like foods with too much of sweet, high salt, high-fat, unhealthy grilled and other junk foods, Fruits, Vegetables, Milk and other foods processed and preserved with chemical, fertilizers and insecticides, drinking excess amount of alcohol; are smokers; leading a couch life, doing no physical activity; have increased working hours and sleep too late and too little; have high stress levels; and taking out of counter drugs.

ALCOHOL

Annually 3.3 million people die due to alcohol misuse. There are 60 diseases where alcohol has a significant causal role.

PHYSICAL INACTIVITY

Insufficient physical activity kills 3.2 million people globally and around 23% of adults aged >18 years are insufficiently active.

In view of the prevalence, global reach and health effect of physical inactivity, the issue should be appropriately described as pandemic, with far-reaching health, economic, environmental and social consequences.”

– Lancet July 2012

BLOOD GLUCOSE

As per the statics of 2014 around 8.5% of adults aged 18 and above have raised blood glucose.

TOBACCO

Tobacco use and exposure to tobacco smoke results in death of 6 million people annually. 22% of people aged 15 are smokers in the world.

1 OUT OF 2
long-term smokers will
DIE FROM TOBACCO.



Every cigarette smoked
CUTS 5 MINUTES OF LIFE
on average - about the time taken to smoke it.



Smoking is the single
LARGEST PREVENTABLE CAUSE
of disease and premature death.

Cigarettes contain more than
4,000 TOXIC OR CARCINOGENIC
chemicals.

1 OUT OF 4
heart diseases victims and
3 OUT OF 4
chronic bronchitis victims
ARE SMOKERS.



BLOOD PRESSURE

In 2014, roughly 22% of adults > 18 had raised blood pressure, globally.

OVERWEIGHT/OBESITY

Globally in 2014, out of the Adults aged 18 > around 39% were overweight & around 13% were obese.

“Sudden death is more common in those who are naturally fat than in the lean”

– Hippocrates

HEART ATTACKS & STROKES

In 2012 C V D was the leading cause of death due to NCD. Out of total of 7.5 million deaths, heart attacks killed 46% or 7.4 million people and 6.7 million deaths were due to strokes.

CHOLESTEROL

In 2008 roughly 39% of adults aged 25 and over had raised cholesterol.

UNHEALTHY DIET

Low fruit and vegetable consumption was responsible for 1.7 million of deaths worldwide.

INDIAN STATISTICS REGARDING NCDS

More than 20% of the population in India has at least one chronic disease and more than 10% of the people have more than one. As per 2011 estimates 61.3 million people aged 20-79 years are diabetics which is expected to rise to 101.2 million by 2030, leave aside the pre diabetics, Indians get diabetes 10 years earlier on average than their western counterparts, 118 million people were suffering from hypertension in 2000, and this number is likely to increase to 213 million by 2025 The death due to cardiovascular diseases in people aged 30-59 is double then that in the U.S. There are around 2,50,000 cancer cases in India and 1/3rd Indians have high levels of Triglycerides and 30-70% have low levels of HDL. Lifestyle changes leads to decreased physical activity, increased consumption of sugar, fat and calories, and higher stress levels which affects insulin sensitivity and causes obesity. There are around 85 million obese persons in India and obesity in Children is rising fast with its consequential effects, which is grave sign for future of nation.

PREVENTION NCDS

The interventions that lower NCD risk factors can result in reducing pre-mature deaths by half to two-third. It can be prevented by controlling major risk factors like the harmful use of tobacco, alcohol consumption, obesity, unhealthy diet and physical inactivity and others.

MODIFICATIONS

For reducing the risk of NCDs we should focus on making healthy food choices from all five food groups, with special emphasis on fresh vegetables and fruits. avoid foods that are overly sweet, salty, high in fat, or even grilled.

If we give every individual the right amount (& Types) of nourishment and exercise, not too little and not too much, we have found the safest way to health."

– Hippocrates

"Be the Change you wish to see in the World"

– Mahatma Gandhi

HEALTHY DIET

"Eat what you Love and Love what you eat: but eat only healthy foods."

- Plant based diet with less sugar and refined carbohydrates.
- Fruits, vegetables, legumes, and whole grains and nuts intake should be increased.
- Dietary fiber intake should be increased, Men 45-55g/day, Women 55-65g/day.
- Decreased intake of processed foods, refined sugars, saturated fats and cholesterol

EXERCISE

30/45 minutes a day, at least 5 times a week/all seven days for Indians.

ABSTINENCE FROM ALCOHOL

Stop smoking

Tobacco use cessation counseling is very important aspect of clinical management and medications ex. Chantix, bupropion are also available to be used if necessary.

AVOID STRESS

- S – Smile. Keep smiling
- T – Tolerance. Grow in tolerance.
- R – Relax. Never be tensed
- E – Easy. Take it easy but be not lazy.
- S – service, Keep serving
- S – Silence. Practice silence and there by turn to God

PRACTICE YOGA AND MEDITATION

Yoga has been practiced for more than 5000 years and Yoga is one of the most effective and proven way of staying healthy and fit and keeping diseases away. If we want a workable solution for health issues, want to lose weight, be stronger with good physique or want a peaceful mind, yoga is the way which offers a holistic benefit over any other physical activity. Yoga is not just a physical movement and postures of body but it helps in maintaining a harmony between body, mind and soul which benefits a lots.

YOGIC LIFE STYLE

- Natural-Living according to laws of nature & body.
- Discipline.
- Balanced Diet.
- Asana, Pranayam, Relaxation (Yoga Nidra,

Meditation).

- Adequate Sleep.

BENEFITS OF YOGA

- Improves all round fitness
- Relieves Stress & Anxiety
- Boosts immunity, positive Energy and Mood
- Helps normalize Blood Pressure and have been found to be beneficial in IHD also.
- Helps in management of pulmonary diseases.
- Speeds up a Sluggish Digestion by massaging surrounding muscles
- Increases Muscle Flexibility, Strength & Endurance
- Increases feelings of Calmness & Wellbeing
- Boost sexual life

Even 15-20 minutes of concentrated yoga is all that you need. Even at work, a few minutes of meditation will make you refreshed and recharged and you are back to your work tension-free and energetic

GET SUFFICIENT REST AND SLEEP

- Adult needs 7-8 hours of sleep per night. However, more than 40% of adults sleep for less than 7 hours in 24 hours.
- Adolescents need more than 9 hours per night. Almost 70% get less than that on average weeknight.
- Insufficient sleep is associated with diabetes, HTN, CVD, depression and obesity.
- In the year 2008 drowsy driving contributed to 100,000 MVA's and 15,000 deaths.
- Importance of Obstructive sleep Apnoea is well known and it should be appropriately managed

MULTIDIMENSIONAL APPROACHES TO PREVENT AND REDUCE THE BURDEN OF NCDs

It is the lack of awareness, screening, diagnosis, training, financing and efficient referral that collectively denies access to healthcare. Primary health care system has to be revamped with training to healthcare workers especially regarding counseling for change in lifestyle. The Medicines for treating NCDs should be made easily available and affordable as they are needed lifelong.

It is important that along with the government the other agencies should come forward with schemes like insurance policies for specific diseases, health awareness programmes and other technological advancements to address the growing burden of NCDs at the regional, state and national level. Promotion of traditional methods to reduce diseases and promote health like yoga and meditation, engaging religious leaders to raise awareness to modify lifestyle and follow a balanced diet, use of electronic media for IEC and NCDs prevention programmes for healthier behavior change at workplaces of the employees like having physical education training and gym can be of great help.

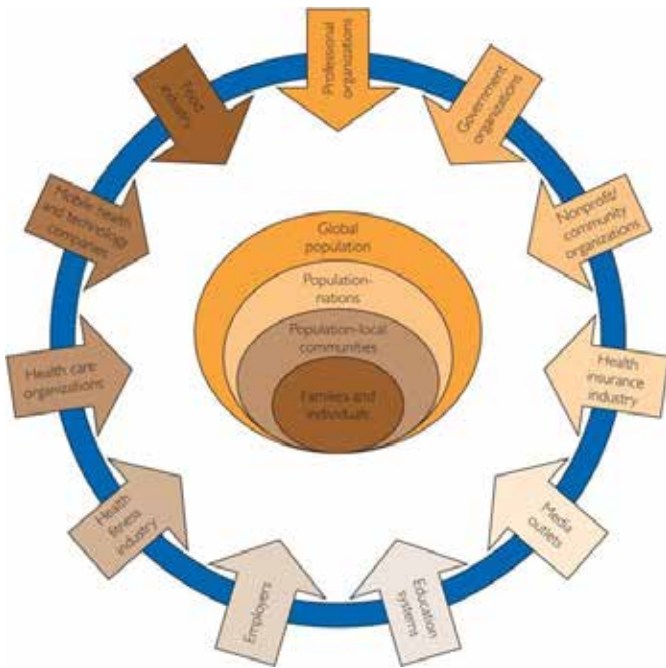


Fig. 3: Model for a comprehensive approach to healthy lifestyle promotion, education, and interventions

M-HEALTH

The mobile technology becoming so economical, Print and Media can be of great help in the management and prevention of for NCDs. To make people aware about the chronic diseases and its outcome, through WhatsApp or SMS can be another way to approach to the maximum people.

Private practitioners should be involved along with patients and their representative in the design and delivery of strategies to prevent and manage NCDs. Training in latest medical technologies to promote awareness through all perspectives may also be helpful.

CONCLUSION

Surveillance & Policy Strengthening of Healthcare Systems and Healthcare Financing are needed. With a Concrete policy-with improvement in health systems, India can successfully address the serious issue of NCDs and can present a roadmap for others to follow. We need to have a competent public health system along with innovative strategies, technology-based initiatives and an efficient use of the existing resources. A multi pronged approach is the needed where different players have their specific roles. It is therefore important to develop NCDs prevention and control program involving multiple agencies and innovative approach. Success of any programme depends on provision of facilities and monitoring its progress. The Government is doing a lot in this direction but still a lot has to be done.

REFERENCES

1. <http://dx.doi.org/10.1093/eurheartj/ehv207.2097-2109>
2. Consultation paper addressing non-communicable diseases in India through innovation and multi-sectoral approach taken jointly published by the partnership to fight chronic disease (PFCD) and strategic partners group (SPAG ASIA) January 2015
3. http://siteresources.worldbank.org/SOUTHASIAEXT/Resources/223546-1296680097256/7707437-1296680114157/NCD_IN_Policy_Feb_2011.pdf