

TODAY'S CHANGING LIFESTYLE AND DIETARY PATTERNS AND IT'S SIDE EFFECT ON HEALTH W.S.R TO NON COMMUNICABLE DISEASES

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ABSTRACT

Good nourishment is the secret of healthy and happy life. A healthy diet is one that provides adequate level of vitamins, minerals, protein, carbohydrate and healthy fats from a variety of foods. An unhealthy diet is high in fat, saturated fat, trans fat, sodium and added sugars. These diets often contain a lot of processed or fast foods that are high in calories and too few nutrients. Recently the eating habits and lifestyle of human has drastically changed from those of previous generation and the popularity of fast food is greater due to the shortage of time. Because of the busy schedules the meal times having become irregular and when pangs of hunger strike it is easier to pick up ready to eat snacks rather than prepare a hot meal. The market is constantly

flooded with new food products which are promoted attractively and this has greatly influenced the bad food habits of the human. Unfortunately today's poor eating habits and sedentary lifestyle caused by the continuous evolution of high technology are some of the contributing factor on increasing health problem worldwide. Unhealthy diet causing serious side effects on body such as a Cancer, Stroke, heart disease, obesity, Diabetes, nutrient deficiency, osteoporosis, low immunity, gall bladder diseases, skin problem, fatty liver diseases, high cholesterol, oral problems and much more. To avoid these side effects eating healthy is the best way to stay happy and healthy.

KEYWORDS: Dietary/Nutrition Transition, Physical Inactivity, Non Communicable Diseases, Diabetes, Cardiovascular Diseases, Cancer.

1. INTRODUCTION

In a major shift of disease pattern, WHO has found that worldwide non-communicable diseases (NCD) are killing more people than communicable diseases. According to the health statistics of WHO, among 57 million global deaths in 2008, 36 million, or 63%, were due to non-communicable and 37% were due to communicable diseases. The leading causes of NCD deaths in 2008 were cardiovascular diseases (17 million deaths, or 48% of all NCD deaths), cancers (7.6 million, or 21% of all NCD deaths), respiratory diseases, including asthma and chronic obstructive pulmonary disease (4.2 million).^[1]

After analysis of the causes responsible for manifestation of these diseases, it is concluded that, common preventable risk factors underlie most NCDs. These risk factors are a leading cause of the death and disability burden in nearly all countries, regardless of economic development. The leading risk factor globally for mortality is raised blood pressure (responsible for 13% of deaths globally), followed by tobacco use (9%), raised blood glucose (6%), physical inactivity (6%), and overweight and obesity (5%).^[2]

Worldwide non-communicable diseases (NCDs) occur due to multiple etiological factors impacting development and economic progress. Developing countries have dual burden of diseases viz., under and over nutrition, which are critical public health challenges. NCDs occur a decade earlier in India.

Increasing sedentary lifestyle due to growing use of technologies in daily life causes higher levels of physical inactivity. The disturbed sleep pattern and wrong dietary habits are also a part of changing lifestyle which leads to onset of many diseases. It has been proved that in case of Non-communicable diseases, simple lifestyle measures are more effective in preventing or delaying the onset of these diseases.^[3]

Diet is major factor influencing the health of population and to prevent chronic diseases. Industrialisation, urbanisation, globalisation, economic and social development have led to rapid changes in diet and lifestyles. As a consequence millions of people suffer from poor health reflected by the incidence of diseases (e.g. obesity, diabetes, cardiovascular diseases, stroke, hypertension and some type of cancer) arising from inappropriate diet, poor quality of

nutrition, bad eating habits, lack of physical activity and other behaviour that we know are detrimental to health.

The prevalence of diet related chronic diseases like obesity, metabolic syndrome and allergies is currently on the rise in almost all industrialized countries and has become a prominent problem on the political agenda of many countries. Changing lifestyle and work habits are the two major factors deciding consumer's preferences for fast food that is driving them towards junk health. A higher intake of energy- dense foods, refined and fatty foods, processed/convenience and animal foods, salty and sugary snacks, low intake of whole grains, vegetables, fruits and nuts coupled with physical inactivity result in NCDs. Hence, prevention strategies as public health measures must have applicable and realistic goals for these challenging issues. We need to seize this opportunity to act on time. This article encapsulates the current determinants of NCDs and presents dietary strategies for prevention of diabetes, cardiovascular diseases (CVD) and cancer. Both global and Indian scenario is portrayed.

2. AIM

To study today's dietary changes and its Side effects on health.

3. OBJECTIVES

- ✚ To study today's dietary changes and factor influencing the changing dietary pattern.
- ✚ To discuss the impact of changing dietary pattern on health w.s.r Non Communicable diseases.

4. MATERIALS AND METHODS

4.1. Drivers influencing the changing dietary pattern

There has been a complete changes in the eating patterns of the people and the driving factors for this change are liberalization, the foreign direct investment, spurting of supermarkets and fast food chains, increase in purchasing power of the people, urbanization, better access to internet and other communication systems.

Due changes in family and social environment there has been a revolutionized change in children's lifestyle and eating habits. These changes are mainly due to increases in working women, decline in the birth rates and reduction in the size of the families. The advancement

in food technology, fishing and agriculture methods employed for food production have led to change in the food pattern.

Ease of access to health services and better education facilities, very strong influence of television, decline in the age for children to start going to school, children getting access to money for spending which prompts them to buy unhealthy food without parental control are all the leading factors for changes in the eating habits.

4.2. Diet

A healthy lifestyle involves many choices. Among them eating healthy and having a balanced diet are required.

4.3. Balanced diet







A Balanced Diet is defined as one which contains a variety of foods in such quantities and proportions that the need for energy, amino acids, Vitamins, minerals, fats, carbohydrate and other nutrients is adequately met for maintaining health, vitality and general well being and also make a small provision for extra nutrients to withstand short duration of leanness.^[3]

A diet which contains all the required amounts of food and drinks to supply nutrition and energy for maintaining body cells, tissues, organs for supporting normal growth and development.

4.4. Healthy diet

A healthy diet is one that helps maintain or improve health. It is important for the prevention of many chronic health risks such as: obesity, heart disease, diabetes and cancer. A healthy diet involves consuming appropriate amounts of all nutrients and an adequate amount of water.

4.5. Keys to have a healthy diet

-  Eat a variety of nutrients rich foods.
-  Enjoy plenty of whole grain, fruits and vegetables.
-  Eat moderate portions.
-  Eat regular meals.
-  Reduce, don't eliminate certain foods.
-  Balance your food choices over time

4.6. Junk Food

✚ Junk food is an informal term applied to some foods that are perceived to have little or no nutritional value (containing ‘empty calories’) or to products with nutritional value but which also have ingredients considered unhealthy when regular eaten.

✚ Junk foods are typically ready to eat convenience foods containing high levels of saturated fats, salt or sugar and little or no fruit, vegetables or dietary fibre ; junk foods thus have little or no health benefits.

✚ Junk food leads to short and long term affects like

- Lack of energy
- Heart disease
- Poor concentration
- High cholesterol

4.7. Past and Present food habits

Older generation consumed healthy foods when compared to what people consume today. Diet of people has changed a lot from natural ingredients to artificial ingredients. Ancient people food are mostly from their farmland so they are safe. The quality of their seeds, eggs, vegetables and meat are wholly purified, since they are processed by themselves.

On the contrast the foods now are directly bought from supermarket, hence we will never know it has been contaminated or not. To increase profits the food producer and manufactures produce highly processed and highly profitable foods. To improvise the taste of foods, additives or flavors are added which are harmful to the health. People in the past do not tend to put too much of salt or sugar. Admittedly sugar and salt are harmful to health.

5. Non-communicable diseases

The main types of Non-communicable diseases are-

- ✚ Cardiovascular diseases (like Hypertension, Heart attack and stroke)
- ✚ Cancers
- ✚ Diabetes
- ✚ Chronic respiratory diseases (Such as Chronic obstructive pulmonary Disease and Asthma)

5.1. Risk factors^[4]

The risk factors responsible for major NCD's are:

Modifiable behavioural risk factors

1. Physical inactivity
2. Unhealthy diet
3. Tobacco & Cigarette use and other forms of smoking
4. Harmful use of alcohol and smoking
5. Stress & other psychological factors

Metabolic/Physiological risk factors

1. Overweight/ obesity
2. Hyperlipidaemia
3. Hyperglycemia
4. High blood pressure
5. Heredity

Environmental factors

1. Occupational Hazards
2. Exposure to air pollution
3. Exposure to noise pollution

Non-Modifiable risk factors

1. Age
2. Gender
3. Heredity

5.2. Major causes of Non- Communicable diseases

A sedentary lifestyle combined with an increase in the consumption of fatty food and alcohol is to blame cases of obesity, diabetes, hypertension etc.

5.2.1. Modern life style is a major cause of many NCDs. Getting up late in the morning and sleeping late at night has become common. These faulty habits cause loss of concentration, mood disturbance, headache and stress. Late night sleeping causes the release of hormone cortisol which is responsible for rise in blood pressure and reduction in cell regeneration activity.

5.2.2. Lack of exercise and Yoga result into many NCDs.

5.2.3. Continuous sedentary jobs cause cervical and lumbar problems.

5.2.4. Excessive work on computer results in dry eye or computer vision syndrome. Many researchers predict that high frequency waves emerging from cell phones increase stress level and may also cause vision problem.

6. Side effects of changing lifestyle & bad eating habits

6.1. Diabetes

Diabetes is a collection of multiple metabolic diseases, in which high levels of blood glucose are present over an extended period of time. Most persons with diabetes remain undiagnosed early in the disease process^[5]

In most cases, blood glucose levels in persons with diabetes increase with age, leading to heart disease, stroke, chronic kidney failure, foot ulcers, and damage to the eyes. Such high glucose levels are associated with frequent urination and increased thirst and hunger.

Type 2 diabetes is a late-onset disease, in that its symptoms first appear in persons older than 30 years of age. Type 2 diabetes covers over 90% of the total diabetic population. Type 2 diabetes encompasses persons with higher-than-normal blood sugar levels, which may lead to increased insulin resistance and insulin deficiency.^[5]

Type 2 diabetes may be caused by consuming an unhealthy diet. It is a most common type of diabetes. Type 2 diabetes is a chronic or long term condition that affects the way the body metabolizes glucose or sugar. Glucose is the body's principal fuel source. An unhealthy diet, physical inactivity, being over weight and having a family history of the condition are all risk factors for type 2 diabetes. Common signs and symptoms associated with type 2 diabetes include increased thirst, frequent urination, weight loss, fatigue, vision problems, impaired wound healing and skin discoloration. Diet plays a significant role in the maintenance of blood sugar levels in persons who are obese or who have pre-diabetes and diabetes symptoms. Eating a healthy diet and exercising can help in the prevention and management of type 2 diabetes.

Exercise plays an important role in the maintenance of body weight and blood sugar levels and in reducing pre-diabetes symptoms. Health benefits associated with physical activity are rapidly being identified. For example, exercise improves blood circulation, reduces the risk of

heart disease, reduces the risk of stroke, improves self-esteem, and improves whole-body blood glucose levels. Some exercises may also improve changes in skeletal muscle since skeletal muscle is responsible for the disposal of glucose from the blood. In addition, white adipose tissue shows beneficial effects with physical activity and exercise.^[6]

6.2. Cardiovascular disease

Cardiovascular conditions and diseases such as heart disease, arteriosclerosis, congestive heart failure, heart attack and stroke are serious potentially life threatening diseases that may result from years of unhealthy eating. According the American heart association a healthy diet is one of the most effective tools you have towards fighting heart disease. Food such as saturated fats (Found in fatty meats, cheese, butter and eggs) and trans fat (found in shortening, margarine, deep fried food and processed snack foods) increase risk of cardiovascular diseases. Nutrient rich foods such as fruits, vegetables, whole grains, legumes and other lean protein sources may decrease risk for such diseases.

To prevent long term wellness and prevent diet related disease, adhere to a balanced diet rich in a variety of nutrients foods.

Hypertension or high blood pressure occurs when your arteries become congested with plaque, which accumulated over time. Most arterial plaque is diet derived and generally stems from saturated fat, trans fats and dietary cholesterol intake in addition to overeating in general. Being overweight or obese consuming too much sodium or too little potassium or vitamin D and excessive consumption of alcohol are significant risk factors for hypertension. To prevent or help reduce high blood pressure consume a variety of healthy foods, such as fruits, vegetables, whole grains and lean protein sources and cut back on added sugars, saturated fats and deep fried foods. Regular physical activity is also a mean of preventing hypertension.

6.3. Cancer

Healthy diet reduce the risk of cancer.

Eating a healthy diet helps keep a healthy weight.

Fruit and vegetables may reduce the risk for oral cavity, oesophagus, liver, stomach and colorectal cancers.

Fruits and vegetables have wide health benefits.

Eating lots of processed and junk food can increases the risk of bowel cancer.

Eating foods high in fibre can reduce the risk of bowel cancer.

Eating salt preserved foods could increase the risk of stomach cancer.

One study suggests that girls who eat a high fat diet during puberty even if they don't become overweight or obese, may have a higher risk of developing breast cancer later in life.

6.4. Obesity

It should come as no surprise that obesity is a major consequence of not eating healthy. With the increasing availability of unhealthy foods and convenience foods also came a rise in both adult and childhood obesity. According to centres for disease control and prevention 35.7% of adults and 17% of children are obese. Obesity puts stress on every part of your body and increases your risk of developing major health problems including heart diseases, diabetes, high blood pressure, stroke, liver disease, infertility and sleep apnoea.

6.5. Stroke

Stroke is one of the leading causes of death and certainly the major cause of disability in the world. Diet and nutrient has an effective role in prevention and control of the risk of stroke. The levels of dietary saturated fatty acid consumption is correlated positively with stroke mortality rates in both sexes.

Reducing sodium intake, avoiding egg yolks, limiting the intake of animal flesh (particularly red meat), and increasing the intake of whole grains, fruits, vegetables and lentils would contribute importantly to reversing the trend to increased cardiovascular risk.

Huge amount of sodium and nitrate are used as preservatives in processed foods. This increases the blood pressure of our body, thus damaging the blood vessels.

6.6. High cholesterol

Consuming a high level of saturated fat in your diet is linked to the development of high cholesterol levels especially the levels of bad cholesterol which is referred to as LDL- low density lipoprotein cholesterol.

6.7. Low immunity

Vegetables and fruits including tomatoes, oranges, leafy greens, peaches and beans all are excellent sources of antioxidants which are nutrients that prevent cell damage. Not getting enough of these nutrients in your diet may impact your immune function. Vitamins C for example is a key player in the immune system and keeping your body's tissues healthy.

7. DISCUSSION

There is an unprecedented epidemic of noncommunicable diseases (NCDs) in India. There were an estimated 69 million people with diabetes in 2013, and 77 million with pre-diabetes. Thus, India is regarded as one of the world's capitals of diabetes. Prevalence of coronary artery disease (CAD) is similarly high. NCDs contribute to 60% of all deaths and an estimated loss of 20 million productive life years annually.^[6]

NCDs place a huge burden on the economy and could hamper the nation's development in coming decades. Indian diabetes prevention trials have demonstrated a reduction in progression from pre-diabetes to diabetes by simple lifestyle adjustment or eating a healthy diet.

Consuming predominantly plant- Based diets reduces the risk of developing diabetes, obesity, cardiovascular diseases, and some forms of cancer. Plant-based diets are high in vegetables and fruits, wholegrains, pulses, nuts and seeds, and have only modest amounts of meat and dairy. These diets help to achieve and maintain a healthy weight, reduce blood pressure, and are also rich in sources of dietary fibre (which protects against colorectal cancer).

Food and nutrients- Fruits and vegetables independently contribute to preventing cardiovascular disease. It is likely that particular vegetables and fruits, including cruciferous vegetables such as cabbage and broccoli, and many fruits or vegetables that are rich in folate, also protect from developing cancers of the colon and rectum, mouth, pharynx, larynx and oesophagus. Eating red and processed meat increases risk of developing colorectal cancer. Saturated fat and trans fats increase blood cholesterol and cardiovascular risk. Higher sodium/salt intake is a major risk factor for elevated blood pressure and cardiovascular diseases, and probably stomach cancer. Diets high in meat and dairy also increase blood pressure. Diets high in energy-dense, highly-processed foods and refined starches and/or sugary beverages contribute to overweight and obesity.

Body composition- Overweight and obesity is associated with increased total mortality and increased risk of disease or death from cardiovascular diseases, diabetes, and several types of cancer. It does so by increasing high blood pressure, blood cholesterol, insulin resistance and inflammation as well as hormone levels.

8. CONCLUSION

Staying healthy has the best impact on our body and it plays an important role in our daily life activities.

It is said that 'your body shows reflection of your lifestyle' So eat healthy add more fruits and vegetables. Never consume junk food, preservative food, alcohol, smoking, drugs these habits just harm our bodies and it cost's our lives.

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