

## LIFESTYLE CHANGES A CONTRIBUTING FACTOR FOR RECTAL CANCER IN YOUTH

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### ABSTRACT

Rectal cancer is the 3<sup>rd</sup> most common cancer in men & the 2<sup>nd</sup> in women worldwide. Recent studies show that incident rate of rectal cancer found to be increased among youth of India. Analytical reports show that certain diet and nature of work are high risk factors for rectal cancer especially in high techies. Even though exact etiology of cancer is unknown, preventive measures of risk factors are very necessary. Here an attempt is made to analyze some dietary and occupational factors which are responsible for inducing rectal cancer.

**Key words:** *rectal cancer, life style changes, dietary modifications, Ayurveda*

### INTRODUCTION

Colorectal cancer is the 3<sup>rd</sup> most common cancer responsible for death causing cancer in man and 2<sup>nd</sup> in women. A change from the traditional life style and adoption of western lifestyle was found to be contributing factor for increased incidence rate of rectal cancer among youth of India. Statistical reports show that rate of incidence of rectal cancer has been increased among youth compared to old age people. So a thorough analysis of food habits and nature of

work is essential to understand the contributing factors for rectal cancer.

Eg: Study reports of Rajiv Gandhi institute of biotechnology published last year which shows that number of rectal cancer cases doubled with in last two years (2012-2014) among youth of India (in a particular state), and high techies with improper food habits and prolonged sitting nature of work are at high risk

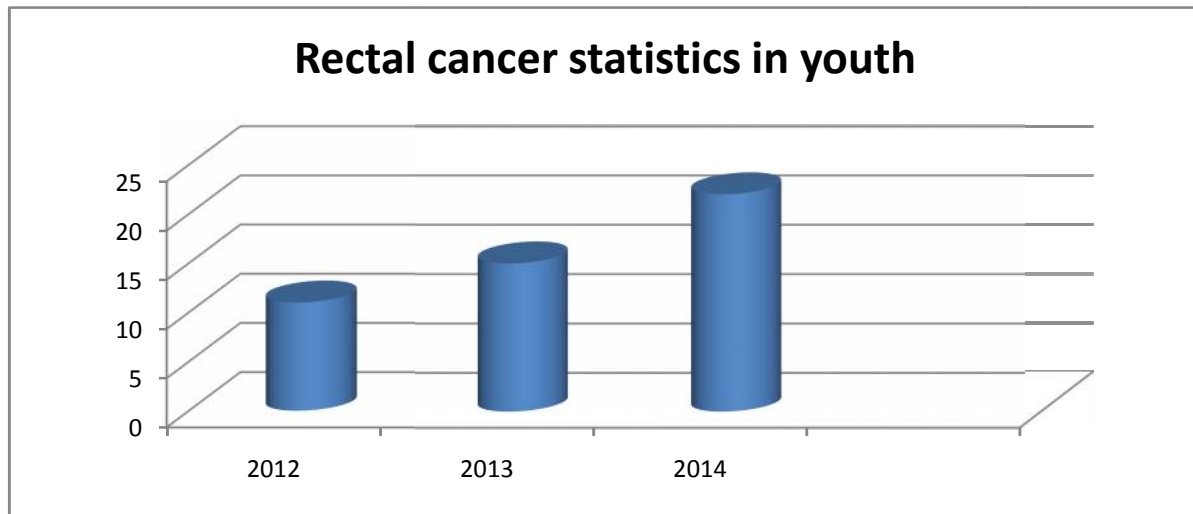


Figure 1

### DIETARY FACTORS

1. High fat diet-it is already proved that high fat diet always provide a favorable environment for carcinogens to act in the gastro intestinal tract.
2. Red meat-it is proved that red meat contains the iron carrier Heme which can form an unknown substance in the intestinal tract which is highly cytotoxic. These substances will cause epithelial damage and hyperproliferation there by inducing carcinomatous growth in rectal mucosa. Besides new reports from American scientific journal reveal that a sugar molecule called Neu5Gc present in the red meat can produce toxic immune response in the rectal mucosa contributing to rectal cancer
3. Fast food-Fast food restaurants are a part of our everyday lives. Heterocyclic amines present in fast food chicken, pizza etc are proved carcinogen which is capable of producing mutagenicity in the rectal mucosa. British Journal of nutrition revealed a study report that lack of folic acid in diet can increase the risk of rectal cancer and the synthetic folic acid present in fast food items lead to the formation of Deoxy folic acid which is a carcinogen capable

of turning pre cancerous cells in the rectal mucosa in to cancer cells.

4. Maida products-majority of people prefers *Paratta* for its taste. Noodles, Vermicilli food items are even preferred by children. Few years back it is identified that Alloxan a chemical used for softening Maida was found to be causing prostate and cardiac disorders. But recent studies show that it is also having some carcinogenic effect in rectal mucosa.

5. Chinese food-Monosodium glutamate (Ajinomotto) a salt widely used in Chinese cuisines to enhance flavors. It is a powerful carcinogen and recent studies show that it can induce rectal cancer

6. Cool drinks-Benzoic acid is often added to drink as a preservative in the form of its salts like Sodium benzoate/Pottassium benzoate. Decarboxylation of benzoic acid in the presence of ascorbic acid accelerate the production of Benzene which is highly carcinogenic to the rectal mucosa

7. Genetically modified food such as broiler chicken can cause mutagenicity in rectal mucosa leading to cancer

### NATURE OF WORK

Regular intake of fast food and prolonged sitting in work place is very common among high techies. This will lead to accumulation of these toxic substances in rectal angle along with fecal matter for a very long time gradually causing mutagenicity in the rectal mucosa leading to cancer. Studies also reveal that suppression of defecation and not evacuating bowel in timely can also lead to rectal carcinoma due to the above reason.

#### GROWING URBANIZATION

A few studies have strongly suggested a possible link of colorectal cancer with chlorinated water and chemical and pesticide pollution of food.

#### PATHOGENESIS

Annular variety is common at recto sigmoid junction. Young onset rectal cancer exhibits a more aggressive pathologic characteristic and advanced stage at presentation. It takes 12 months for growth to completely encircle the lumen of gut. In the first stage growth confined to the rectal wall, in 2<sup>nd</sup> stage spread to peri-rectal pad of fat and tissues, in 3<sup>rd</sup> there will be involvement of local lymph nodes, in 4<sup>th</sup> surrounding organs will be affected.

#### DIAGNOSIS

Diagnosis is made from clinical features which includes bleeding per rectum, altered bowel habits, early morning spurious diarrhea, and sudden loss of weight. Besides, rectal examination with investigations confirms the diagnosis.

#### DIETARY MODIFICATIONS

Following of traditional diet and avoidance of junk food is having high importance in preventing such conditions. Mixed diet more of vegetables should be preferred. Intake of more fresh and raw vegetables, fruits (mainly citrus variety), whole grain and legumes (Beans, Lentils etc) should be given importance. Include leafy vegetables and

plenty of water in diet so that which further helps to evacuate the bowels clearly and regularly. Omega-3-fatty acid containing fishes like Salmon, Mackerel etc are found to be having protective action against rectal cancer. Besides intake of Organic food and chicken, meats which are free of hormones and additives (for non vegetarians) should be encouraged. Above all we should advise people to maintain a healthy weight and to keep themselves physically active.

#### DISCUSSION AND CONCLUSION

As our science says: “*Nidana parivarjanameva chikitsa*”. So, generating a great awareness among youth regarding the risk factors for rectal cancer is very important. It is also important to advice the people to give preference to their traditional life style or which is “*pathya*” to them. The traditional Indian diet, consisting predominantly of plant-based, fiber-rich foods and antioxidant-rich spices, has been postulated to be protective.

Although the incidence of rectal carcinoma in Indian old age group is currently low compared to Western population, the younger generation is experiencing an increase in incidence. This may be due to the increased adoption of western life style such as high consumption of food with little nutritional value and high on calories. So being an Ayurvedic scholar, our intension should be to provide a total positive health. Following *Pathya aharakrama*, *Balavidhikara bhavas* and *Sadvritha* will help individuals to keep away from rectal cancer diseases to some extent. This will save present as well as future generations.

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