



# A Training Module on Cancer Awareness for Prevention and Early Detection of Oral Cavity Cancer



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**Tata Memorial Hospital**  
**Department of Preventive Oncology**  
Publication No.1

**Training Module on  
Cancer Awareness for  
Prevention and Early Detection  
of Oral Cavity Cancer**

## DEPARTMENT OF PREVENTIVE ONCOLOGY

It is estimated that there were 11,57,294 new cancer cases, 7,84,821 deaths and 22,58,208 people living with cancer, in India, in 2018, according to GLOBOCAN 2018 data. The five most common cancers affecting the Indian population are breast, lip, oral cavity, uterine cervix, lung and stomach. Cancers of major public health relevance such as breast, lip, oral cavity and uterine cervix contribute to 32.8% of all cancers among Indian population. These cancers can be prevented, screened for and/or detected early and treated at an early stage. This could significantly reduce the death rate from these cancers.

The cancer toll in developing countries, especially India, is due to the fact that over 70% of cases are detected late and report for treatment in very advanced stages. Apart from the pain and misery that cancer inflicts on the patient and his family, the economic impact of this disease is catastrophic. Simple preventive measures and regular screening can bring down these deaths drastically and even have other health benefits. With the principal objective of prevention and early detection of common cancers, the Tata Memorial Hospital set up the Department of Preventive Oncology in March 1993. Ever since, the Department of Preventive Oncology has been raising awareness and concern about cancer and affirming the prevention and curability of cancers, if detected early. As the level of cancer awareness rises, the health seeking behaviour towards early detection will increase and consequently the cancer load in the country will begin to decline.

The Department of Preventive Oncology, Tata Memorial Hospital, Mumbai, is a designated WHO Collaborating Centre for Cancer Prevention, Screening and Early Detection (IND 59), Region SEARO, since 2002. The five main thrust areas of the department are:

- Information, Education and Communication (IEC)
- Clinic and Community-based, Opportunistic-Screening
- Health Manpower Development
- Advocacy, NGO-Training and Networking
- Research

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**Publication No.1**

**2019**

**Tata Memorial Hospital  
Department of Preventive Oncology  
Mumbai-400012, India.**

Published by the Department of Preventive Oncology,  
Tata Memorial Hospital

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Distributed by the Department of Preventive Oncology ([preventive@tmc.gov.in](mailto:preventive@tmc.gov.in))

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## *Preface*

India is in the roll out mode of the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular diseases and Stroke (NPCDCS). Health being a State subject, different States are at various stages of implementation. There are directives to the State Government to roll out the Cancer Control Programme. However, the State Health Services manpower is not trained to implement either cancer awareness or common cancer screening. The Department of Preventive Oncology at the Tata Memorial Hospital is actively engaged in training the health services staff. This booklet will guide the paramedical staff Accredited Social Health Activist (ASHAs), Auxiliary Nurse Midwifery (ANMs), Anganwadi Workers (AWWs), Primary Health Workers (PHWs), Community Health Volunteers (CHVs) and other staff from the government and private sectors about conducting cancer awareness sessions for the prevention and control of Oral Cavity Cancers. Our intent is to translate this booklet in to as many Indian languages, as possible so that it could be widely used.

Dr. Gauravi Mishra & Dr. Sharmila Pimple





## *Acknowledgements*

The authors gratefully acknowledge the following personnel of Preventive Oncology Department, Tata Memorial Hospital for their valuable and tireless contribution in the preparation of this manual:

Dr. Heenakauser Shaikh, Dr. Pallavi Uplap and Dr. Sheetal Kulkarni who assisted in editing the various versions of this manual;

Mr. Tushar Jadhav responsible for designing the manual and also the background graphics of the cover page;

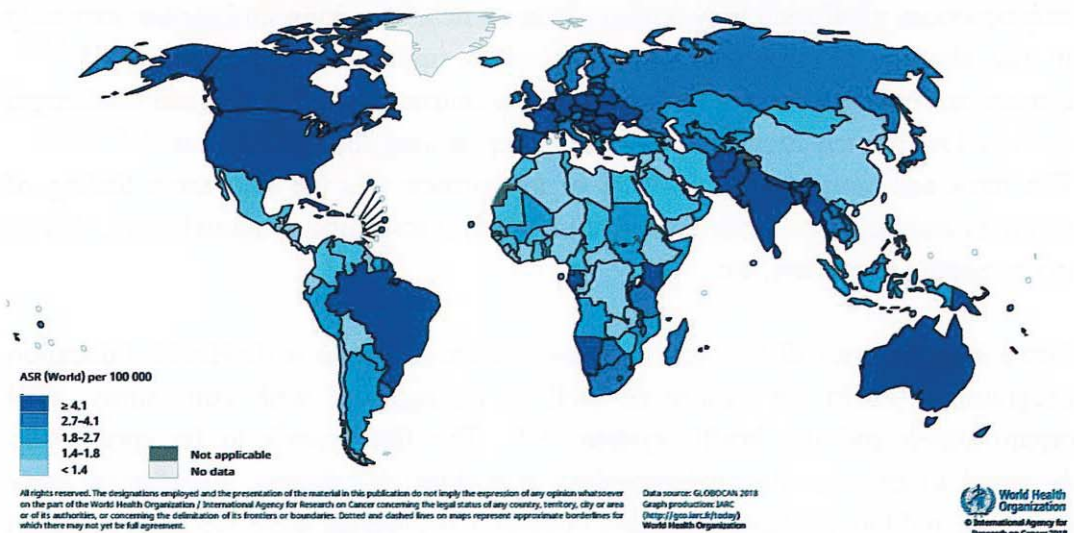
We are extremely grateful to Dr. Shripad Banavali, Director Academics, Tata Memorial Centre for his support and encouragement to bring about this manual.



## Background

Oral cavity cancers account for around 3,50,000 incident cases and 1,77,000 deaths annually, worldwide. Nearly, 80% of these cases are from the South and South East Asian countries. India records the highest cases of oral cavity cancers globally. Oral cavity cancers are the commonest cancers among men in India and rank as the fourth most common cancer among the Indian women. <sup>(1)</sup>

Estimated age-standardized incidence rates (World) in 2018, lip, oral cavity, both sexes, all ages



As per the Global Adult Tobacco Survey (GATS), 2016-17 India survey, 42.4% men, 14.2% women and 28.6% (266.8 million) adults currently use tobacco in some form. Smokeless tobacco use is very common in South Asia. This is because of the easy availability of tobacco and lack of effective tobacco control measures. Tobacco use has been identified as a risk factor for oral cavity cancers.

The five-year relative survival of oral cavity and pharynx cancer patients is 62%, based on SEER 18 2003-2009 data. <sup>(2)</sup> The proportion of oral cancer cases diagnosed at an early and localised stage is still less than fifty percent. Evidence suggests that this is in part due to poor public awareness of the disease itself and the associated signs and symptoms of oral cancer and premalignant lesions. This lack of awareness and information could result in the incapacity of patients with oral cancer to seek appropriate treatment. <sup>(3)</sup> Lack of awareness is also a major predictor for lack of willingness for cancer screening as demonstrated by studies from various developing countries. <sup>(4,5)</sup> Poor awareness of symptoms and the consequences of disease may lead to delayed health seeking and higher mortality in the absence of proactive interventions to improve early detection. <sup>(6,7,8,9)</sup> Cancer screening programs in developing countries identified various challenges such as low participation and poor follow-up among the participants. <sup>(10, 11,12)</sup> The most common reasons for lack of acceptance was the subjective feeling of wellness and hence no perceived need to undergo screening, personal work, fear of the screening procedure, etc.

There is an urgent call for more effective nation and state wide Health Education Programme (HEP) for cancer as well as engagement with community level organizations and the health system. <sup>(13)</sup> The HEP needs to be specifically designed to enhance the understanding regarding risk factors, benefits of early detection and the available treatment options. Considering these we have prepared Health Education Module for Oral Cavity Cancer.

## **Introduction to Health Education**

### **What is Health Education?**

Health education is any combination of learning experiences designed to help individuals and communities improve their health, by increasing their knowledge or influencing their attitudes.<sup>(14)</sup>

### **Where Health Education should be given?**<sup>(15)</sup>

Health Education locations are not limited to just health centres, existing clinics, outpatient departments or hospitals but every encounter between the Health personnel and community is an opportunity for delivering Health Education and educating the people. Opportunities for Health education may be provided in those places where people come together like, community centre, religious places, shops, clubs, youth groups, ladies club etc.

### **Whom should we consider to deliver Health Education?**<sup>(15)</sup>

Even though doctors and medical assistants have large burden of clinical work, they should consider health education as an essential role. They should take lead in Health Education and train paramedical staff to deliver organized health education. Every paramedical staff should be trained in delivering health awareness on different aspects and thus educate the community e.g. ANMs, ASHA, youth workers, and teachers etc. Elders in the village, religious leaders, family physicians and political leaders have influence in the community. The trained Health workers should ensure their support in the HEP.

## **Principles of effective health education: (15)**

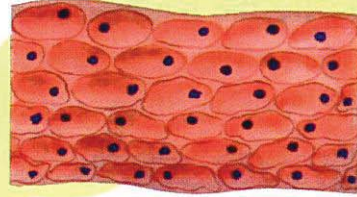
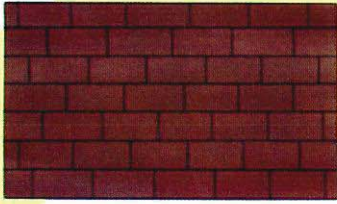
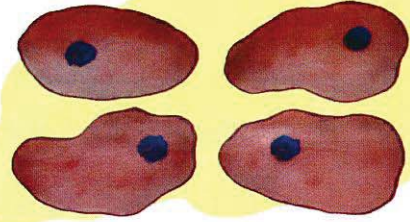
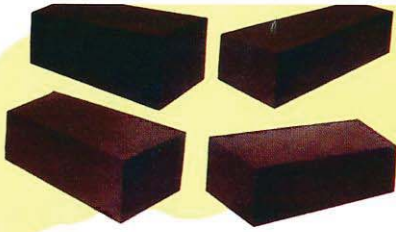
1. Aimed at people who have influence in the community.
2. Repetitive and reinforced by using effective methods depending upon the population or community
3. Adaptable and by different channels of communication like songs, drama, and storytelling.
4. The effective Health education should be engaging to attract the community's attention.
5. By using easy, understandable and local language of community.
6. HEP should be interactive. Sufficient time should be given for discussion and feedback on understanding.
7. Advisable to give in small groups so that people will not hesitate to ask queries.

## What is Cancer?

*Let us first understand what CANCER is!*

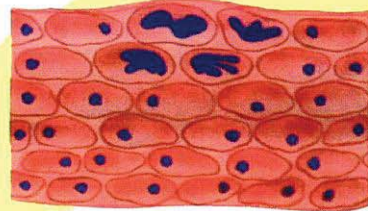
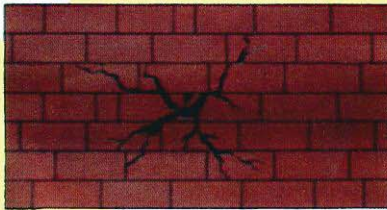
Just as a wall of a building is made of several bricks, our body is made up of cells. Even if one brick of the wall develops a crack through it, eventually the building is damaged. Similarly, even if one cell of the body grows out of control it may cause cancer. If the repairs of the wall are not done on time, entire building collapses. Similarly if cancer is not detected and treated at an early stage, it advances and thereby causes death of the person.





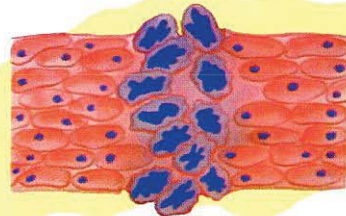
**WALLS ARE MADE OF BRICKS**

**ORGANS ARE MADE OF CELLS**



**CRACK THROUGH ONE BRICK,  
THE WALL IS DAMAGED**

**ONE CELL GROWS ABNORMALLY  
WHOLE HUMAN BODY IS DAMAGED**

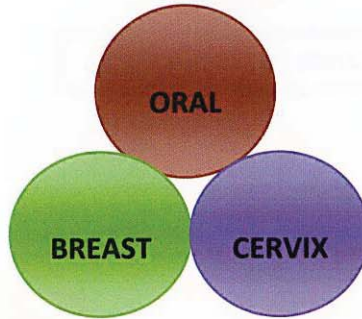


**BUILDING COLLAPSES EVEN WHEN  
ONE WALL GETS DAMAGED**

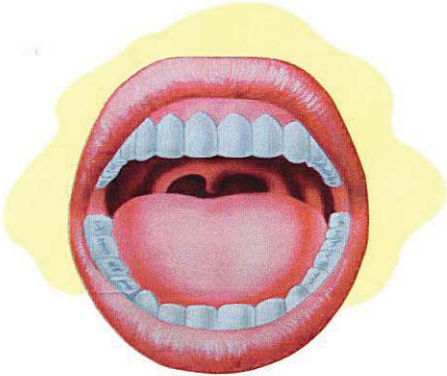
**PERSON MAY DIE EVEN IF ONE  
CELL OF ANY ORGAN IS DAMAGED**

## Can Cancer be Treated?

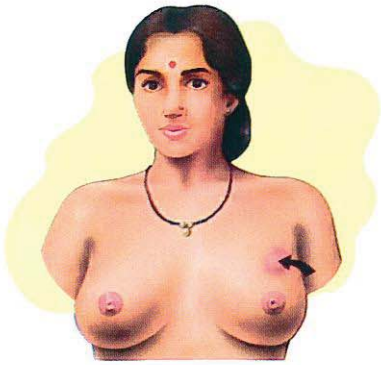
Most of us may think that cancer cannot be treated. But the fact is that cancer can be treated. But **WHICH?** And **WHEN?**



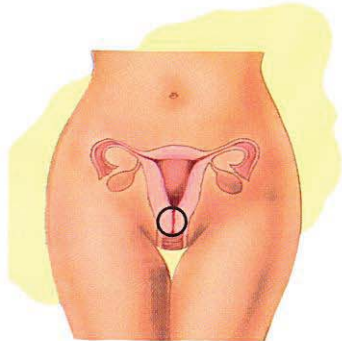
**Yes**, cancers of the Oral cavity, breast and uterine cervix are very common among the Indian population and can be treated if detected at early stages.



**CANCER OF THE MOUTH**



**CANCER OF THE BREAST**



**CANCER OF THE CERVIX**

## Introduction to Oral Cavity Cancers

Oral cavity cancers are part of the Head and neck cancers. The head and neck cancers can be further categorized by the area of the head or neck in which they begin .

**Oral cavity:** Includes the lips, the front two-thirds of the tongue, the gums, the lining inside the cheeks and lips, the floor (bottom) of the mouth under the tongue, the hard palate (bony top of the mouth), and the small area of the gum behind the wisdom teeth.

**Pharynx:** The pharynx (throat) is a hollow tube about 5 inches long that starts behind the nose and leads to the esophagus. It has three parts: the **nasopharynx** (the upper part of the pharynx, behind the nose); the **oropharynx** (the middle part of the pharynx, including the soft palate [the back of the mouth], the base of the tongue, and the tonsils the **hypopharynx** (the lower part of the pharynx).

**Larynx:** The larynx, also called the voicebox, is a short passageway formed by cartilage just below the pharynx in the neck.

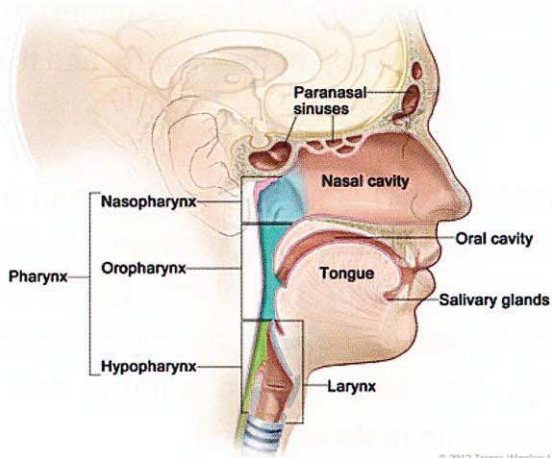
**Paranasal sinuses and nasal cavity:** The paranasal sinuses are small hollow spaces in the bones of the head surrounding the nose. The nasal cavity is the hollow space inside the nose.

**Salivary glands:** The major salivary glands are in the floor of the mouth and near the jawbone. The salivary glands produce saliva.

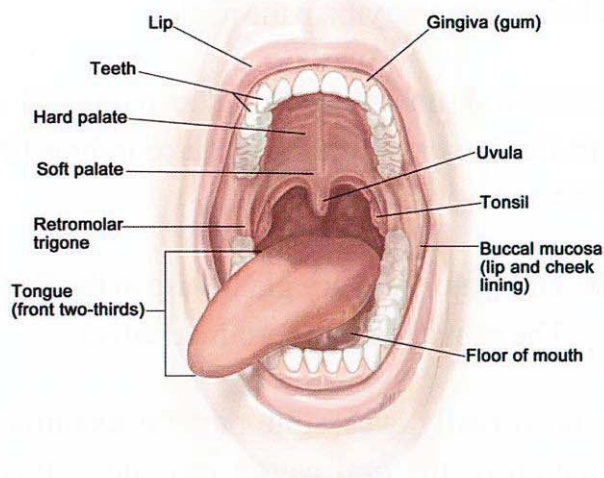
The oral cavity is an easily accessible part for examination. A thorough physical examination of the oral cavity provides valuable insight into a person's overall health in general and their oral health in particular. The

assessment of oral health is complete only after an extraoral head and neck physical examination. Often in routine clinical practice, examination of the oral cavity receives minimal attention. Careful history (indicating trauma, infection etc.), clinical examination and histopathology findings from the biopsy acquired material can lead to the early diagnosis of a vast majority of oral lesions. (17)

Head and Neck Cancer Regions (16)



Anatomy of the Oral Cavity



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## Risk factors for Oral Cavity Cancer

### *What is risk factor?*

A risk factor is any attribute, characteristic or exposure of an individual that increases the likelihood of developing a disease or injury.

### *Risk factor for Oral cancer*

1. Tobacco –

This is the most important Risk Factor.

Any form of tobacco whether in smoking form such as cigarette, beedi, hukka, cigars etc. or consumption in smokeless forms such as khaini, gutka, paan-masala, pan, betel nut, zarda etc. or application forms such as masheri, brushing with tobacco containing tooth paste or tooth powder etc. are all harmful.

2. Taking alcohol of any kind increases the risk of oral cavity cancer.
3. Constant irritation caused by sharp tooth or ill-fitting dentures
4. Poor oral hygiene.
5. Poor, unhealthy diet.
6. Infection with high risk HPV.
7. Supari use. (Betel nuts with or without tobacco).



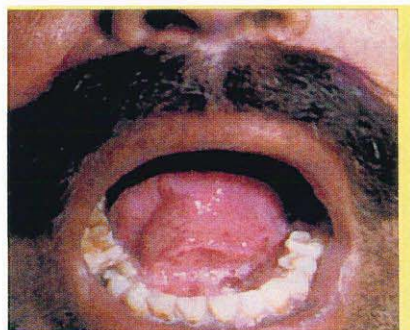
**TOBACCO CONSUMPTION**



**SMOKING**



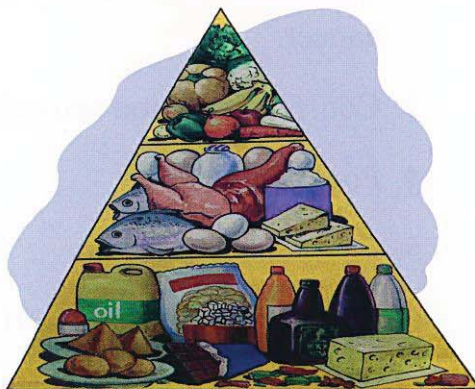
**MASHERI/TOOTH POWDERS  
CONTAINING TOBACCO**



**POOR ORAL HYGIENE**



**ALCOHOL CONSUMPTION & TOBACCO**



**POOR UNHEALTHY DIET**

## Symptoms of Oral Precancers and Cancers

### *What is symptom?*

A symptom is a phenomenon that is experienced by the individual affected by the disease.

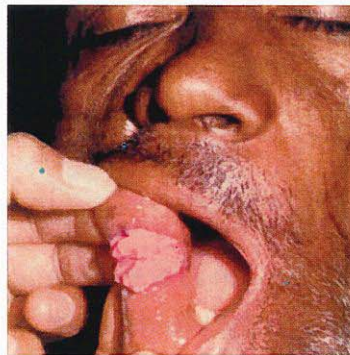
Oral cavity cancer can be detected in precancerous condition if regular screening is done and symptoms are not ignored.

1. Whitish patch that cannot be scraped out also known as leukoplakia.
2. Reddish patches in mouth which do not heal early known as erythroplakia.
3. Inability to open the mouth, difficulty in moving jaws.
4. Recurrent ulcers in the mouth which bleed easily and also pain or numbness in the area of ulcer.
5. Blood in sputum.
6. Difficulty in swallowing solid/ liquid foods.
7. Swelling in neck region/mouth/face etc.
8. Change in voice for more than two weeks.

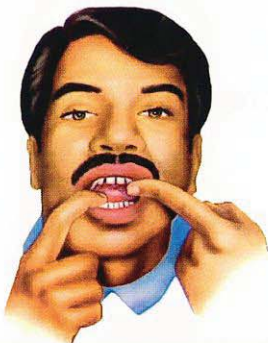




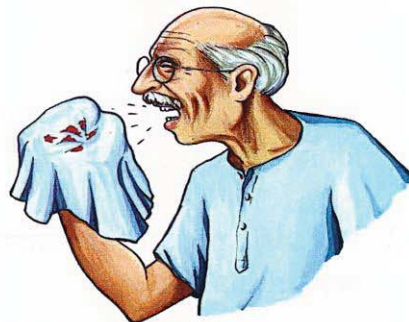
**WHITE PATCH**



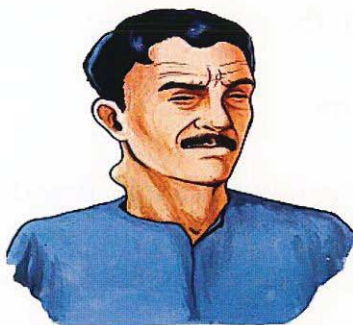
**RED PATCH**



**INABILITY TO OPEN THE MOUTH**



**BLOOD IN SPUTUM**



**SWELLING AT NECK REGION**

## Early Diagnosis of Oral Precancers & Cancers

### What is screening?

Screening is defined by WHO as the presumptive identification of unrecognized disease in an apparently healthy, asymptomatic population by means of tests, examinations or other procedures that can be applied rapidly and easily to the target population.

It is catching illness before it spreads. Regular screenings can precancerous cells. Treatment is easy and the chance of a full recovery is very high.

### 1) Oral Self Examination:-

This can be done by you,

1. Stand in front of the mirror & look for the above mentioned symptoms, regularly. Also check for any swelling in the neck.
2. Tobacco or alcohol consumers may get themselves examined by a doctor at least once a year.
3. If there is any red or white patch in the mouth and if it persists for more than 15 days then consult your doctor & get it treated.

## *Screening at Home: Oral Self Examination*

### *Step One:*

Use your fore finger and thumb to stretch out the inside of right cheek, with a good light illuminating the inside of the mouth, check for white or red patches, sores or swellings.

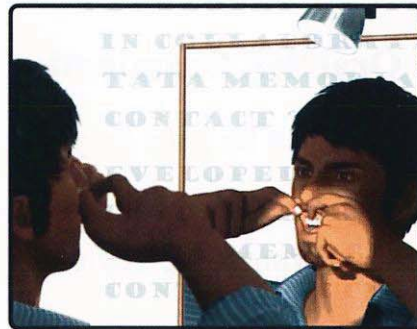


### *Step Two:*

Check the other side of the mouth same way.

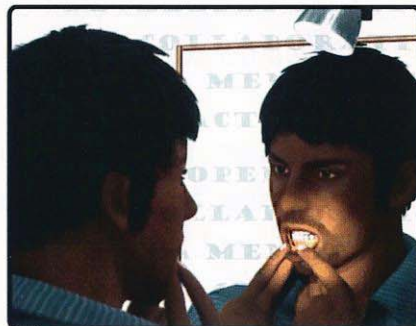
### *Step Three:*

Stretch your upper lip with the thumbs and four fingers of both hands. Check the inner fold of the lip as well as the upper gum, for persistent red or white patch, swellings or sores.



### *Step Four:*

Same as step three for lower lip.



***Step Five:***

Open your mouth as fully as you can. Roll your tongue back as much as possible. With the light illuminating the inside of your mouth, check your mouth for sores or swellings below the tongue.



***Step Six:***

Open your mouth as fully as you can. Push out your tongue as much as possible. With the light illuminating the inside of your mouth, check both the front and back of your tongue for red and white patches sores or swellings.



***Step Seven:***

Open your mouth as fully as you can. Push out your tongue as shown. Check for red or white patches, sores or swellings along the visible sides of your tongue.

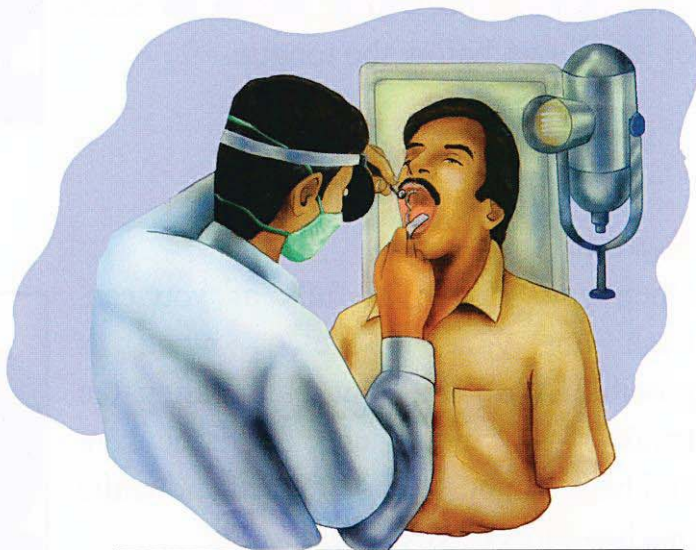


**Step Eight:**

Repeat the examination for the other side of the tongue.

**2) Clinical Oral Visual Inspection:-**

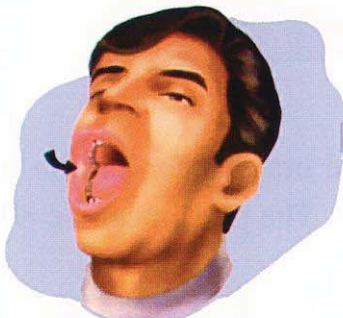
You should get a clinical examination done every two years. There are some examinations that only a doctor or health worker can perform, such as feeling for lymph nodes in your neck.



**EXAMINATION OF MOUTH BY  
A TRAINED DOCTOR**

## Treatment of Oral Cancer

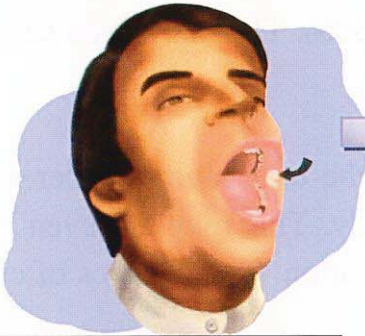
1. If detected in early stages, then the oral cancer can be treated by surgically excising the affected part. The person can be 80% - 95% cured.
2. If neglected in early stages, oral cavity cancer advances. This can be treated by excising large part of the mouth. The chances of the person getting cured may be only 50%. This may even cause some deformity of the mouth.
3. If neglected in the above stages, the oral cavity cancer advances further & spreads in the whole body. This may not even be cured by Surgery, Chemotherapy or Radiation. The chances of cure may be less than 40%.
4. Regular screenings can catch precancerous cells. Treatment is easy and the chance of a full recovery is very high.



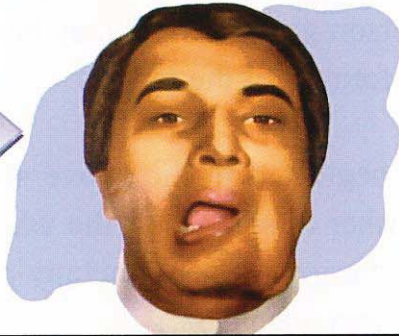
**EARLY STAGES**



**SURGICAL EXCISION OF AFFECTED PART**



**ORAL CANCER ADVANCES**



**EXCISING LARGE PART OF THE MOUTH**



**ORAL CANCER SPREADS OUTSIDE THE MOUTH**



**MINIMAL CHANCES OF CURE BY EITHER SURGERY, CHEMO THERAPY OR RADIATION-TREATMENT IS SUPPORTIVE**

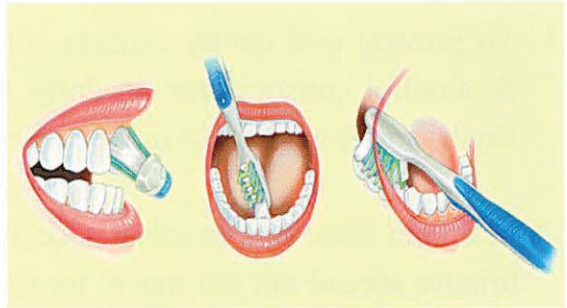
## Prevention of Oral Precancers & Cancers

1. To prevent oral cavity cancers, avoid tobacco supari in any form & alcohol consumption in daily life, those addicted to tobacco supari smoking, should make sincere efforts to refrain from the habit.
2. Maintain good oral hygiene. Use a clean toothbrush. When the bristles spread out too much, try to get a new one. Use a tooth paste that does not contain tobacco. Do not use tobacco, cream or masherī for brushes. Brush twice a day.
3. Tobacco consumers must do regular self examination of the oral cavity. If any suspicious lesion is detected on oral self examination, then doctor has to be consulted.
4. Healthy diet should be maintained. Vegetables, fruits, lentils, beans, chapati, rice should be more in diet. Fish, eggs, milk, curd should be in moderate amounts in diet. Oil, butter, ghee, fried snacks, snacks, sweets; carbonated drinks should kept away from diet.

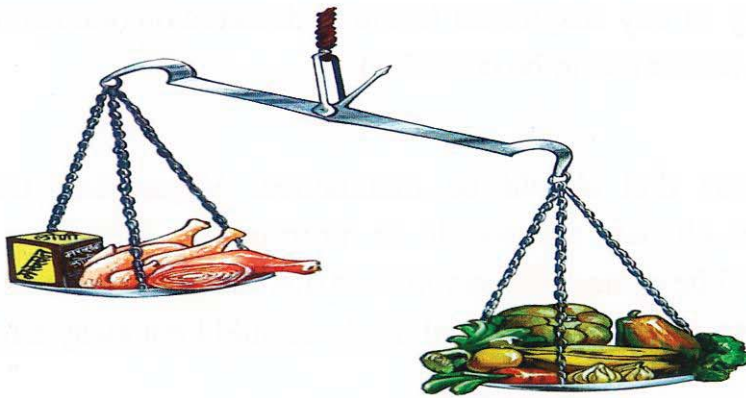




**AVOIDE CONSUMPTION OF TOBACCO AND ALCOHOL**



**ORAL HYGIENE**



**HEALTHY DIET**

## *Conclusion*

As per the Global Adult Tobacco Survey (GATS), 2016-17 India survey, 42.4% men, 14.2% women and 28.6% (266.8 million) adults currently use tobacco in some form. Smokeless tobacco use is extremely common in India both among men as well as women. Lip and oral cavity cancers remain the commonest cancers among men in India. This cancer can be prevented by means of primary prevention by keeping away from tobacco and/ or alcohol consumption. Less than 50% of oral cavity cancers are diagnosed in early and localised stage. However, oral cavity cancers can be detected in pre-cancer and localised stage by regular screening. In this respect, organized health education by trained personnel is vital. Hence, there is an urgent need for training the health personnel in conducting Health Education Programme for oral cavity cancers.

This module includes the risk factors, signs and symptoms, methods of early detection and prevention of oral cavity cancers. Appropriate messaging and educating the community by conducting awareness programme in the locality has a far reaching influence. However, care must be taken that the messages are scientifically correct and not conflicting. Educating the community by trained Health personnel is of prime importance. The purpose of this module is to train medical as well as paramedical staff to conduct a well organised Cancer Awareness Programme on Oral Cavity Cancers. This training module is intended to build capacity of paramedical staff in educating community regarding oral cancers in an organized and standardized way.

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ISBN 9789382963196