



Webinar on the Role of Sugars in Oral and General Health

for Kendriya Vidyalaya Sangathan Trained Graduate School Teachers



Organized By :
Centre for Dental Education and Research
All India Institute of Medical Sciences
New Delhi



Learning Objectives



- Components of food
- Effect of high levels of sugar on general health and oral health
- Process of dental decay
- Prevention from ill effects of high level of sugars



Background



- The National Oral Health Program (NOHP) of Ministry of Health and Family Welfare and Centre for Dental Education and Research, AIIMS New Delhi envisages creation of master trainers for oral health promotion.
- The teachers form the first line of contact with the students and provide a unique opportunity to instill positive health-related behavior in school children.



Previous Collaborations



- Two previous trainings programs have been conducted for training KV school teachers on oral health promotion under NOHP in 2019.
- The previous training programs on oral health promotion for school teachers resulted in numerous oral health related activities in respective KV schools.

Feedback from previous training programs



KV Chandigarh



KV Ludnow



KV Chennai



KV Hyderabad

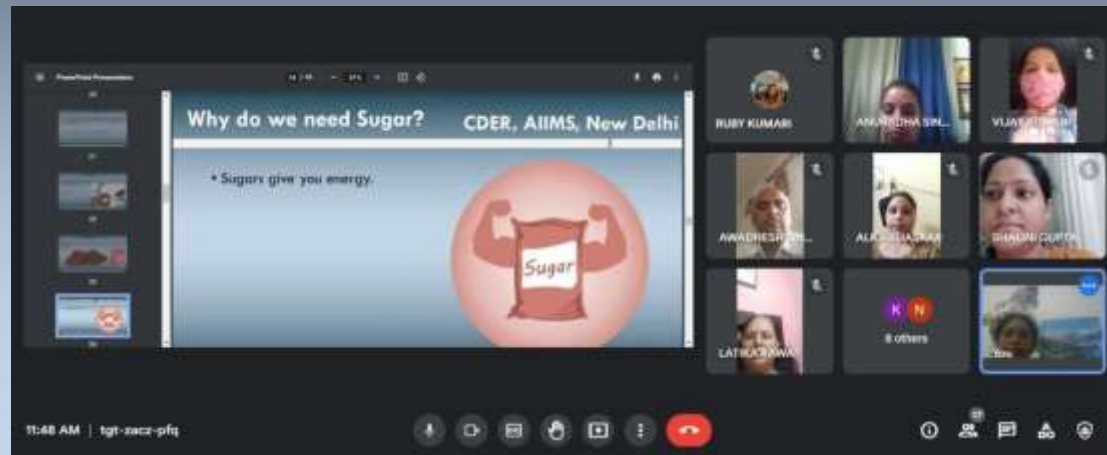


KV New Delhi
Centre for Dental Education and Research, AIIMS, New Delhi



KV Gurugram

Feedback from previous training programs





Why there is a need to understand the role of sugars



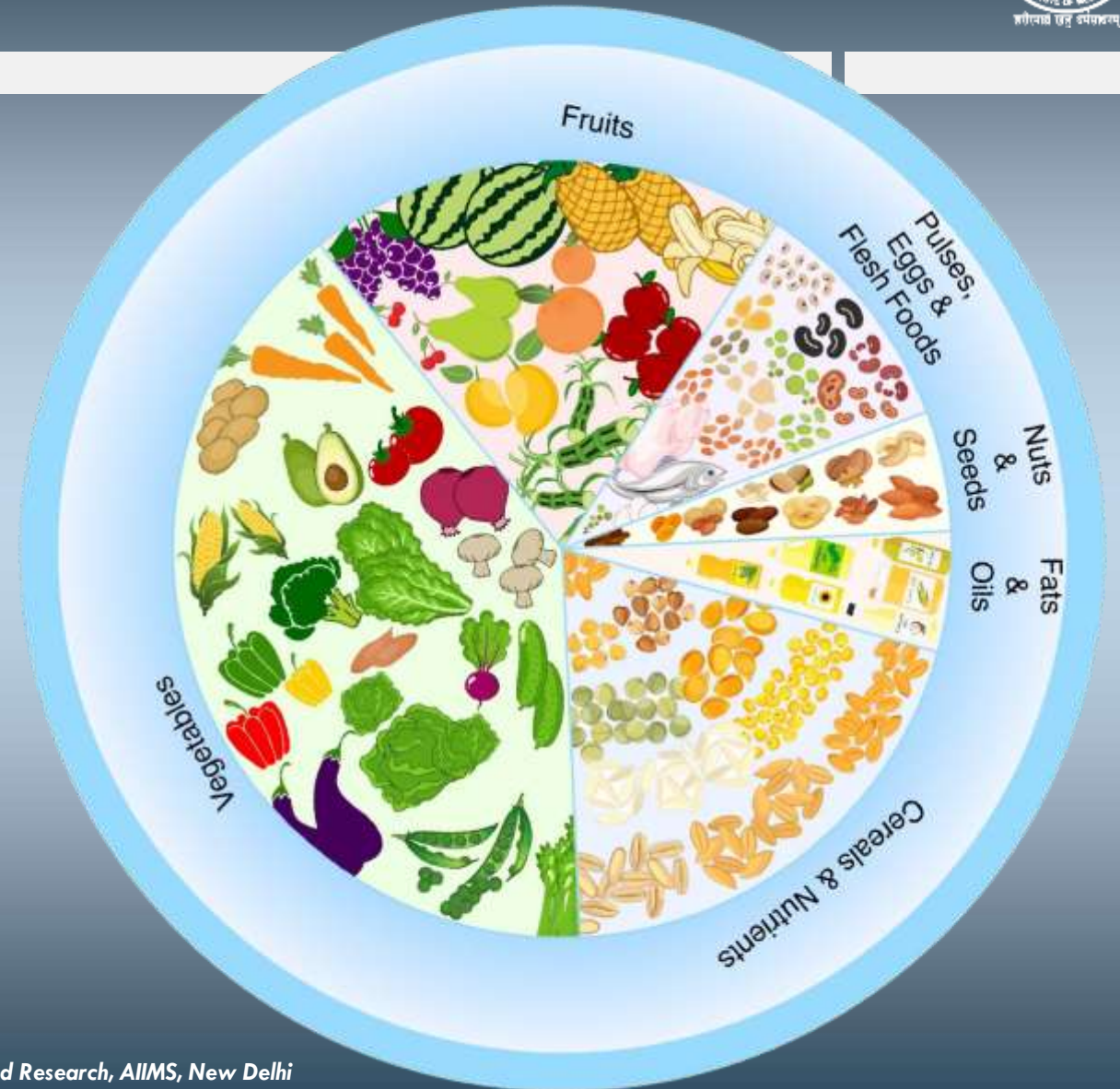
- Sugars are an integral component of our diet and create an impact on overall and oral health.
- Understanding the useful and harmful effects of sugar at a young age can significantly aid in improving the overall quality of life of school children.

- This module is specifically designed to provide information about the role of sugars on overall and oral health.
- The module is in line with the comprehension of the students and follows the existing curriculum of school children.

Carbohydrates: Role in General and Oral Health

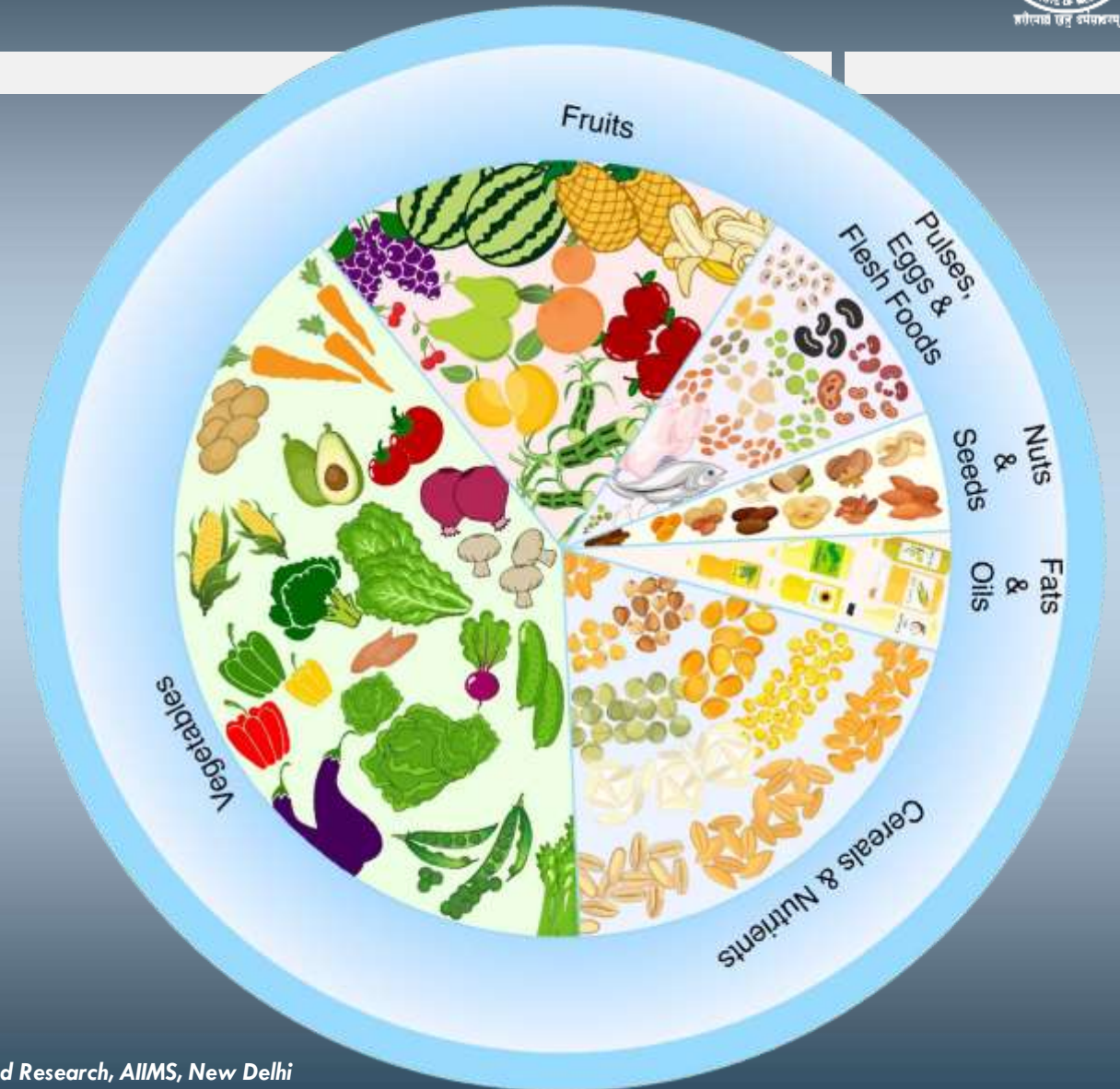
Components of food

- A healthy diet consists of adequate proportion of all the components of food.



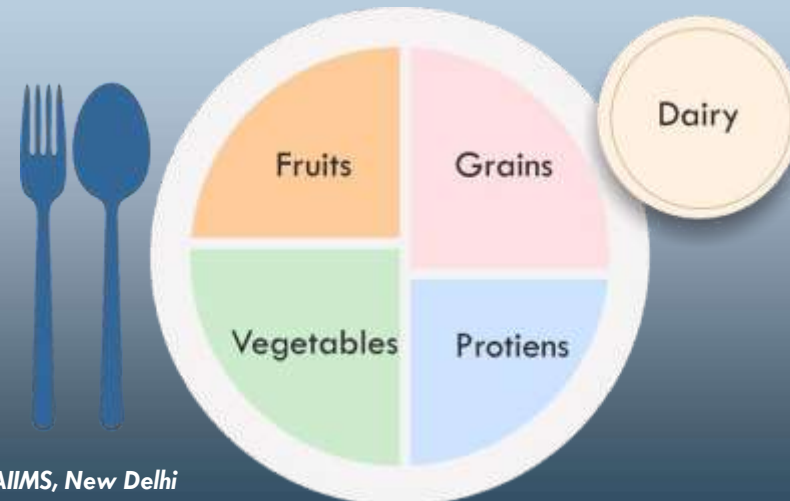
Components of food

- Food provides us with essential materials which are needed for growth and maintenance of body which are called the nutrients.
- Different food items are rich in different kind of nutrients.



Various nutrients required for our food include:

- Carbohydrates
- Proteins
- Vitamins
- Minerals
- Fats
- Dietary Fibers
- Water





Carbohydrates



Energy giving substances.

Example: Sugars and starch.

Sugar is recognized most commonly as a white crystalline substance used as sweetener.

Sugars are mainly divided into two categories:

- I. Simple Sugars : Examples – Glucose, Lactose, Sucrose
- II. Complex Sugars : Examples – Cellulose, Gums



Simple Sugars



- They are a basic form of carbohydrate.
- Belong to two categories:
 - I. Monosaccharide
 - II. Disaccharide
- Saccharides are a group of carbohydrates which belong to starches and sugars.





Simple Sugars



Monosaccharide:

- Ex- Ribose, Glucose, Fructose, Galactose.



Disaccharide:

- Maltose, Lactose, Sucrose.



Source of simple sugar include:

Fruit, milk



Complex Sugars



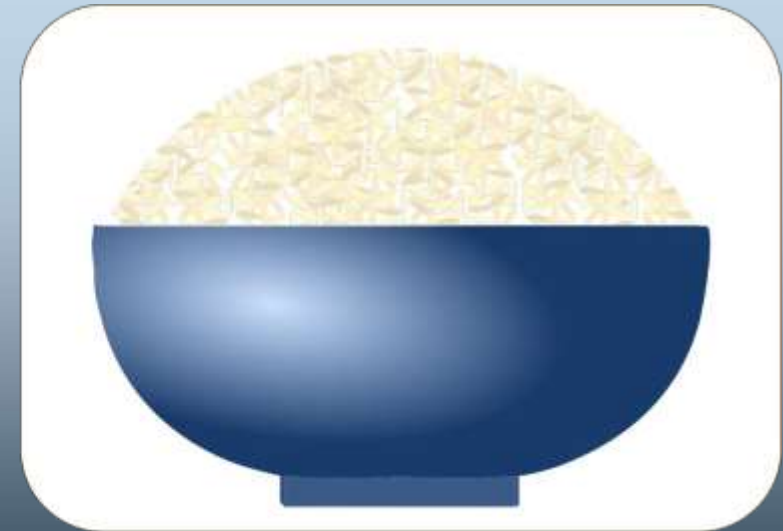
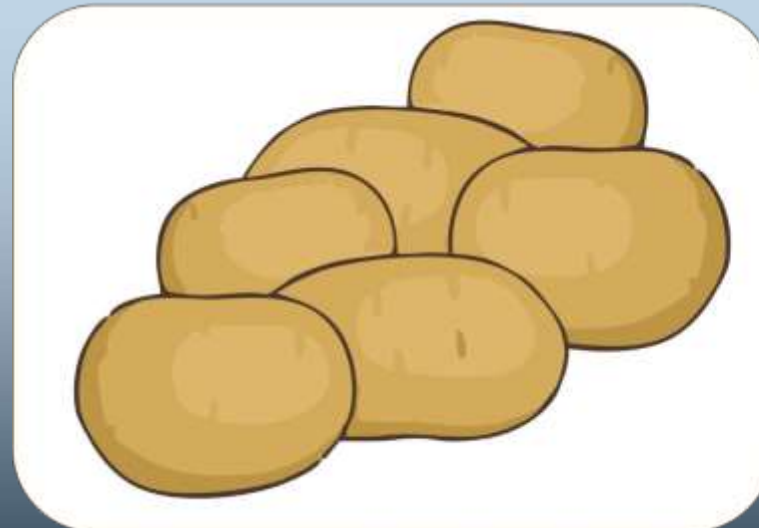
- Complex sugar contains three or more units of sugar.
- They are often referred to as complex carbohydrate.
- They are often divided into two parts:
 - I. Assimilable polysaccharides
 - II. Non assimilable polysaccharides



Assimilable polysaccharides

- It can be readily absorbed by the body and incorporated into body tissues.

Ex: Potatoes, Pasta, Rice.





Non-Assimilable polysaccharides



- They are not readily absorbed by the body and are good for health.
- Non assimilable polysaccharides should be preferably consumed over assimilable polysaccharides.
- Examples: Cellulose, gums and pectin.

Sources: Seeds, Pulses, Green Vegetables.



III effects of excessive sugars on general health

- Obesity- Increased sugar intake and consumption of added sugars has been linked to weight gain.
- Reducing free sugars intake is associated with reduced body weight.



Concept of Free Sugar

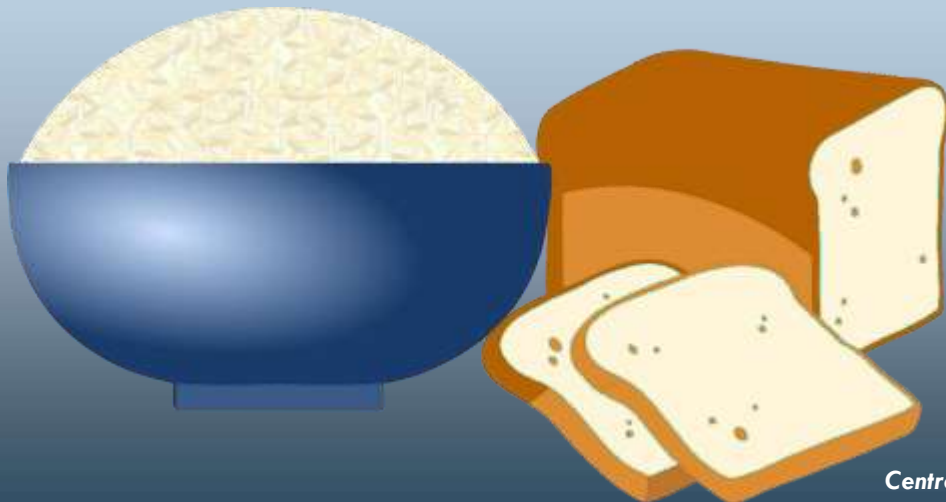
- Free sugars include all monosaccharides and disaccharides added to foods and drinks by the manufacturer, cook or consumer
- Sugars are naturally present in honey, syrups, fruit juices and fruit juice concentrates.



- Free sugars are a crucial in the development of obesity and tooth decay.
- Confectionery, cakes, biscuits, sweetened cereals, sweet desserts, sucrose, honey and preserves are the most common sources of free sugars.



- Sugar-sweetened drinks, including fruit juices and milk-based sweetened drinks, contain free sugars.
- Other foods such as bread, pasta sauce and soups also contain free sugars.



III effects of excessive sugars on general health

Diabetes –

- High amount of sugary foods or drinks are more likely to be at risk of diabetes.
- If you eat more amount of sugar than your body can use for energy, the excess will be stored as fat and increase chances of diabetes



III effects of excessive sugars on general health

Heart Disease-

- People who consume high amounts of sugary food or drinks are more likely to be at risk of heart diseases.
- Sugar sweetened beverages can raise blood pressure and cause liver to dump more harmful fats into blood stream.

Tips to **reduce your risk** for Heart Disease



Maintain a
Healthy Weight



Make Healthy
Food Choices



Stay
Active



Know Your Diabetes ABCs Talk to your health care team about how to manage your A1C, blood pressure, and cholesterol. This will help lower your chances of having a heart attack, a stroke or other diabetes problems

III effects of excessive sugars on general health

Brain:

- High glucose levels cause the brain to atrophy or shrink and can restrict the flow of blood to brain.

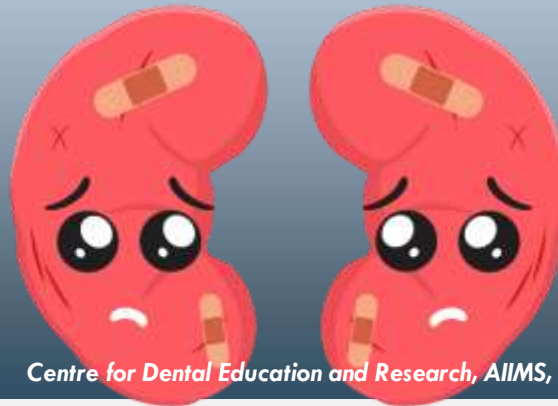


III effects of excessive sugars on general health

Kidneys:

- High level of sugars in blood may also lead to kidney problems.
- Once the blood sugar level gets higher the kidneys start to spill sugar into the urine and more sugar comes out in the urine

Help Us



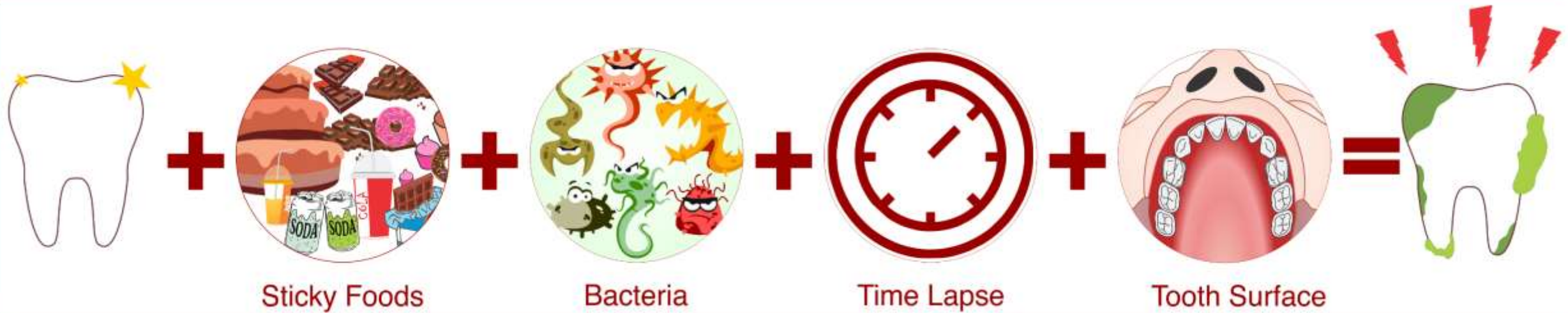


III effects of excessive sugars on general health

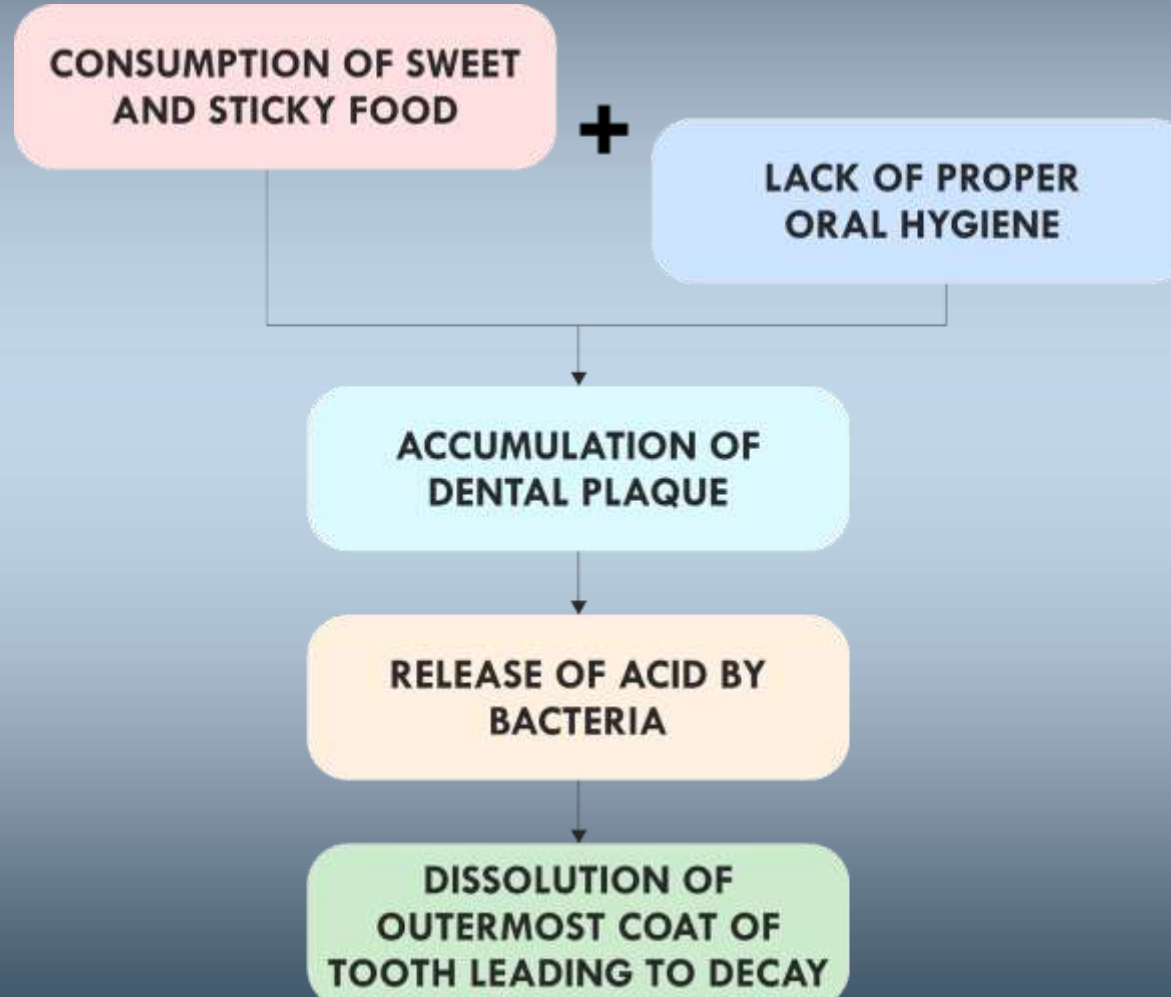


- Intake of free sugars is linked with dental caries.
- Dental caries commonly known as cavities is a frequent cause of absenteeism at work or school.

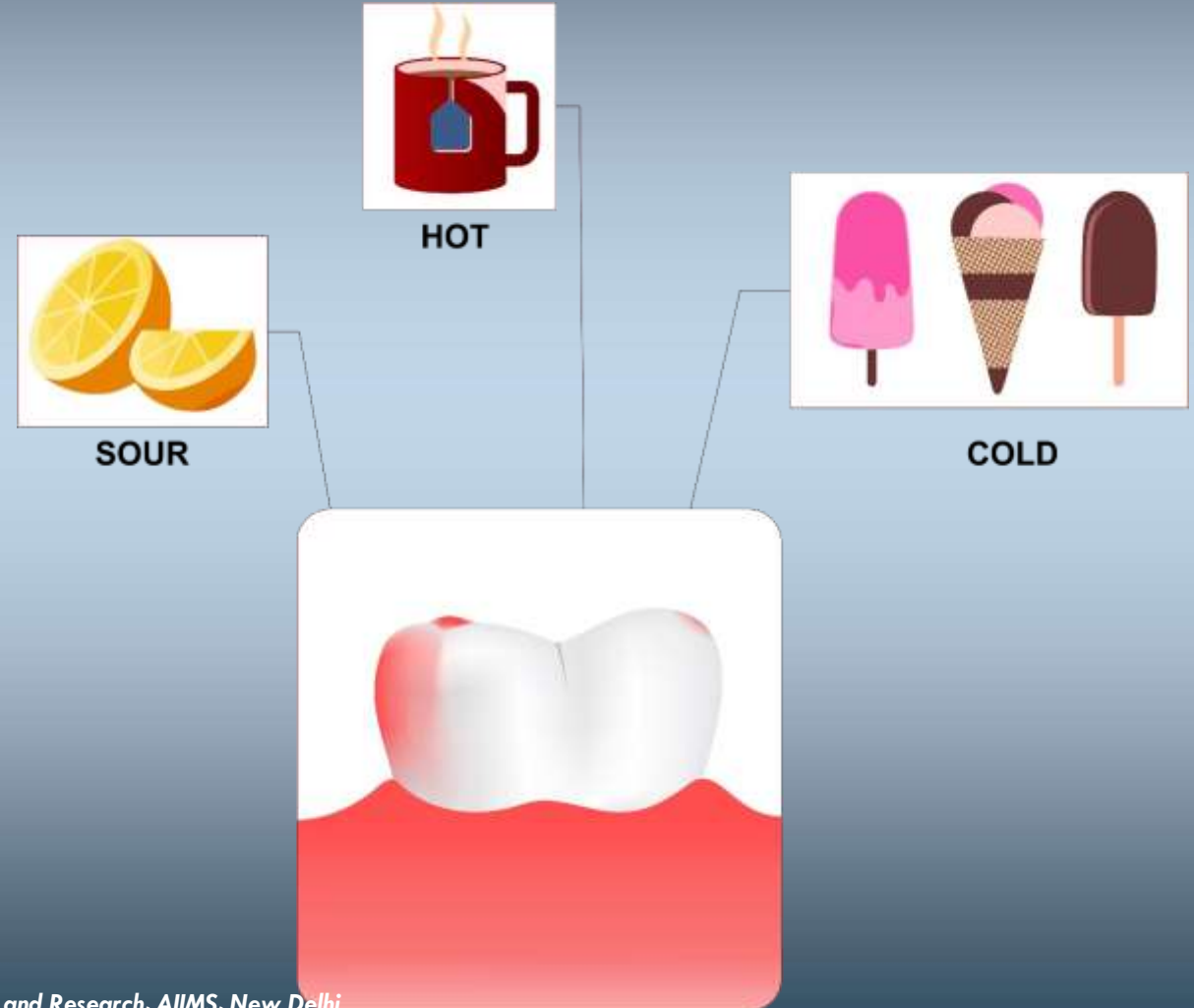
Four factors that interplay in tooth decay



Process of dental decay



- Food lodgement
- Sensitivity on consuming hot/cold food
- Pain on chewing





Symptoms



- Swelling
- Referred pain at other sites like forehead, ear, cheek
- Severe discomfort
- Associated fever on leaving the decay untreated for a long time

Progression of dental decay





Prevention is the key to health



A balanced diet should be recommended at all ages:

- Advise on consumption of raw and fiber rich fruits and vegetables.
- Advise on consumption of limited amount of sugar.



Center for Dental Education and Research, All India Institute of Medical Sciences

Prevention is the key to health

Tips for reducing sugar intake:

- Advise on avoiding frequent snacking between major meals.
- Advise on avoiding sweetened beverages, soft drinks, sticky and sweet food.
- Read food labels, sugar can be hidden on labels.
- Replace sugary drinks with water, plain milk, splash of fruit juice, squeeze of lemon



Prevention of oral health-Tooth brushing

- Tooth brushing has to be done with toothpaste.
- A pea size amount of tooth paste and a soft bristled brush must be used.
- The tooth brush has to be changed once in three months or when it begins to fray.



Pea-size amount of toothpaste
Tooth Brush & Paste



For the outer portion of tooth surfaces, place the toothbrush at a 45 degree angle towards the gum margin



From red to white



Move the brush from up to down for the upper jaw and from down to up for the lower jaw



To clean the inner backtooth surfaces, use gentle down strokes with the tip of the toothbrush

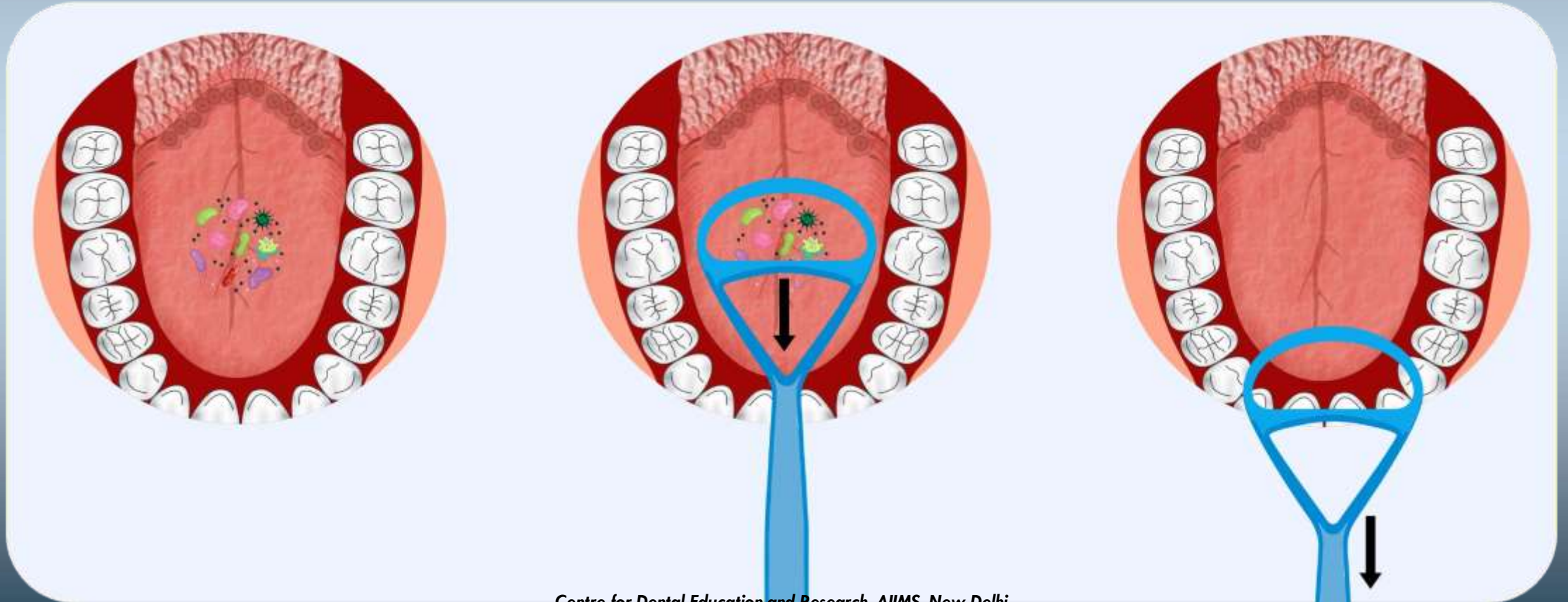


To clean the inner front tooth surfaces, hold the brush upright and use gentle up and down strokes with the tip of the toothbrush



For chewing surface use gentle, short back and forth motion so that teeth are cleaned

- Advise on cleaning the tongue after tooth brushing.



- Advise on rinsing the mouth thoroughly after brushing.
- Mouthwash can be used after consultation with dentist.

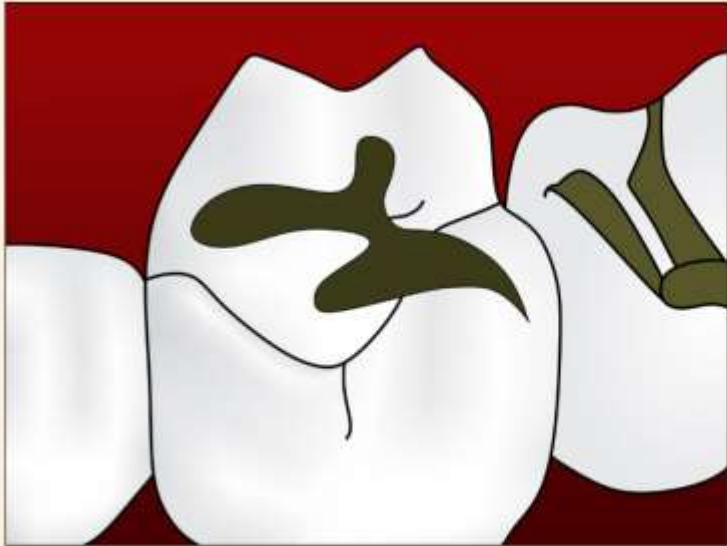


- Visit dentist every 6 months.

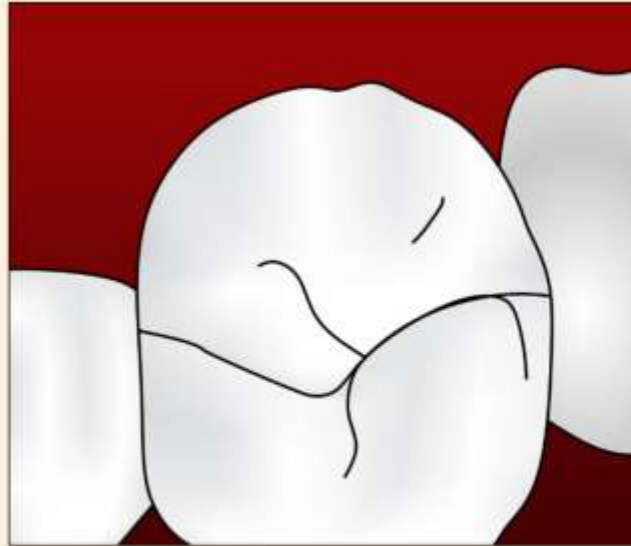


Fillings

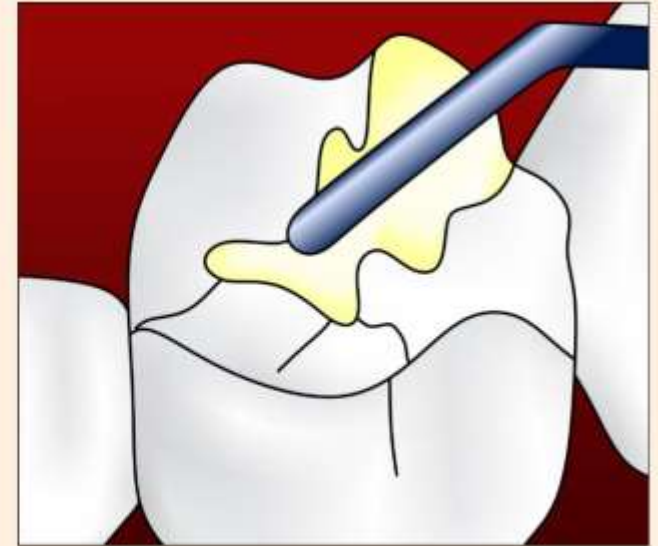
- Fillings are placed on the tooth surface after removal of decay by a dentist



Decayed tooth



Removal of decay



Filling

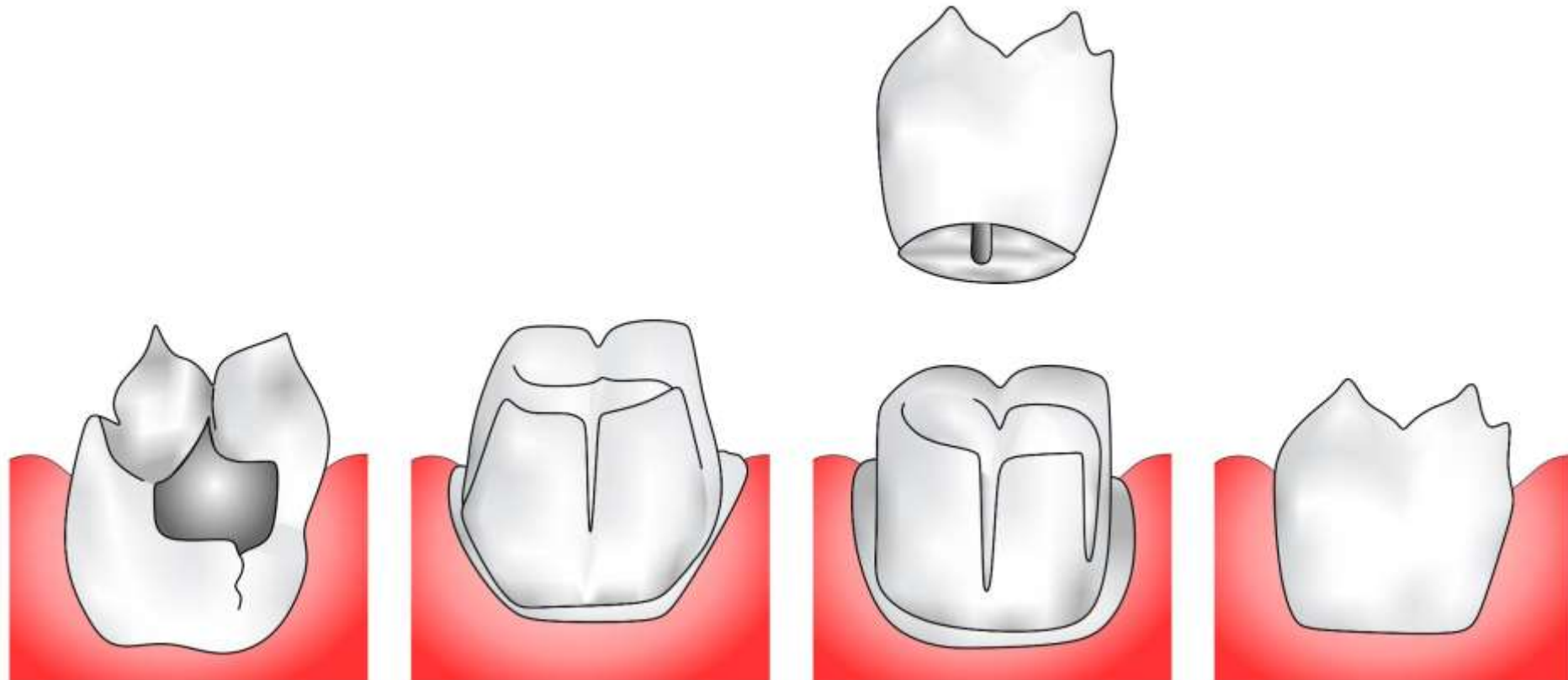


Root Canal Treatment



- When the decay progresses to involve pulp, root canal treatment is done.
- It is a procedure where infected pulp, nerves and vessels of the tooth are removed and a filling material is placed.
- Later, a cap is placed on the tooth.

Placement of a cap





Take Home Messages



- Sugars are not harmful, excessive consumption is !
- Be aware of source of sugar in your diet?
- Keep a watch, how much and how often sugar are we consuming?
- Understand that excess sugar can harm your body.
- Habits are instilled at an early stage, **FORM THIS ONE TODAY!**

Thank You