**Preventive Lec #4**

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***Outline :***

**Classification of non sugar sweeteners.**

**The effect of chewing gum.**

**Prevention of dental caries by diet control**

Everyone loves the sweet taste, but the problem is the caries and calories. So, the (non-sugar sweeteners) with the same sweet taste but reduce the carries effect.

* (non- sweet sugar ) classify in our book according to v.k into two- types:-

1. **Intrinsic**

* No calori
* Not cariogenic no produce acid/ can't be ferment by bacteria at all
* Many types like sucrose
* Many types like sucrose

1. **Extrinsic**

* Provide calori ( not calori free )
* Virtually none cariogenic means the bacteria can ferment the sugar but slowly.
* Partialy absorb by small intestine so you have some pass to colon so you may end by diarria if the intake excess the Recommended so not recommend for child <3yr (because of that you may see it as a warning for this type)

………. Like : sorbitoc / manitoc/ xycitoc/ Lactatoc

Sorbitoc

* In none – sugar sweeteners
* In chewing gum
* Some liquid oral medication to make them more acceptable by the pt.

Manitoc

* In sweets and chewing gum
* Similar properties to sorbitol

Less, bcuze the manufacture like the \_\_\_\_\_\_\_\_\_ so you will see more sorbitol than manitoc.

Xycitoc

* Naturary source like vegetables, corn , fruits, strawberry extracted and used as sweets
* Also produced in small amounts in human body.
* Most commercially available is from corn.
* The gum made of it to prevent the caries.

**Turku Study**

Said that sucrose not the most cariogenic, and classify into groups that each one has one sugar exclusively like fructose, sucrose and group just has Xycitoc . **So, what they found**?

The group that just has Xycitoc has reduction by 85% in the caries and the reason behind that is it's anti-cariogenic behavior of it it's actually affect the ability of bacteria to produce acid , it has effect on the metabolism of the sugar and also the of streptococcus , also the middle ear infection in children.

Sacrin

* Intrinsic sweet
* Discovered accidently in 1878 by two persons and they don't follow the laboratory guidelines and they found that food is sweet so they return the lab to know what's this substance and found that it's sacrin. So discovered by mistake
* 300 x sweaters than suerose
* Can used in tooth paste

Sbartate

* In yogurt
* Can cause problem if take in excess like headache , migraine
* Phenyketenuria pt can't metabocize this sweet

**The role of chewing gum**

* The main role of gum is saliva so caries.
* No dental benefit if use sugar chewing gum.
* Sugariness gum better than sugar gum.
* Belese? Study gives the best for Xycitoc over the rest of sugar in carries because it's Anti cariogenic effect.
* Chewing 5 x / day better than 3 x / day.
* Mixture of Xycitoc + sorbitol < effect than Xycitoc alone
* It has effect on both dentition
* Sugar classified into : 1. Cariogenic

2. None- cariogenic

The problem is when we want to surprise someone or in stress situation we eat sweet food so this the caries risk. This must try to avoid.

* Xycitoc + Intrinsic sweet are non cariogenic
* Chewing gum sweeting with xylito to caries.
* Sugar not impo just in term of caries, it's impo in term of disease like diabetic.

**Prevention of dental caries by diet control-:**The role of diet involves a modification of behavior which is difficult, and the idea is to start earlier, as a child patient.  
Involves a reduction in the non-milk, extrinsic sugars.  
A healthy diet constitutes-:General guidelines for a healthy diet.  
  
- eating a variety of foods.  
- get minerals and nutrients.   
- eating the right amount.  
- get foods plenty in starch and fibers.   
- eating the right amount of fruits and veggies, the recommended amount is 5 servings a day at every meal and between meals.   
- get the right amount of fat not more.   
- don’t have sugary foods and drinks often.   
  
The effect of diet on teeth health arises more importantly when the teeth erupt.   
  
Non-milk extrinsic sugar shouldn't provide more than 10% of the source of energy in the diet which is 60 grams/ day.   
  
an example of 60 grams/ day:   
  
1. Coca-Cola 35grams of sugar.   
2. Kit Kat 29.3grams of sugar.