

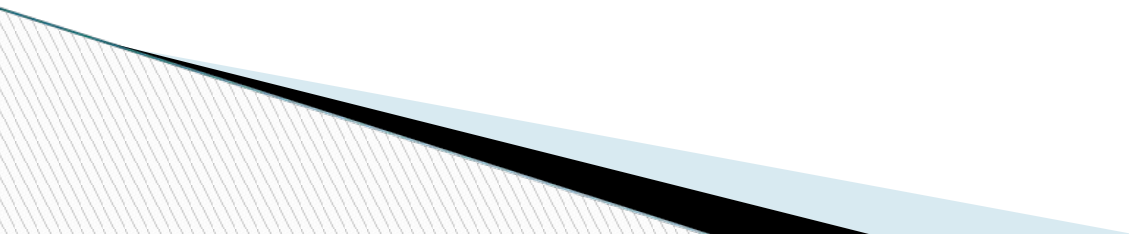
Block 5 DECE-2
Nutrition related disorders in Early
Childhood

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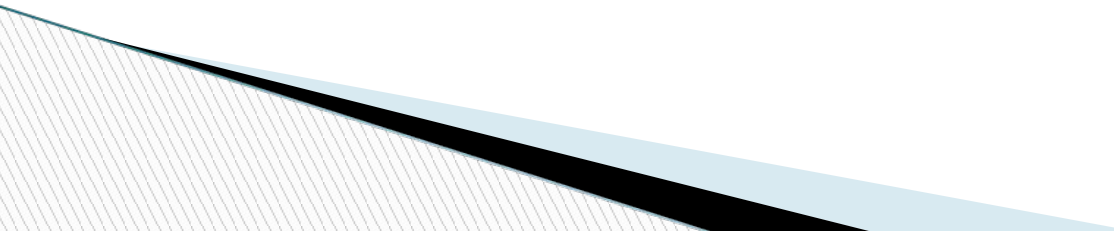


UNIT 17

OTHER NUTRITIONAL PROBLEMS



Objectives

- ❑ **Describe vitamin deficiencies like ariboflavinosis, beriberi, scurvy, rickets**
 - ❑ **Discuss the major features of fluorosis and lathyrism, the two disorders caused by consumption of excessive amounts of a nutrient (fluoride) or a toxin, and**
 - ❑ **Enumerate the measures taken to treat and prevent these disorders.**
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B-Complex Deficiencies

▣ ARIBOFLAVINOSIS (RIBOFLAVIN DEFICIENCY)

CLINICAL FEATURES:

- 1) Angular stomatitis: cracks on both sides of the mouth.**
- 2) Glossitis: common among women during pregnancy. The tongue becomes raw and red.**
- 3) Ceilosis: The lips develop cracks and become red. The subject may lose appetite.**

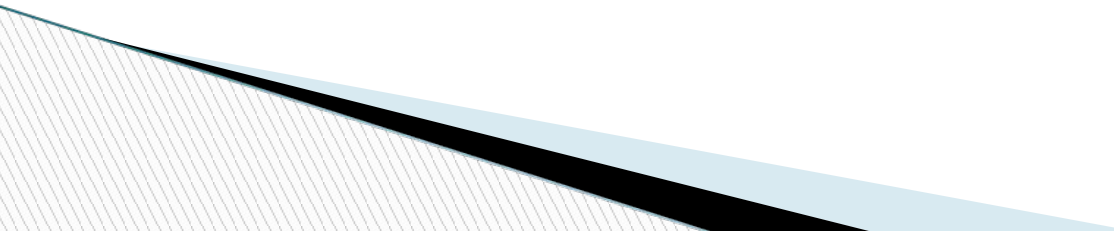
▣ CAUSES: Dietary inadequacy of riboflavin.

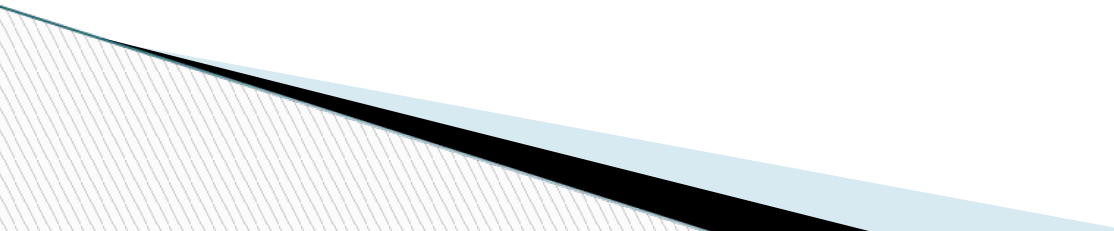
▣ TREATMENT: One tablet of B-complex daily for about one week to ten days.

▣ PREVENTION: Milk, green leafy veg., whole cereals and pulses and nuts are included in the diet.

Pellagra (Niacin Deficiency):

CLINICAL FEATURES:

- 1) **Dermatosis (changes in skin):** The skin of the body parts exposed to the sun like forearms and legs, face and neck, becomes dry and rough.
 - 2) **Diarrhoea, weakness and sometimes fever and vomiting.**
 - 3) **Slight mental changes like irritability, anxiety, forgetfulness and loss of orientation, headache, sleeplessness, tremors of hands and legs and mental depression.**
 - 4) **Glossitis**
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- ❑ **CAUSES:** Pellagra is common in countries where maize is a staple diet as in Mexico. In India, common in places where Jowar is a staple diet.
 - ❑ **TREATMENT:** Nicotinamide, B-complex tablets are also given.
 - ❑ **PREVENTION:** Encourage people to eat mixed cereal diets. Inclusion of pulses, nuts, oilseeds and organ meats in diet helps to prevent Pellagra.
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Beriberi (Thiamine Deficiency)

□ CLINICAL FEATURES:

- 1) **WET BERIBERI:** accumulation of fluid in the body can lead to heart failure. Palpitation and chest pain. Pain in the leg muscles on application of pressure.
 - 2) **DRY BERIBERI:** Weakness in the legs.
- **CAUSES:** common in communities consuming polished rice.
 - **TREATMENT:** Thiamine should be given by injection. Thereafter, thiamine tablets should be given.
 - **PREVENTION:** Hand pounded rice is the best. Richest dietary sources are yeast and bran of wheat and millets.

Vitamin D Deficiency

- ❑ **Vitamin D is essential for the absorption of Calcium and Phosphorus and their deposition in the bones.**
- ❑ **RICKETS: In children.**

CLINICAL FEATURES:

- 1) Children become restless.**
 - 2) Muscles become flabby. Abdomen distended.**
 - 3) Teeth erupt late. Considerable delay in age when the child would sit and crawl. Child too weak and unable to walk.**
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1) Bones become soft and deformed. The growing ends of the long bones get extended and widened.

1) Beading of the ribs.

2) Skull deformation

3) Pigeon chest.

4) Bow legs and knock knees.

5) Deformity of the backbone .

OSTEOMALACIA: adult form of rickets.

CLINICAL FEATURES: Pain in ribs, hip bone, lower back and legs. Muscular weakness and difficulty in climbing stairs. Deformities of back bone.

- ▣ **TREATMENT: Daily treatment of Vitamin D supplemented with calcium for about 4 weeks.**
- ▣ **PREVENTION: Exposure to sunlight. Found in Liver, egg yolk, milk and milk fat and cod-liver oil.**

Vitamin C Deficiency- Scurvy

❑ CLINICAL FEATURES:

- ❑ 1) Spongy bleeding gums. Gums are swollen. Infection of gums.
- ❑ 2) Tiny spots on the skin above the knees and on the lower parts of the thighs due to bleeding.
- ❑ 3) Anaemia
- ❑ 4) Untreated, the deficiency can lead to death due to internal bleeding.

❑ **CAUSES:** consumption of diets which do not contain fresh fruits and vegetables.

❑ **TREATMENT:** Vitamin C tablets should be given. Injections may be given followed by tablets in acute cases.

❑ **PREVENTION:** Amla, guava, citrus fruits, sprouted pulses are good sources of Vitamin C.

Fluorosis

- ▣ **Caused by consumption of excessive amounts of Fluorine.**

CLINICAL FEATURES:

DENTAL FLUOROSIS: teeth lose their shine and chalky white patches appear on them. This is *mottling of teeth*. Then these white patches become yellow. Enamel is eroded and depressions on the teeth- *pitting*.

SKELETAL FLUOROSIS: Pain in the neck and stiffness of the back. Changes in legs “knock knees”.

- ❑ **CAUSES:** Drinking water should contain less than 1 mg per litre of fluoride. The fluoride content of water may be as high as 3-12 mg/litre. Sea foods such as sea fish, tea and cheese are rich in fluorine.
- ❑ **PREVENTION:** Supply water with safe levels of fluoride or defluoridation of water.

LATHYRISM

- ❑ **Disease of nervous system caused by consumption of a pulse, Kesari dal, which contains a toxin, for prolonged periods.**
- ❑ **PREVENTION:** There is no specific treatment for the disease. Banning of crop is the surest way of preventing the disease. Removing the toxin of the pulse by Parboiling or steeping.

Thank You

