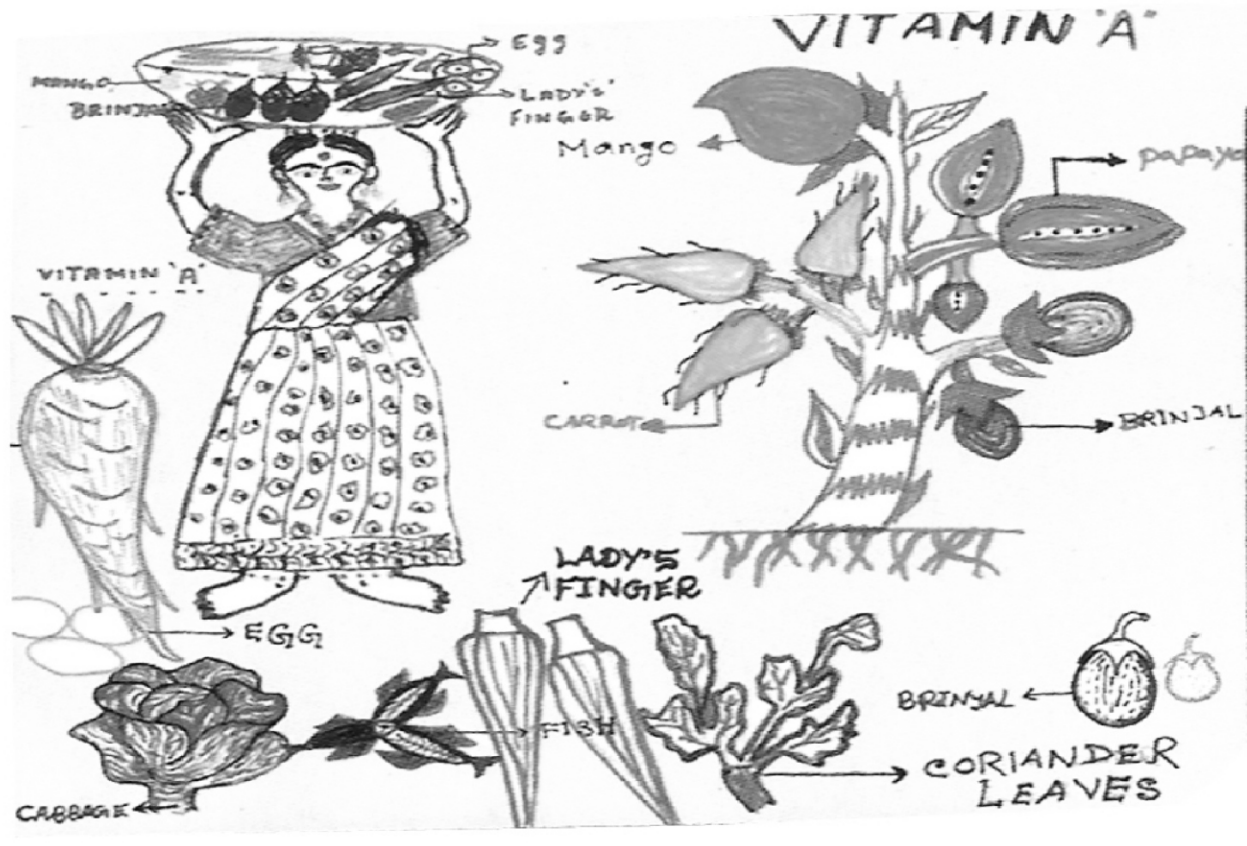


An Information : Vitamin-A

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Vitamins are essential food for the healthy growth of the body. They are required only in very small amounts. There are different types of vitamins like A, B, C, D, E and K and each one has a difference role in keeping the body healthy.

What is Vitamin A?

Vitamin A is a nutrient present on our food.

Vitamin A is very important for normal eyesight especially in the dim light. Over 100 million children in the world suffer from Vitamin A deficiency. Vitamin A is also essential for normal growth of skin, bone, respiratory system, digestive system and urinary system.

What does Vitamin A do?

1. Vitamin A plays an important role in-
 - a. Maintaining normal eye sight, especially in dim light.
 - b. Normal bone growth.
 - c. Healthy cell growth.
2. Vitamin A helps maintain the surface lining of the eyes, respiratory, urinary and intestinal tract.
3. Vitamin A maintains healthy skin and mucous membranes

that function as barrier to bacteria and virus.

4. Vitamin A helps regulate the immune system.

How to recognise the symptoms of lack of Vitamin A in the body?

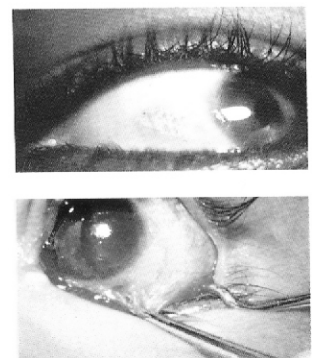
Vitamin A deficiency mainly affects the eyes. It can lead to the following eye problems-

Night blindness- Night blindness is the inability to see when the light is dim.

Bitot's spot- Bitot's spots are triangular pearly-white, foamy spots on the white part of the eye.

Conjunctival Xerosis- Conjunctiva is the transparent covering over the white part covering over the white part of the eye. Vitamin A deficiency makes the conjunctiva look muddy and wrinkled. This is called Conjunctival Xerosis.

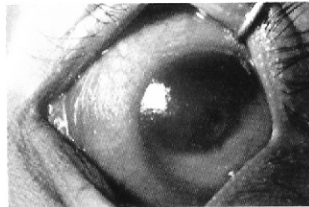
Corneal Xerosis - Cornea is the black part of the



eye. Vitamin A deficiency makes this look dry and dull (Corneal Xerosis). Severe deficiency causes ulcers in the cornea. When the ulcers heal, they form scars on the cornea. These scars on the cornea affect vision.



Keratomalacia - In severe deficiency of Vitamin A, the black part of the eye becomes very soft and the eye may burst open. The eye collapses and the vision is totally lost.



What are the other complications of Vitamin A deficiency?

- Frequent diarrhea and respiratory infections.
- Increases severity and chances of acquiring illness such as measles and malaria.
- Dry goose skin.
- Thick and weak bones.
- Growth retardation.
- Formation of urinary stones.
- Risk of abortions and congenital deformities.
- Supplementing Vitamin A during pregnancy may hinder the transmission of HIV (Human Immune deficiency Virus) from mother to infant.

Who is at risk?

- Children being weaned off breast milk and not given adequate amount of supplementary food (4-6 months)
- Toddlers and Preschool children (1-5 years)
- Children living below the poverty level
- Children with inadequate Health Care
- Children who are not Immunized
- Children who are malnourished
- Children with chronic diarrhea
- Pregnant and Lactating women

How to prevent Vitamin A Deficiency?

- Provide health education to the community about the importance of preventing Vitamin A deficiency.
- Promote exclusive breast-feeding till six months of age because Vitamin A rich foods, by pregnant and lactating mothers and by children under 5 years of age.
- Encourage feeding of locally available Vitamin A rich foods such as sweet potato,



green leafy vegetables and yellow and orange vegetables and fruits like pumpkin, papaya, mango, oranges, etc. along with cereal and pulse (rice/roti and dal) to a weaning child.

- In addition to these if the family can afford, foods like milk, cheese, paneer, dahi (yoghurt), ghee, liver etc. should be given.
- Promote kitchen gardens and growing of Vitamin A rich foods for a regular availability
- Foods should be cooked in a covered vessel on moderate heat. Vitamin A is destroyed when food is cooked on high heat in an open vessel
- Precautions should be taken to reduce frequent and severe occurrence of diarrhea, measles, respiratory infection and malnutrition

What is the supplementary dose of Vitamin A?

Children under 5 years of age are at the highest risk of blindness due to Vitamin A deficiency.



Vitamin A supplementation in the form of syrup, drops or capsules given periodically is effective and safe. When Vitamin A is administered in the right doses there is rarely any complication.

Children 6-11 months	One dose of 100000 IU of Vitamin-A orally*
Children 1-5 years	One dose of 200000 IU of Vitamin A orally every 6 months*

*(source Min. of Health & Family Welfare, Govt. of India)

A child must receive a total of 9 doses of Vitamin A by it's fifth birthday.

Vitamin A solution in India is supplied as a flavoured syrup in 100ml bottles with a concentration of 100 000 IU Vitamin A/ml.

A 2ml spoon is supplied with each bottle for administering syrup.

Vitamin A does not require any special storage measures but should be stored in a cool dark room protected from direct sunlight.

Once the bottle is opened the syrup must be used within 6-8 weeks.

Vitamin A is also supplied in capsules of 100 000 IU. The capsule should be snipped at one end with a pair of scissor and the contents of the capsule should be squeezed gently and completely into the mouth of the child.

What are the sources of Vitamin A?

Plant - Carrots, sweet potato

- Green leafy vegetables
- Yellow and orange fruits and vegetables such as mango, papaya, orange, tomato



Animal - Milk, butter, cheese, paneer, egg, fish, liver, cod liver oil, halibut liver oil

Children above 1 year should have any one of the following every day-

- 1/4 cup of sweet potato (cooked)
- 2 handful (70g) of dark leafy vegetables
- 1 small (100g) mango
- 3/4 cup of tomato
- 1/2 cup of medium sized carrot
- 1/2 cup of pumpkin
- 1/2 cup of papaya

How to treat Vitamin A deficiency

All children showing signs of Vitamin A deficiency must be referred immediately to the nearest Health Center or Hospital for treatment by a qualified doctor.

A Single oral dose of 200 000 IU of Vitamin A (one spoon full/2ml) is given immediately to children with signs of deficiency. This is to be followed by another dose of 200 000 IU of Vitamin a one to four weeks later.

Children suffering from diarrhea, measles and acute respiratory infections should be monitored carefully for any signs of Vitamin A deficiency.

What is fortification?

Adding small amounts of nutrients like Vitamins, Iodine, Iron etc. in foods like oil and salt is called fortification.

Vegetable oils to which Vitamin A is added should be used for cooking.

Eg.: Amul butter, Some brands of Wheat flour etc.

Note: Too much Vitamin A is harmful. Adequate measures need to be taken to ensure the right dose is given to children.

Conclusion

A well balanced diet containing locally available, low cost foods such as spinach, pumpkin, sweet potato, papaya, mango etc, which are rich in Vitamin A is the best and easiest way to prevent Vitamin A deficiency and help children see the wonders of nature.

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