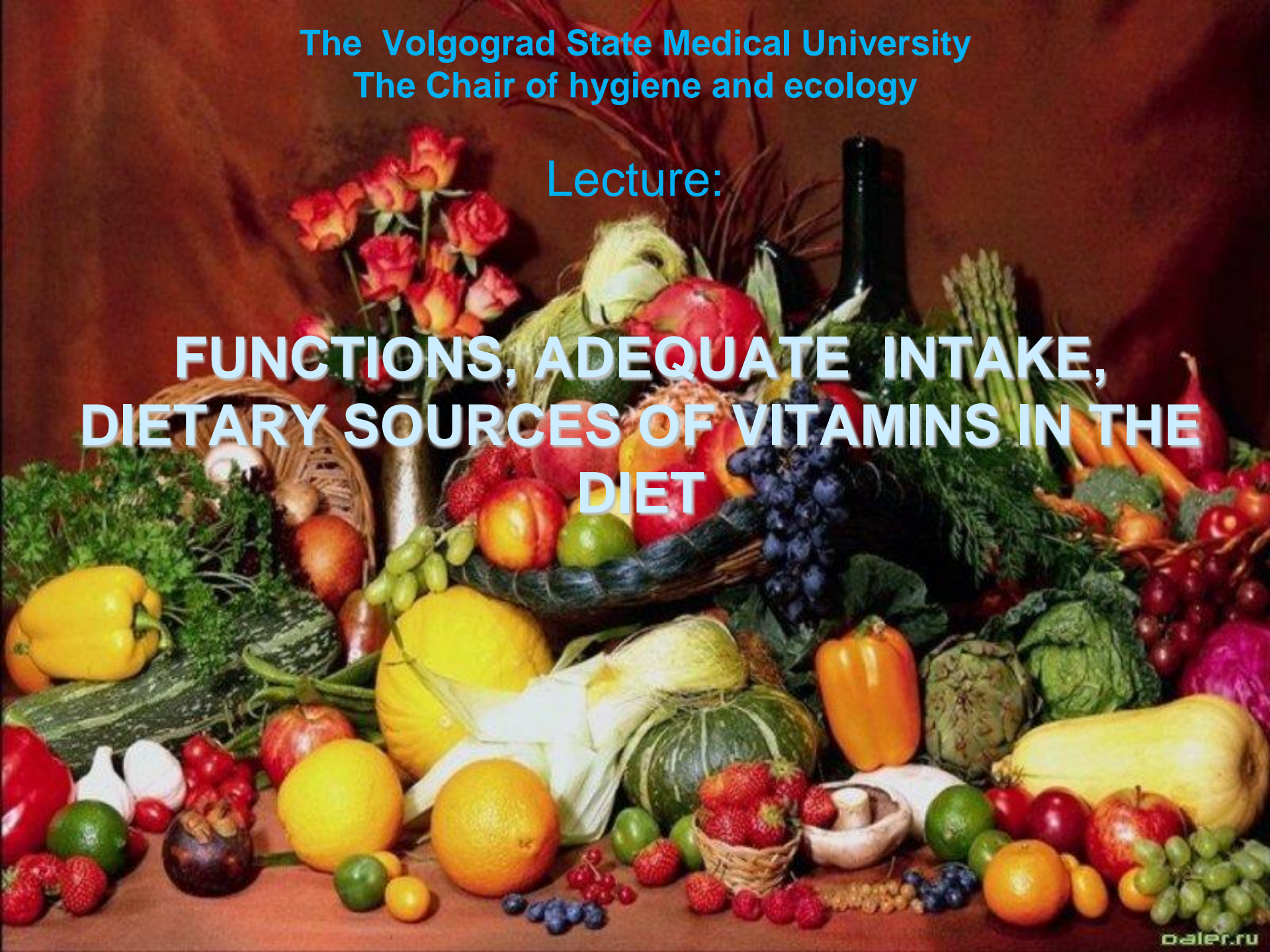


The Volgograd State Medical University
The Chair of hygiene and ecology

Lecture:

**FUNCTIONS, ADEQUATE INTAKE,
DIETARY SOURCES OF VITAMINS IN THE
DIET**



Forms of vitamin deficiency.

Avitaminosis

Hypervitaminosis.

Latent forms of vitamin deficiency

Avitaminosis is an advanced stage of vitamin deficiency caused by long term deprivation of vitamins. Avitaminosis develops certain clinical symptoms which are characteristic of every vitamin deficiency.

Hypervitaminosis is an initial stage of avitominosis. Hypervitaminosis ia caused by under-consumption of vitamins that need to be provided in the diet, during a limited period of time.

Latent forms of vitamin deficiency occur when the body has a steady low supply of the vitamins in the diet. They are considered to be a preclinical stage of vitamin deficiency and are characterized only by biochemical disorders. This deficiency disorder causes reduced ability of the human body to fight against infections and toxic substances, stress, and many other unfavourable factors. Though the period of rehabilitation after getting recovered is prolonged.

Causes of vitamin deficiency

1. Lack of adequate intake of vitamins.

- Monotonous diet with a low content vitamins in daily diet.**
- Reduced amount of the consumed food related to decreased energy expenditure of a modern person.**
- Losses of vitamins in food in refining, processing, and cooking.**
- Affection of antivitamin agents contained in food.**
- Malabsorption. When vitamins are present in foodstuffs in badly absorbed forms.**
- Failure of the correct substance, vitamin or nutrient balance in the human body; failure of the correct chemical composition of the diet.**
- Anorexia**

Causes of vitamin deficiency

- 2. Damage of a healthy intestinal flora, producing a number of vitamins.**
 - Diseases of the gastro-intestinal tract.**
 - Non-rational chemotherapy.**

Causes of vitamin deficiency

3. Failures related to malabsorption of vitamins.

- Failures related to malabsorption of vitamins in the gastrointestinal tract (diseases of the stomach, liver, gallbladder, intestine; congenital defects of the motor and ferment mechanisms of vitamin absorption).
- Most vitamins are utilized or broken down in the human body by intestinal parasites or intestinal microflora.
- Failures related to a healthy metabolism of vitamins and their biologically active forms (hereditary anomalies, acquired diseases, affection of toxic and transmitting agents).
- Failures related to forming the active forms of vitamins (hereditary, acquired).
- Antivitamin affection of drugs and xenobiotics.

Increased vitamin requirements

- 1. Special physiological states (intensive growth, pregnancy, lactation).**
- 2. Environmental factors.**
- 3. Heavy activity (including going in for sports).**
- 4. Nervous, psychological, and stress loads.**
- 5. Infectious diseases and intoxications.**
- 6. Affection of hazardous working environment factors.**
- 7. Visceral diseases and diseases of closed glands.**
- 8. Increased excretion of vitamins.**