INSTRUCTIONS FOR THE STUDENTS
TO THE PRACTICAL CLASSES
FOR 3RD YEAR STUDENTS OF STOMATOLOGICAL FACULTY FOR THE SPRING-SUMMER TERM OF 2016-2017 ACADEMIC YEAR

TOPIC 1
«Dietetic Characteristics Of Milk And Dairy Products»

1. Learning objective

Extend the students' knowledge about dietetic characteristics of milk and dairy products.

2. Basics

2.1. You should know:

2.1.1. Physiological basics of metabolism in the human organism.

2.1.2. Energy metabolism and their regulations. Constituents of the daily energy expenditure.

2.1.3. Rational nutrition as a basis of the sufficient energy supply for the human organism.

2.1.4. Basic function of proteins, fat, carbohydrates, vitamins, minerals.

2.1.5. Dietary nutrition principles of people with different nosological forms of diseases and during the re-habilitation.

2.1.6. To carry out the prophylactic measures concerning the nutrition optimization.

2.2. You should have the following skills:

2.2.1. To monitor the daily activity of the individual or a group with similar daily routine and nutrition. Pay attention to hygienic characteristics and dietary functions of the dairy food.

2.2.2. To use directive, reference materials, formulas, tables, nomograms, perform the necessary calculations analyses.

3. Self-training questions

3.1. Physiological basics of energy and the plasticity of metabolism in organism.

3.2. Physiological significance and main functions of the nutrition.

3.3. Daily energy expenditure of human organism and its main constituents.

3.4. Classification of nutrients and their functions in the organism.

3.5. Method of calculation of the human requirements in nutrients.

3.5. Basic of characteristics of milk and dairy products.

4. Self-training assignments

4.1. Compare of chemical composition of cow and breast milk (kind of proteins; fat, carbohydrates, vitamins, minerals.

4.2. Calculate the caloric value and amount of proteins, calcium and vitamin A obtained from the consumption of:

- 150 g of cottage-cheese;
- 250 ml of milk;
- 20 g of butter;
- 50 g of cheese;
- 200 g of yogurt;

4.3. A 60-year-old man consumes 200g of cheese and 50 g of butter every day. What will the consequences of such day regimen be? What are your recommendations regarding the nutritional regimen?

Literature

1. General Science of Nutrition. Study Guide for the 4th accreditation level Medical School Students /Edited by S.T. Omelchuk, O.V. Kuzminska., K., 2016. P. 145.
2. Rybak O. The Role of Milk Proteins in the Structure Formation of Dairy Products / Olga Rybak. // Ukrainian Food Journal. – 2014. – №3.– C. 360.
3. Alimentary Obesityas Hygienic Problem / L. I.Byrjak, E. N. Belitskaya, S. A. Shchudro, L. V. Grygorenko. – Dnipropetrovsk: "Thresholds", 2012. – 273 c.
4. Hygieneand Ecology / [V. G. Bardov, V. F. Moskalenko, S. T. Omelchuk and authors]. – Kiev: NovaKnyha, 2009. – 685 c.
5. Greenfield H. Food Composition Data Production, Managementand Use / H. Greenfield, D. Southgate. – Rome: FAO, 2003. – 288 c. – (second edition). – (Food and agriculture organization of the United Nations).
6. CINDI. Принципи здорового харчування / CINDI. – Україна, 2001. – 28с.– (Посібник для поліпшення якості роботи).
7. Гігієна харчування з основами нутриціології / [В. І. Ципріян, Т. І. Аністратенко, Т. М. Білко та ін.]. – Київ: Медицина, 2007. – 528 с. – (у двох томах).
8. "Норми фізіологічних потреб населення України в основних харчових речовинах і енергії". (Наказ МОЗ України № 272 від 18.11.99 р.).
9. http://www.fao.org/docrep/018/i3396e/i3396e.pdf.
10. http://www4.ncsu.edu/~adpierce/u03_characteristics_milk.pdf.
11. http://advances.nutrition.org/content/5/2/131.full.
12. https://authority nutrition.com/foods/milk/

Equipment required for the lesson

1. Tables: Physiologicalnormsofnutritionfordifferentageandprofessionalpopulationgroups.
2. Tables of food products chemical composition and energy value (caloric content).
3. Calculators.
4. Self-training tasks, tests for student.

TOPIC 2
«Dietetic Characteristics Of Meat And Meat Products»

1. Learning objective

Extend the students' knowledge about dietetic characteristics of meat and meat products.

2. Basics

2.1. You should know:

2.1.1. Physiological standards of nutrients.

2.1.2. The main physiological and hygienic functions of proteins, fats, vitamins.

2.1.3. Basic functions of proteins, fats, vitamins, minerals. Its of classification.

2.1.4. Basic symptoms of proteins, vitamins, mineral substances deficiency.

2.1.5. Causes of vitamins and minerals deficiency.

2.1.6. Functions of meat and meat products in nutritions.

2.1.7. Dietary functions of meat and meat products.

2.2. You should have the following skills:

2.2.1. To monitor the daily activity of the individual or a group with similar daily routine and nutrition. Pay attention to hygienic characteristics and dietary functions of the meat and meat products.

2.2.2. To use directive, reference materials, formulas, tables, nomograms, perform the necessary analyses.

3. Self-training questions

3.1. Classification of nutrients and their functions in the organism.

3.2. Physiological standards of nutrients.

3.3. Symptoms of proteins, vitamin, mineral substances deficiency.

3.4. Causes of vitamin and mineral deficiency.

3.5. Basic of characteristics of meatand meat products.

3.6. Dietary functions of meat and meat products

4. Self-training assignments

4.1. Calculate the amount of total fats for the 67-year-old person if he eats 250 g of pork's liver and 150 g of pork's kidneys a long time. What will the consequences of such day regimen be? What are your recommendations regarding the nutritional diet?

4.2. Mineral substances deficiency is characterized by such symptoms: tiredness, vertigo, sleepiness, headache, decreased appetite, pale skin, disordered taste sensation. What are your recommendations concerning nutrition in this case?

4.3. A 22-year-old woman has suddenly accepted vegan nutritional patterns. What nutrients will her body lack? What are your recommendations regarding the nutritional regimen?

4.4. Calculate the caloric value and amount of proteins, iron, fats, vitamin B_{12} obtained from the consumption of:

- 200 g of beef;
- 200 ml of fatty pork;
- 200 g of poultry;
- 200 g of chicken (breast cut);
- 200 g of sausage;

4.5. When and why are limited meat products (disease, physiological condition)? Write down.

Literature

1. General Science of Nutrition. Study Guide for the 4th accreditation level Medical School Students /Edited by S.T. Omelchuk, O.V. Kuzminska., K., 2016. P. 145.
2. Rybak O. The Role of Milk Proteins in the Structure Formation of Dairy Products / Olga Rybak. // Ukrainian Food Journal. – 2014. – №3.– C. 360.
3. Alimentary Obesityas Hygienic Problem / L. I.Byrjak, E. N. Belitskaya, S. A. Shchudro, L. V. Grygorenko. – Dnipropetrovsk: "Thresholds", 2012. – 273 c.
4. Hygieneand Ecology / [V. G. Bardov, V. F. Moskalenko, S. T. Omelchuk and authors]. – Kiev: NovaKnyha, 2009. – 685 c.
5. Greenfield H. Food Composition Data Production, Managementand Use / H. Greenfield, D. Southgate. – Rome: FAO, 2003. – 288 c. – (second edition). – (Food and agriculture organization of the United Nations).
6. CINDI. Принципи здорового харчування / CINDI. – Україна, 2001. – 28с.– (Посібник для поліпшення якості роботи).
7. Гігієна харчування з основами нутриціології / [В. І. Ципріян, Т. І. Аністратенко, Т. М. Білко та ін.]. – Київ: Медицина, 2007. – 528 с. – (у двох томах).
8. "Норми фізіологічних потреб населення України в основних харчових речовинах і енергії". (Наказ МОЗ України № 272 від 18.11.99 р.).
9. http://ro.uow.edu.au/cgi/viewcontent.cgi?article=1053&context=hbspapers.

Equipment required for the lesson

1. Tables:
   Physiologicalnormsofnutritionfordifferentageandprofessionalpopulation groups.
2. Tables of food products chemical composition and energy value (caloric content).
3. Calculators.
4. Self-training tasks, tests for student.

TOPIC 3
«Dietetic characteristics of fish and seafood products»

1. Learning objective

Extend the students' knowledge about dietetic characteristics of fish and seafood products.

2. Basics

2.1. You should know:

2.1.1. Physiological standards of nutrients.

2.1.2. The main physiological and hygienic functions of proteins, fats, vitamins, minerals.

2.1.3. Basic symptoms of proteins, vitamins, mineral substances deficiency.

2.1.4. Deficiency of UNFA.

2.1.5. Causes of vitamins and minerals deficiency, deficiency of UNFA.

2.1.6. Functions of fish and seafood products in nutritions.

2.1.7. Dietary functions of fish and seafood products.

2.2. You should have the following skills:

2.2.1. To monitor the daily activity of the individual or a group with similar daily routine and nutrition. Pay attention to hygienic characteristics and dietary functions of the fish and seafood products.

2.2.2. To use directive, reference materials, formulas, tables, nomograms, perform the necessary analyses.

3. Self-training questions

3.1. Classification of nutrients and their functions in the organism.

3.2. Physiological standards of nutrients.

3.3. Symptoms of proteins, fats, vitamins, mineral substances deficiency.

3.4. Causes of vitamins, UNFA and minerals deficiency.

3.5. Basic of characteristics of fish and seafood products.

3.6. Dietary functions of fish and seafood products.

3.7. The basic role of the sea products.

4. Self-training assignments

4.1. Retarded sexual development, personal growth retardation, prolonged wound healing, furuncles, acne. What mineral substance deficiency may lead to these symptoms?

4.2. Calculate the caloric value and amount of fats, iodine obtained from the consumption of:

- 200 g of any fish;
- 50 g of caviar;
- 100 g of laminaria (seaweed);
- 200 g of salmon.

Literature

1. General Science of Nutrition. Study Guide for the 4th accreditation level Medical School Students /Edited by S.T. Omelchuk, O.V. Kuzminska., K., 2016. P. 145.

2. Rybak O. The Role of Milk Proteins in the Structure Formation of Dairy Products / Olga Rybak. // Ukrainian Food Journal. – 2014. – №3.– C. 360.

3. Alimentary Obesityas Hygienic Problem / L. I.Byrjak, E. N. Belitskaya, S. A. Shchudro, L. V. Grygorenko. – Dnipropetrovsk: "Thresholds", 2012. – 273 c.

4. Hygieneand Ecology / [V. G. Bardov, V. F. Moskalenko, S. T. Omelchuk and authors]. – Kiev: NovaKnyha, 2009. – 685 c.

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8. "Норми фізіологічних потреб населення України в основних харчових речовинах і енергії". (Наказ МОЗ України № 272 від 18.11.99 р.).

9. https://authoritynutrition.com/11-health-benefits-of-fish/.

10.http://www.doh.wa.gov/Community and Environment/ Food /Fish /Health Benefits.

11. http://www.fao.org/wairdocs/tan/x5916e/x5916e01.htm.

Equipment required for the lesson

1. Tables:

   Physiologicalnormsofnutritionfordifferentageandprofessionalpopulation groups.

2. Tables of food products chemical composition and energy value (caloric content).

3. Calculators.

4. Self-training tasks, tests for student.

TOPIC 4
«Dietetic characteristics of bread and cereal products. Sweets.»

1. Learning objective

Extend the students knowledge about dietetic characteristics of bread and cereal products.

2. Basics

2.1. You should know:

2.1.1. Physiological standards of nutrients.
2.1.2. The main physiological and hygienic functions of vitamins, minerals.
2.1.3. Basic function of vitamins, minerals. The main of their classifications.
2.1.4. Basic symptoms of vitamins, mineral substances deficiency.
2.1.5. The main sources of carbohydrates.
2.1.6. Dietary fiber, functions of fiber, primary sources.
2.1.7. Classification of vitamins and pseudovitamins.
2.1.8. Functions bread and cereal products nutrition.
2.1.9. Dietary functions of fish and seafood products.

2.2. You should have the following skills:

2.2.1. To monitor the daily activity of the individual or a group with similar daily routine and nutrition. Pay attention to hygienic characteristics and dietary functions of the bread and cereal products.

2.2.2. To use directive, reference materials, formulas, tables, nomograms, perform the necessary calculations (analyses).

3. Self-training questions

3.1. Classification of nutrients and their functions in the organism.
3.2. Physiological standards of nutrients.
3.3. Symptoms of vitamins, mineral substances deficiency.
3.4. Causes of vitamins and minerals deficiency.
3.5. Basic of characteristics of bread and cereal products.
3.6. Dietary functions of bread and cereal products.
3.7. The basic role of the cereal products.
3.8. Problems of overweight.
3.9. Glycaemic index. Determination, importance for the body.
3.10. Dietary and preventive functions of bread and cereal products.

4. Self-training assignments

4.1. Calculate the required amount of total carbohydrate and energy if the person intakes 250g of white bread per day.

4.2. Calculate the caloric value and amount of vitamins B_1, B_2, B_6, PP obtained from the consumption of:

- 100 g of any cereal products;
- 200 g of any bread;
- 50 g of any candy;

4.3. A teenager has consumed 2.5 litres of Coca-Cola, 30 g of raisins and 30 g of dried apricots during the day. Calculate the caloric value of the consumed food and the amount of carbohydrates contained in these foodstuffs.

Literature

1. General Science of Nutrition. Study Guide for the 4th accreditation level Medical School Students /Edited by S.T. Omelchuk, O.V. Kuzminska., K., 2016. P. 145.
2. Rybak O. The Role of Milk Proteins in the Structure Formation of Dairy Products / Olga Rybak. // Ukrainian Food Journal. – 2014. – №3.– C. 360.
3. Alimentary Obesityas Hygienic Problem / L. I.Byrjak, E. N. Belitskaya, S. A. Shchudro, L. V. Grygorenko. – Dnipropetrovsk: "Thresholds", 2012. – 273 c.
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7. Гігієна харчування з основами нутриціології / [В. І. Ципріян, Т. І. Аністратенко, Т. М. Білко та ін.]. – Київ: Медицина, 2007. – 528 с. – (у двох томах).
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9. https://authoritynutrition.com/11-health-benefits-of-fish/.
10. https://www.organicfacts.net/health-benefits/cereal.
11. https://www.betterhealth.vic.gov.au/health/healthyliving/cereals-and-wholegrain-foods.

Equipment required for the lesson

1. Tables:
   Physiologicalnormsofnutritionfordifferentageandprofessionalpopulation groups.
2. Tables of food products chemical composition and energy value (caloric content).
3. Calculators.
4. Self-training tasks, tests for student.

TOPIC 5.
«Dietetic characteristics of vegetables, fruit and berries, nuts.»

1. Learning objective

Extend the students' knowledge about dietetic characteristics of vegetables, fruit and berries, nuts.

3. Basics

3.1. You should know:

3.1.1. Physiological standards of nutrients.

3.1.2. The main physiological and hygienic functions of carbohydrate, vitamins, minerals.

3.1.3. Basic functions of vitamins, minerals, carbohydrate. The main of their classifications.

3.1.4. Antivitamins.

3.1.5. Demineralizing substances.

3.1.6. Causes of vitamins and minerals deficiency.

3.1.7. Functions of vegetables, fruit and berries, nuts nutrition.

3.1.8. Dietary functions of vegetables, fruit and berries, nuts.

3.2. You should have the following skills:

2.2.1. To monitor the daily activity of the individual or a group with similar daily routine and nutrition. Pay attention to hygienic characteristics and dietary functions of the vegetables, fruit and berries, nuts.

2.2.2. To use directive, reference materials, formulas, tables, nomograms, perform the necessary analyses.

3. Self-training questions

3.1. Classification of carbohydrate.
3.2. Classification of vitamins.
3.3. Classification of minerals substances.
3.4. Physiological standards of carbohydrate, vitamins, minerals.
3.5. Symptoms of vitamins, minerals substances deficiency.
3.6. Glycaemic index. Determination, importance for the body.
3.7. Antivitamins and demineralizing substances. Definition and meaning.
3.8. Causes of vitamin and mineral deficiency.
3.9. Basic of characteristics of vegetables, fruit and berries, nuts.
3.10. Dietary functions of vegetables, fruit and berries, nuts.

4. Self-training assignments

1. A 25-year-old woman has suddenly accepted vegan nutritional patterns. What nutrients will her body lack? What are your recommendations regarding the nutritional regimen?
2. What vitamin deficiency is characterized by the following symptoms: gingival bleeding during tooth brushing, pale and dry skin, keratinization of

hair follicles with isolated petechiae, fatigue, increased susceptibility to colds?

3. Calculate the caloric value and amount of vitamin C obtained from the consumption of 150 g of any berries.
4. Analyze the nutrient losses in basic types of heat cooking and recommend the food processing method, aimed to reduce vitamin C, vitamins of group B loss.
5. Calculate the required amount of carbohydrate and energy if the person intakes:
   - 200 g of banana;
   - 300 g of potato;
6. Calculate the required amount of β-carotene:
   - 200 g of pumpkin;
   - 100 g of carrots;
   - 150 g of parsley;
7. Calculate the required amount of vitamin C:
   - 200 g of cherries;
   - 100 g of apricots:
   - 150 g of peaches;

Literature

1. General Science of Nutrition. Study Guide for the 4th accreditation level Medical School Students /Edited by S.T. Omelchuk, O.V. Kuzminska., K., 2016. P. 145.

2. Rybak O. The Role of Milk Proteins in the Structure Formation of Dairy Products / Olga Rybak. // UKRAINIAN FOOD JOURNAL. – 2014. – №3.– C. 360.

3. Alimentary Obesityas Hygienic Problem / L. I.Byrjak, E. N. Belitskaya, S. A. Shchudro, L. V. Grygorenko. – Dnipropetrovsk: "Thresholds", 2012. – 273 с.

4. Hygieneand Ecology / [V. G. Bardov, V. F. Moskalenko, S. T. Omelchuk and authors]. – Kiev: NovaKnyha, 2009. – 685 с.

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7. Гігієна харчування з основами нутриціології / [В. І. Ципріян, Т. І. Аністратенко, Т. М. Білко та ін.]. – Київ: Медицина, 2007. – 528 с. – (у двох томах).

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9. http://livewell.jillianmichaels.com/diet-fruits-vegetables-nuts-5355.

Equipment required for the lesson

1. Tables:
   Physiologicalnormsofnutritionfordifferentageandprofessionalpopulation groups.
2. Tables of food products chemical composition and energy value (caloric content).
3. Calculators.
4. Self-training tasks, tests for student.