



OVQATLANISH FIZIOLOGIYASIDA OZIQLANISH HOLATINI BAHOLASH: AXBOROT QIYMATI VA TAHLILIY IMKONIYATLARNI TAKOMILLASHTIRISH YO‘LLARI

Toshkent turizm va mehmonxona menejmenti texnikumi

“Maxsus fanlar” kafedrasi o‘qituvchisi

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Annotatsiya

Ushbu ilmiy maqolada ovqatlanish fiziologiyasi doirasida insonning oziqlanish holatini baholashda qo‘llaniladigan ko‘rsatkichlar, ularning axborot qiymati hamda tahliliy imkoniyatlarini takomillashtirish masalalari yoritilgan. Antropometrik, biokimyoviy va fiziologik ko‘rsatkichlar asosida ovqatlanish holatini aniqlash usullari tahlil qilingan. Shuningdek, nutrigenomika, raqamli monitoring tizimlari, mobil sog‘liq ilovalari kabi zamonaviy axborot texnologiyalarining ovqatlanish holatini baholashdagi o‘rni ko‘rib chiqiladi. Tadqiqot natijasi sifatida sog‘lom ovqatlanish, kasalliklarning oldini olish va aholi salomatligini yaxshilashda qo‘llanilishi mumkin bo‘lgan amaliy tavsiyalar ishlab chiqilgan.

Kalit so‘zlar: ovqatlanish fiziologiyasi, oziqlanish holati, energiya balansi, biokimyoviy ko‘rsatkichlar, nutrigenomika, metabolizm, sog‘lom ovqatlanish, antropometriya.

Kirish

Ovqatlanish fiziologiyasi organizmning ozuqa moddalariga bo‘lgan ehtiyojini, ularning hazm bo‘lishi va o‘zlashtirilishini o‘rganuvchi fandir. Aholining sog‘lom ovqatlanish darajasini baholashda fiziologik ko‘rsatkichlarning aniqligi juda muhim. Bu jarayon sog‘liqni saqlash, profilaktika va dietologiya sohasida to‘g‘ri qaror qabul qilishga imkon beradi. Bugungi kunda ovqatlanish holatini baholashda



qo'llaniladigan usullar ko'p, biroq ularning informativligi, aniqligi va tahliliy imkoniyatlarini kengaytirish zarurati mavjud. Ayniqsa, raqamli texnologiyalar sharoitida ma'lumotlarni muntazam va real vaqt rejimida kuzatish imkoniyatlari kengayib bormoqda.

Tadqiqot vazifalari. Ushbu ilmiy ishlanma quyidagi vazifalarni o'z ichiga oladi:

1. Oziqlanish holatini belgilovchi fiziologik ko'rsatkichlarning axborot qiymatini aniqlash.
2. Antropometrik o'lchovlar (BMI, BKU nisbati)ni xalqaro standartlar asosida tahlil qilish.
3. Biokimyoviy ko'rsatkichlarni (gemoglobin, glyukoza, vitamin va mineral darajasi) baholash.
4. Energiya balansini aniqlashning zamonaviy usullarini o'rganish.
5. Nutrigenomika va axborot texnologiyalarining ovqatlanish fiziologiyasidagi o'rmini aniqlash.
6. Ovqatlanish holatini aniqlashda qo'llaniladigan ma'lumotlarni tahliliy qayta ishlashning takomillashtirilgan yondashuvlarini ishlab chiqish.

Mavjud muammolar. Amaliyotda ovqatlanish fiziologiyasi bo'yicha quyidagi muammolar kuzatiladi:

- Antropometrik ko'rsatkichlar bo'yicha muntazam monitoring olib borilmasligi.
- Biokimyoviy tahlillarning yetarli o'tkazilmasligi natijasida yashirin oqsillik yetishmovchiligi, vitamin yetishmovchiligi kabi holatlar aniqlanmay qolishi.
- Raqamli ovqatlanish monitoring tizimlaridan kam foydalanilishi.
- Aholining ovqatlanish madaniyatining pastligi.
- Individual ovqatlanish bo'yicha ilmiy asoslangan dasturlarning yetishmasligi.



Takomillashtirish bo'yicha takliflar 1. Antropometrik baholashni kengaytirish. BMI, BKU, tana yog' miqdori, mushak massasi kabi ko'rsatkichlarni o'lchovchi avtomatlashtirilgan qurilmalar joriy etish.

2. Biokimyoviy ko'rsatkichlarni tahlil qilishni kuchaytirish. Gemoglobin, ferritin, D vitamini, lipidlar profili kabi ko'rsatkichlarni muntazam laborator tekshiruvlarga kiritish.

3. Nutrigenomika usullarini qo'llash. Genetik xususiyatlar asosida individual ovqatlanish dasturlari ishlab chiqish.

4. Raqamli texnologiyalarni keng tatbiq etish. Mobil dietologiya ilovalari, AI asosidagi menyu tavsiyalari, elektron sog'liq monitoring tizimlaridan foydalanish.

5. Ta'lim jarayonini kuchaytirish. Aholi va talaba yoshlar uchun sog'lom ovqatlanish bo'yicha treninglar, master-klasslar tashkil qilish. Ushbu tadqiqot natijalariga ko'ra, ovqatlanish fiziologiyasida ma'lumot to'plash va ularni tahlil qilish jarayonini modernizatsiya qilish zarur. Antropometrik va biokimyoviy ko'rsatkichlarning axborot qiymatini oshirish, raqamli texnologiyalarni keng joriy etish, shuningdek nutrigenomik yondashuvlarni qo'llash orqali inson organizmining ovqatlanish holatini aniq baholash va sog'lom ovqatlanish strategiyalarini ishlab chiqish imkoniyati oshadi. Bu esa jamiyat salomatligini yaxshilashning muhim omilidir.

Adabiyotlar

1. WHO. Human Nutrition Report, 2022.
2. FAO/WHO. Food and Human Nutrition Guidelines, 2020.
3. Smolensky M. "Human Metabolism and Nutrition Physiology", 2019.
4. Mamatqulov Sh. "Ovqatlanish fiziologiyasi asoslari", 2022.
5. EFSA. European Food Safety Standards, 2021.



6. NIH. Nutrition and Metabolism Recommendations, 2023.

7. lex.uz – O‘zbekiston Respublikasi sog‘liqni saqlash qonunchiligi.

Talabnoma

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EVALUATION OF NUTRITIONAL STATUS IN NUTRITIONAL PHYSIOLOGY: INFORMATIONAL VALUE AND WAYS TO IMPROVE ANALYTICAL CAPABILITIES

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Abstract

This scientific article discusses the assessment of human nutritional status within the framework of nutritional physiology, analyzing commonly used indicators, their informational value, and analytical potential. The study examines anthropometric, biochemical, and physiological parameters used to identify nutritional status. The role of modern information technologies — including nutrigenomics, digital monitoring systems, and mobile health applications — is also highlighted. Based on the research findings, practical recommendations are



proposed for improving healthy nutrition practices, preventing nutrition-related diseases, and enhancing public health.

Keywords: nutritional physiology, nutritional status, energy balance, biochemical markers, nutrigenomics, metabolism, healthy nutrition, anthropometry.

Abstract

The article examines approaches to assessing human nutritional status within the framework of nutritional physiology and analyzes anthropometric, biochemical, and physiological indicators. The informational value of these parameters and the need to improve analytical methods are highlighted. The study also explores the use of digital technologies, including nutrigenomics, electronic monitoring systems, and mobile applications. Based on the findings, practical recommendations are proposed to enhance nutritional status assessment and improve decision-making in the field of healthy nutrition.

Keywords: nutritional physiology, nutritional status, energy balance, nutrigenomics, biochemistry, anthropometry.

Introduction

Nutritional physiology studies the human body's need for nutrients and the processes of digestion, absorption, and metabolism. Accurate assessment of an individual's nutritional status is essential for decision-making in public health, preventive medicine, and dietetics. Although various methods are used today to evaluate nutritional status, there is a growing need to enhance the informativeness, accuracy, and analytical capacity of these approaches. In the digital era, opportunities for continuous real-time monitoring of health and nutrition are expanding rapidly.

Research Tasks. This study covers the following tasks:

1. Identify the informational value of physiological indicators used in nutritional status assessment.



2. Analyze anthropometric measurements (BMI, WHR, body composition) based on international standards.
3. Evaluate biochemical indicators (hemoglobin, glucose, vitamin and mineral levels).
4. Study modern methods for determining energy balance.
5. Explore the role of nutrigenomics and information technologies in nutritional physiology.
6. Develop improved analytical approaches for processing data related to nutritional status.

Existing Problems. Practical analysis of nutritional physiology reveals the following issues:

- Lack of regular monitoring of anthropometric indicators.
- Insufficient biochemical testing, leading to undetected protein-energy deficiency or hidden micronutrient deficiencies.
- Limited use of digital nutrition monitoring tools.
- Low level of nutritional literacy among the population.
- Lack of scientifically based individualized nutrition programs.

Recommendations for Improvement

1. Expanding anthropometric evaluation. Introduce automated devices measuring:

- BMI
- WHR
- body fat percentage
- muscle mass

2. Strengthening biochemical assessment. Include laboratory testing for:

- hemoglobin and ferritin
- vitamin D
- lipid profile



- glucose

3. Applying nutrigenomic methods. Develop personalized nutrition plans based on genetic characteristics and metabolic predispositions.

4. Increasing the use of digital technologies. Implement:

- mobile diet-analysis applications
- AI-based menu recommendation tools
- electronic health and nutrition monitoring systems

5. Enhancing educational programs. Conduct regular trainings, workshops, and awareness programs on healthy nutrition for youth, students, and the general population.

Conclusion

The findings of this study indicate that modernization of data collection and analytical methods in nutritional physiology is essential. Enhancing the informational value of anthropometric and biochemical indicators, expanding the use of digital technologies, and incorporating nutrigenomic approaches provide more accurate assessment of nutritional status and contribute to effective strategies for improving healthy nutrition. These efforts are crucial for strengthening public health and preventing nutrition-related disorders.

References

1. WHO. Human Nutrition Report, 2022.
2. FAO/WHO. Food and Human Nutrition Guidelines, 2020.
3. Smolensky M. *Human Metabolism and Nutrition Physiology*, 2019.
4. Mamatqulov Sh. *Ovqatlanish fiziologiyasi asoslari*, 2022.
5. EFSA. European Food Safety Standards, 2021.
6. NIH. Nutrition and Metabolism Recommendations, 2023.
7. lex.uz – Legislation of the Republic of Uzbekistan on Public Health.



Application Form

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