

**KEKSA YOSHDA RATSIONNING MIKRO VA MAKRONUTRIENT
TA'MINOTI SALOMATLIK OMILI SIFATIDA**

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Annotatsiya: Ushbu maqolada keksa ayollar salomatligini saqlashda ratsionning mikro- va makronutrientlar bilan ta'minlanishining roli ko'rib chiqilgan. Ta'kidlanishicha, metabolizmning yoshga bog'liq o'zgarishlari, gormonal o'zgarishlar va jismoniy faollikning pasayishi oqsil, kalsiy, D vitamini, temir, folat, magniy va B guruh vitaminlarining yetarli miqdorda qabul qilinishining ahamiyatini oshiradi. Ushbu ozuqa moddalarining yetishmasligi natriyning ortiqcha iste'moli va kaliyning past darajasi bilan birgalikda surunkali yuqumli bo'lmagan kasalliklarning rivojlanish xavfini oshiradi. O'zbekiston sharoitida ratsionning o'ziga xos xususiyatlari - osh tuzini iste'mol qilishning yuqori darajasi, sabzavot va mevalarni cheklangan iste'mol qilish, temir tanqisligi anemiyasi va D vitamini tanqisligining tarqalishi aniqlangan. Ta'kidlanishicha, oziq-ovqat muhitini isloh qilish, mahsulotlarni boyitish dasturlari va ma'rifiy tashabbuslar keksa ayollarning ovqatlanish holatini yaxshilashga qodir. Milliy xususiyatlarni hisobga olgan holda ovqatlanishni optimallashtirish yoshga bog'liq kasalliklarning oldini olish va tuzatishning muhim yo'nalishi hisoblanadi.

Kalit so'zlar: keksa ayollar; nutritiv ta'minlanganlik; oqsil; mikronutrientlar; vitamin D; kalsiy; kaliy; natriy; O'zbekiston; NIK; sarkopeniya; osteoporoz.

Аннотация: В данной аннотации рассматривается роль микро- и макронутриентной обеспеченности рациона в сохранении здоровья пожилых женщин. Подчеркивается, что возрастные изменения метаболизма, гормональные перестройки и снижение физической активности усиливают значимость адекватного поступления белка, кальция, витамина D, железа, фолата, магния и витаминов группы B. Недостаточность этих нутриентов в сочетании с избыточным потреблением натрия и низким уровнем калия повышает риск развития хронических неинфекционных заболеваний. В условиях Узбекистана выявлены особенности рациона — высокий уровень потребления

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соли, ограниченное употребление овощей и фруктов, распространённость железодефицитной анемии и дефицита витамина D. Отмечается, что реформирование пищевой среды, программы обогащения продуктов и просветительские инициативы способны улучшить нутритивный статус пожилых женщин. Оптимизация питания с учётом национальных особенностей представляется важным направлением профилактики и коррекции возраст-ассоциированных заболеваний.

Ключевые слова: пожилые женщины; нутритивная обеспеченность; белок; микронутриенты; витамин D; кальций; калий; натрий; Узбекистан; НИЗ; саркопения; остеопороз.

Abstract: This abstract examines the role of micro- and macronutrient support of the diet in maintaining the health of elderly women. It is emphasized that age-related changes in metabolism, hormonal changes and decreased physical activity increase the importance of adequate intake of protein, calcium, vitamin D, iron, folate, magnesium and B vitamins. Deficiency of these nutrients in combination with excessive sodium intake and low potassium levels increases the risk of developing chronic non-communicable diseases. In the context of Uzbekistan, the following dietary features have been identified: high salt intake, limited consumption of vegetables and fruits, prevalence of iron deficiency anemia and vitamin D deficiency. It is noted that reforming the food environment, food fortification programs and educational initiatives can improve the nutritional status of elderly women. Optimization of nutrition taking into account national characteristics seems to be an important direction for the prevention and correction of age-associated diseases.

Keywords: elderly women; nutritional security; protein; micronutrients; vitamin D; calcium; potassium; sodium; Uzbekistan; NCDs; sarcopenia; osteoporosis.

Kirish

Demografik qarish ≥ 60 yoshdagi odamlarda yurak-qon tomir kasalliklari, diabet, osteoporoz va sarkopeniya ustunlik qiladigan kasalliklar yukini oshiradi [1,2]. Ovqatlanish sifati ushbu xavflarning asosiy o'zgaradigan omilidir. Keksa ayollarda so'rilish va metabolizmning yoshga bog'liq o'zgarishlari, postmenopauzadagi jinsiy gormonal siljishlar va ko'pincha jismoniy faollikning pasayishi kuzatiladi, bu esa cheklangan kaloriyali oqsil va mikronutrientlar bo'yicha ratsion zichligiga bo'lgan talablarni oshiradi [3-6].

O'rta daromadli mamlakatlar, shu jumladan O'zbekiston uchun ovqatlanishning ikki tomonlama yuki - mikronutrientlar tanqisligi va ortiqcha tana vazni/kam vaznlilikning birga kelishi xosdir [7-9]. Sog'lom ovqatlanish siyosati va oziq-ovqat muhitini isloh qilish (tuz, transyog'lar, shakar) JSST/Yevropaning ustuvor yo'nalishlari sifatida tan olingan va O'zbekistonda amalga oshirilmoqda [10]. Shu

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nuqtayi nazardan, keksa yoshdagi ayollar ratsionini ilmiy asoslangan ravishda optimallashtirish juda muhimdir.

Materiallar va usullar (sharh yondashuvi)

Ingliz va rus tilidagi manbalar (2012-2025): JSST, ESPEN, USPSTF, NIH/ODS qo'llanmalari; keksalarning ehtiyojlari bo'yicha tizimli sharhlar va meta-tahlillar; O'zbekiston bo'yicha hisobotlar (JSST/Yevropa, UNICEF, Global Nutrition Report), shuningdek, mikronutriyent yetishmovchiligi va xavf omillari yuki bo'yicha tadqiqotlar o'tkazildi [1-20]. Kiritish mezonlari: keksa yoshdagilar va ayollar populyatsiyasiga mosligi; nutriyentlar va klinik natijalarga e'tibor qaratish; O'zbekiston uchun - rasmiy xalqaro profillar/so'rovnomalar va milliy tashabbuslar. Ma'lumotlar mavzular bo'yicha sintez qilingan: makronutriyentlar; elektrolitlar (Na/K); mikroelementlar va vitaminlar; milliy kontekst va siyosat.

Natijalar

Oqsil. Sog'lom qariyalarda mushak massasi va funksiyasini saqlash uchun $\geq 1,0-1,2$ g/kg/sut, kasalliklarda $1,2-1,5$ g/kg/sut (buyrak funksiyasi bo'yicha individuallashtirish) tavsiya etilgan [4-6,16,20]. Ovqatlanish bo'yicha taqsimlash ($\approx 25-30$ g oqsil/qabul) va mashg'ulotlar bilan birgalikda mushak oqsili sintezini kuchaytiradi [4]. Manbalar: sut mahsulotlari, tuxum, dukkaklilar, yog'siz go'sht/baliq; yetishmaganda - nozik bemorlarda og'iz orqali qabul qilinadigan ozuqaviy aralashmalar (≥ 30 g oqsil/kun) [16].

Yog'lar va uglevodlar. To'yingan yog'larning kamayishi, ularning to'yinmagan yog'lar bilan almashinishi, kletchatkaning ko'payishi (sabzavotlar, mevalar, dukkaklilar, to'liq donli o'simliklar) keksalarda eng yaxshi kardiometabolik natijalar bilan bog'liq; tasodifan tana vaznini yo'qotishning oldini olish uchun energiyaning yetarli bo'lishi muhimdir [16].

Natriy. JSST AB va YUQTK xavfini kamaytirish uchun < 2 g/sut natriy (~ 5 g tuz) tavsiya etadi [11-13]. **Kaliy.** JSST kattalar uchun ovqatdan kuniga ≥ 3510 mg kaliy olishni tavsiya etadi, bu insult va arterial gipertenziya xavfi bilan qarama-qarshi bog'liq [14]. Giperkaliyemiya xavfi bo'lgan keksa ayollarda (surunkali buyrak kasalliklari) monitoring zarur.

Kalsiy va D vitamini. Ovqat bilan yetarli miqdorda kalsiy iste'mol qilish va D vitaminining xavfsiz manbalari suyakning mineral zichligi uchun muhimdir; biroq, jamoada sinishlarning birlamchi oldini olish uchun $Ca \pm D$ kunlik qo'shimchasi ishonchli samaradorlikni ko'rsatmadi va bir qator tavsiyalar yetishmovchilik/ko'rsatmalarsiz universal suplementatsiyadan ogohlantiradi [15,17-19]. D vitamini va kalsiy yetishmovchiligi aniqlanganda, maqsadli korreksiyalash mumkin.

K vitamini, magniy, folat, B guruhi vitaminlari. Ushbu ozuqa moddalarining yetarliligi suyak metabolizmi va gomotsistein almashinuvini qo'llab-quvvatlaydi; folat

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va B12 megaloblastik anemiya va kognitiv pasayishning oldini olish uchun juda muhimdir [3,16].

Temir. Keksa ayollarda temir tanqisligi anemiyasi, ayniqsa gem temirini kam iste'mol qilganda va yondosh oshqozon-ichak kasalliklarida davom etishi mumkin; ko'rsatmalar bo'yicha skrining va tanqislikni korreksiyalash ko'rsatilgan [8,9,15].

Oqsil bilan past ta'minlanganlik va D vitamini yetishmovchiligi mushak kuchi va muvozanatining yomonlashuvi bilan bog'liq; yetarli miqdordagi oqsilni mashqlar bilan birlashtirish sarkopeniya profilaktikasining asosiy strategiyasidir [4-6,16,20].

Profillar kattalarda semizlik va qandli diabetning yuqori darajasini ko'rsatadi, bu esa kardiometabolik xavflarni va ovqatlanish sifatini yaxshilash zaruratini aks ettiradi [7,19].

Reproduktiv yoshdagi ayollar va bolalarda kamqonlik muammolari, alohida tadqiqotlarda D vitamini yetishmovchiligi qayd etilgan; keksalar uchun ma'lumotlar cheklangan, bu esa milliy monitoring zarurligini ta'kidlaydi [8,9].

Muhokama

Keksa ayollarda asosiy nutriyentlar bilan ta'minlanganlik qarish trayektoriyasini belgilaydi. Oqsil bo'yicha tavsiyalar ($\geq 1,0-1,2$ g/kg/sut) ESPEN/PROT AGE konsensusi bilan qo'llab-quvvatlanadi va sarkopeniya xavfini kamaytirish bilan bog'liq [4-6,12,20]. Natriyning cheklanishi va kaliyning ko'payishi qon bosimi va insultni kamaytirishning tasdiqlangan strategiyasidir [11-14]. Suyak salomatligi uchun universal supplementatsiyadan ko'ra parhez kalsiy manbalari va D vitamini tanqisligini individuallashtirilgan tarzda korreksiyalash afzal ko'riladi [15,17-19].

O'zbekiston uchun ustuvor yo'nalishlar quyidagilardan iborat:

- (1) tuzni kamaytirish siyosati (qayta ishlangan mahsulotlar, non),
- (2) kaliy, magniy, folat va kletchatkani oshirish uchun sabzavotlar/mevalar va dukkakli ekinlar iste'molini kengaytirish,
- (3) zaif guruhlarda temir/folat va D vitamini bo'yicha manzilli dasturlar,
- (4) keksa yoshdagi ayollar uchun birlamchi bo'g'inda nutritiv xavf skriningini joriy etish (tana vazni, qo'l kuchi, 24 soatlik ovqatlanish so'rovi),
- (5) sog'lom oziq-ovqat mahsulotlarining mavjudligi va oilalarni ma'rifatli qilish bo'yicha sektorlararo chora-tadbirlar.

Keksa ayollar ovqatlanishi uchun amaliy ko'rsatmalar

Oqsil: $\geq 1,0-1,2$ g/kg/sut; kun davomida bir me'yorda; jismoniy faollik bilan qo'shib olib boriladi [4-6,16,20].

Tuz/natriy: < 2 g natriy/sut (~ 5 g tuz) [11-13].

Kaliy: sabzavotlar, mevalar, dukkakli o'simliklardan (qarshi ko'rsatmalarni hisobga olgan holda) ≥ 3510 mg/kun [1].

Temir, folat, V12: qon ko'rsatkichlarini kuzatish, yetishmovchilikda - parhez/supplementatsiya va sabablarni izlash [8,9,15].

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Kletchatka: metabolik va ichak salomatligi uchun $\geq 25-30$ g/kun [16].

Xulosalar

Ratsionning ozuqaviy ta'minotini optimallashtirish keksa yoshdagi ayollarda sarkopeniya, osteoporoz va yurak-qon tomir kasalliklarining oldini olishning asosi hisoblanadi. O'zbekiston uchun tuzni kamaytirish, yuqori ozuqaviy zichlikka ega mahsulotlar ommabopligini oshirish va BTSYO amaliyotiga nutritiv xavf skriningini joriy etish bo'yicha tizimli chora-tadbirlar talab etiladi.

Foydalanilgan adabiyotlar ro'yxati

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