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**HUQUQNI MUHOFAZA QILISH ORGANLAR TUZILMALARI XODIMLARINING JISMONIY TAYYORGARLIGINI OSHIRISH USULLARINI O'RGANISH****ИССЛЕДОВАНИЕ МЕТОДОВ ПОВЫШЕНИЯ ФИЗИЧЕСКОЙ ПОДГОТОВЛЕННОСТИ СОТРУДНИКОВ СИЛОВЫХ СТРУКТУР****RESEARCH OF METHODS FOR IMPROVING THE PHYSICAL FITNESS OF LAW ENFORCEMENT OFFICERS**

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**Annotatsiya**

Ushbu maqolada huquqni muhofaza qiluvchi organlar hamda Favqulodda vaziyatlar tizimida faoliyat yuritayotgan xodimlari va qutqaruvchilarning jismoniy tayyorgarligi amaliy me'yorlar va ilmiy dalillar asosida kompleks o'rganilib, tahlil qilindi. Xorijiy davlatlarda politsiyada keng qo'llanadigan MPOETC/Cooper testlari (1 daqiqada o'tirib turish (sit-ups), yotgan holda surish (push-ups), yug'irish 300 metrga, 1,5 milga) bo'yicha 20–49 yosh kesimidagi minimal ko'rsatkichlar jamlandi [1]–[3]. Natijalar shuni ko'rsatadiki xizmat davomida (yuqoriga sakrash, push-ups,  $VO_2max$ ) ko'rsatkichlardagi 5 yillik pasayish tendensiyalari tadqiqotlar asosida yoritildi [4]. Qutqaruvchilar uchun CPAT ning 8 mashq (umumiy limit 10:20) va NFPA 1582da belgilangan 12 MET ( $\approx 42 \text{ ml}\cdot\text{kg}^{-1}\cdot\text{min}^{-1}$ ) minimal talabi tizimli tarzda keltirildi [9]–[12]. Natijalarga tayangan holda yoshga mos periodizatsiya (HIIT + kuch), jarohat profilaktikasi va wellness (uyqu, ovqatlanish, stress) bloklarini birlashtirgan amaliy dastur taklif etiladi. Ushbu yondashuv kirish normativlari bilan haqiqiy, kasbiy vazifa bajarilishi o'rtasidagi «uzilish»ni kamaytiradi va xizmatda xavfsizlikni oshiradi.

**Аннотация**

В данной статье на основе прикладных нормативов и научных данных комплексно изучена и проанализирована физическая подготовленность сотрудников правоохранительных органов и работников системы по чрезвычайным ситуациям (спасателей). По широко применяемым в зарубежных полицейских структурах тестам MPOETC/Cooper (приседания из положения лёжа–сидя за 1 минуту – sit-ups, отжимания – push-ups, а также бег на 300 метров и 1,5 мили) собраны минимальные показатели для возрастного диапазона 20–49 лет [1]–[3]. Результаты показывают, что в ходе служебной деятельности (в период пяти лет) наблюдается тенденция снижения по ряду показателей (вертикальный прыжок, push-ups,  $VO_2max$ ), что отражено в исследованиях [4]. Для спасателей системно представлены 8 упражнений теста CPAT (общий лимит 10:20) и минимальные требования 12 MET ( $\approx 42 \text{ мл}\cdot\text{кг}^{-1}\cdot\text{мин}^{-1}$ ), установленное NFPA 1582 [9]–[12]. Опираясь на полученные данные, предложена практическая программа, объединяющая возраст-чувствительную периодизацию (HIIT + силовая подготовка), профилактику травм и блоки wellness (сон, питание, стресс). Такой подход сокращает разрыв между входными нормативами и реальным выполнением профессиональных задач и повышает безопасность службы.

**Abstract**

In this article, the physical readiness of law-enforcement personnel and emergency management workers (rescuers) is comprehensively examined and analyzed based on applied standards and scientific evidence. For the MPOETC/Cooper tests widely used in foreign police agencies (1-minute sit-ups, 1-minute push-ups, and runs over 300 meters and 1.5 miles), minimum benchmarks for the 20–49-year age range were compiled [1]–[3]. The findings indicate five-year decline trends during service in several measures (vertical jump, push-ups,  $VO_2max$ ), as documented in prior studies [4]. For rescuers, the eight CPAT events (overall time limit 10:20) and the 12 MET ( $\approx 42 \text{ ml}\cdot\text{kg}^{-1}\cdot\text{min}^{-1}$ ) minimum requirement specified by NFPA 1582 are presented systematically [9]–[12]. Based on these results, a practical program is proposed that combines age-appropriate periodization (HIIT + strength), injury prevention, and wellness components (sleep, nutrition, stress). This approach reduces the gap between entry standards and actual professional task performance and enhances on-duty safety.

**Kalit so'zlar:** politsiya; qutqaruvchi; MPOETC; Cooper; CPAT; NFPA 1582; HIIT;  $VO_2max$ ; periodizatsiya; jarohat profilaktikasi.

**Ключевые слова:** полиция, спасатели, MPOETC, Cooper, CPAT, NFPA 1582, HIIT,  $VO_2max$ , периодизация, прикладные тесты.

**Key words:** police; firefighters–rescuers; MPOETC; CPAT; NFPA 1582; HIIT;  $VO_2max$ ; periodization.

### KIRISH

Huquqni muhofaza qilish va qutqaruvchilarning xizmat faoliyatida tezlik, kuch va chidamlilikni bir paytning o'zida talab qiladi: quvish, to'siqlardan o'tish, og'ir jihozlarni ko'tarish, jabrlanuvchini xavfsiz zonadan olib chiqish. Bunday vazifalar ayniqsa erkak politsiya xodimlari va qutqaruvchilardan yuqori jismoniy tayyorgarligini talab etadi. Xorijiy davlatlarda ko'plab tashkilotlarda kirish, tanlov, baholash Cooper mezonlariga tayangan bo'lib (sit-ups, push-ups, 300 m, 1.5 mile), MPOETC ga asosan bu ko'rsatkichlar uchun yosh bo'yicha minimal darajalarni belgilaydi [1]–[3]. Xizmat yillari o'tishi bilan ko'rsatkichlarning asta-sekin pasayishi esa JSCRdagi bo'ylama tadqiqotlarda ko'rsatilgan [4]. Qutqaruvchilar faoliyatida CPAT (8 mashqlar) hamda sog'liq/ishga yaroqlilik mezoni sifatida NFPA 1582dagi 12 MET talabi muhim [9]–[12].

**Maqsad.** Ichki ichlar va Favqulodda vaziyatlar vazirliklari tizimlarida erkak xodimlari uchun MPOETC/Cooper normativlarini 20–49 yosh bo'yicha jamlash; xizmat davomida ko'rsatkichlarning 5 yillik o'zgarishini ilmiy dalillar asosida ko'rsatish; qutqaruvchilar uchun CPAT va NFPA 1582 talablari uyg'unligini izohlash; O'zbekiston sharoitida yoshga mos periodizatsiya va ishga yaqin mashg'ulotlar modelini taklif qilish.

### ADABIYOTLAR TAHLILI VA METODOLOGIYA

MPOETC/Cooper me'yorlari politsiya nomzodlari uchun minimal kirish darajasini beradi [1]–[3]. Uzoq muddatli ma'lumotlar 5 yil ichida vertical jump, push-ups va VO<sub>2</sub>max bo'yicha kichik, ammo barqaror pasayish mavjudligini ko'rsatadi [4]. Umumiy fitnes testlari (1,5 mile/2,4 km, push-ups, sit-ups, vertical jump) ishga yaqin testlar (WSTB/PCT/PAT) bilan bog'liq bo'lib, yaxshilanishi real vazifa bajarilishida aks etadi [5], [6], [20]. Qutqaruvchilar uchun CPAT ish jarayonining 8 muhim bo'lagini modellashtiradi [9], [10], NFPA 1582 esa  $\geq 12$  MET aerob quvvatni «pastki chegarasi» sifatida belgilaydi [11], [12]. So'nggi sharhlar politsiyada funksional/kuch va HIIT yondashuvlari samaradorligini ta'qidlaydi [13]–[15], taktik populyatsiyalar bo'yicha NSCA yo'nalishidagi ishlar metodik asos beradi [18], [20].

**Metodologiya.** Ushbu ish integrativ tahlil bo'lib, (1) 20–49 yosh bo'yicha MPOETC normativlari [1]–[3], (2) JSCRdagi 5 yillik o'zgarishlar [4], (3) CPAT va NFPA 1582 talablari [9]–[12] hamda (4) «transfer» bo'yicha tadqiqotlar [5], [6], [20] sistematik tarzda jamlandi. Birlamchi eksperimental o'lchovlar o'tkazilmadi; tavsiyalar mavjud dalillarni amaliy dasturga uyg'unlashtirishga qaratildi.

### NATIJA VA MUHOKAMA

Politsiya (erkak): MPOETC minimal me'yorlari. 20–29 / 30–39 / 40–49 yosh uchun sit-ups, push-ups, 300 m va 1,5 milga yuqurish bo'yicha minimal ko'rsatkichlar normativlari 1-jadvalda keltiriladi [1]–[3].

1-jadval

	Yosh guruhi	O'tirib turish (sit-ups) 1 daqiqada, marta	(push-ups) 1 daqiqada, marta	300 metrga yug'irish, soniya
1	20-29	35	26	62,1
2	30-39	32	30	63,0
3	40-49	27	15	77,0

Bu kirish darajasi bo'lib, xizmatdagi o'rtacha ish samarasi bilan teng emas; biroq yosh bilan ko'rsatkichlar pasayishi, sekinlashuvi (1,5 mil va 300 metrga yug'urish) va takrorlar sonining kamayishini aniq ko'rsatadi.

Uzoq muddatli o'zgarishlar (5 yil). AQSh politsiya (erkak) xodimlarida sakrash (vertical jump  $g \approx -0,20$ ), otjimaniya (push-ups  $g \approx -0,27$ ), VO<sub>2</sub>max ( $g \approx -0,14$ ) bo'yicha kichik pasayishlar qayd etilgan [4]. Bu «asta-sekinlik»ni texnik jihatdan to'g'ri, periodizatsiyalangan mashg'ulotlar orqali sekinlashtirish mumkin. «Transfer»: testdan vazifaga. 1,5 mile/2,4 km, PU/SU va vertical jump natijalarining WSTB/PCT/PAT kabi ishga yaqin sinovlar bilan muvofiqligi aniqlangan [5], [6], [20]. Demak, bazaviy testlardagi o'sish operativ vazifalarga ham ko'chadi. Past fitnes ballari MSI (mushak-skelet jarohatlari) xavfini oshirishi mumkin [7] – bu esa profilaktika va «wellness» bloklarining zaruriyatini kuchaytiradi.

Qutqaruvchilar: CPAT va NFPA 1582. CPAT – 8 mashqlar, umumiy limit 10:20 (Pass/Fail) bo‘lib, zinapoya, sudrash, ko‘tarish, qidiruv kabi real ish jarayonlarini qamrab oladi [9], [10]. NFPA 1582da  $\geq 12$  MET ( $\approx 42 \text{ ml}\cdot\text{kg}^{-1}\cdot\text{min}^{-1}$ ) minimal aerob daraja sifatida ko‘rsatiladi [11], [12]. Mashg‘ulatlarni shu ikki mezonga yo‘naltirish (masalan, haftasiga CPAT-yo‘naltirilgan 30–40 daqiqalik davomiyligi + kuch/HIIT) amaliy natija beradi.

Tavsiyalar (yosh bo‘yicha periodizatsiya). 20–29 yosh: HIIT (200–400 m intervallar 90–100%  $\text{VO}_2$ ) + ko‘p bo‘g‘inli kuch mashqlari; o‘rtacha plyometrika. 30–39 yosh: Aralash kuch–aerob, templi yugurish (20–30 daqiqa), intensivlikni saqlagan holda hajmi boshqarish. 40–49 yosh: Texnikaga urg‘u berilgan kuch, qisqa intervallar+uzunroq templi; bel/tizza/yelka profilaktikasi. Har haftada ish ritmini sezdiruvchi «mini-sbor» (PU/SU 300 metr va 2,5 km) politsiya uchun, CPAT-blok esa qutqaruvchilar uchun tavsiya etiladi.

### XULOSA

Olingan natijalarga ko‘ra Ichki ishlar, Favqulodda vaziyatlar vazirligi tizimidagi erkak xodimlarida yosh oshishi bilan 2,5 km va 300 m masofalariga yug‘ish, masofani bosib o‘tish vaqtlarining oshishi, PU/SU takrorlarining kamayishi kuzatiladi; bu imtixonlar, ishga kirish me‘yorlari va 5 yillik amaliy dalillar bilan tasdiqlanadi [1]–[4].

Umumiy jismoniy tarbiya (fitnes) testlaridagi natijalarini o‘sishi ishga yaqin vazifalardagi samaradorlikni oshiradi; past jismoniy tayorgarlik esa MSI xavfini kuchaytiradi [5]–[7], [20].

Qutqaruvchilar uchun CPAT 10:20 me‘yorlarini haqiqiy nazorat qilish va ularga rioya qilish, NFPA 1582 ( $\geq 12$  MET) esa aeroblikning (yog‘ va uglevodlarning kislorod bilan oksidlanishi) «pastki chegarasi»dir [9]–[12]. O‘zbekiston sharoitida yoshga mos periodizatsiya, HIIT + kuch, haftalik mini-sbor/CPAT-blok, wellness va jarohat profilaktikasi xizmat samaradorligi va xavfsizligini oshirishning eng dalillarga tayangan yo‘lidir.

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