



New Day in Medicine
Новый День в Медицине

NDM



TIBBIYOTDA YANGI KUN

Ilmiy referativ, marifiy-ma'naviy jurnal



AVICENNA-MED.UZ



ISSN 2181-712X.
EISSN 2181-2187

12 (86) 2025

Сопредседатели редакционной коллегии:

**Ш. Ж. ТЕШАЕВ,
А. Ш. РЕВИШВИЛИ**

Ред. коллегия:
М.И. АБДУЛЛАЕВ
А.А. АБДУМАЖИДОВ
Р.Б. АБДУЛЛАЕВ
Л.М. АБДУЛЛАЕВА
А.Ш. АБДУМАЖИДОВ
М.А. АБДУЛЛАЕВА
Х.А. АБДУМАДЖИДОВ
Б.З. АБДУСАМАТОВ
У.О. АБИДОВ
М.М. АКБАРОВ
Х.А. АКИЛОВ
М.М. АЛИЕВ
С.Ж. АМИНОВ
Ш.Э. АМОНОВ
Ш.М. АХМЕДОВ
Ю.М. АХМЕДОВ
С.М. АХМЕДОВА
Т.А. АСКАРОВ
М.А. АРТИКОВА
Д.Т. АШУРОВА
Ж.Б. БЕКНАЗАРОВ (главный редактор)
Е.А. БЕРДИЕВ
Б.Т. БУЗРУКОВ
Р.К. ДАДАБАЕВА
М.Н. ДАМИНОВА
К.А. ДЕХКОНОВ
Э.С. ДЖУМАБАЕВ
А.А. ДЖАЛИЛОВ
Н.Н. ЗОЛотова
А.Ш. ИНОЯТОВ
С. ИНДАМИНОВ
А.И. ИСКАНДАРОВ
А.С. ИЛЪЯСОВ
Э.Э. КОБИЛОВ
А.М. МАННАНОВ
Д.М. МУСАЕВА
Т.С. МУСАЕВ
М.Р. МИРЗОЕВА
Ф.Г. НАЗИРОВ
Н.А. НУРАЛИЕВА
Ф.С. ОРИПОВ
Б.Т. РАХИМОВ
Х.А. РАСУЛОВ
Ш.И. РУЗИЕВ
С.А. РУЗИБОЕВ
С.А. ГАФФОРОВ
С.Т. ШАТМАНОВ (Кыргызстан)
Ж.Б. САТТАРОВ
Б.Б. САФОЕВ (отв. редактор)
И.А. САТИВАЛДИЕВА
Ш.Т. САЛИМОВ
Д.И. ТУКСАНОВА
М.М. ТАДЖИЕВ
А.Ж. ХАМРАЕВ
Б.Б. ХАСАНОВ
Д.А. ХАСАНОВА
Б.З. ХАМДАМОВ
Э.Б. ХАККУЛОВ
Г.С. ХОДЖИЕВА
А.М. ШАМСИЕВ
А.К. ШАДМАНОВ
Н.Ж. ЭРМАТОВ
Б.Б. ЕРГАШЕВ
Н.Ш. ЕРГАШЕВ
И.Р. ЮЛДАШЕВ
Д.Х. ЮЛДАШЕВА
А.С. ЮСУПОВ
Ш.Ш. ЯРИКУЛОВ
М.Ш. ХАКИМОВ
Д.О. ИВАНОВ (Россия)
К.А. ЕГЕЗАРЯН (Россия)
DONG JINCHENG (Китай)
КУЗАКОВ В.Е. (Россия)
Я. МЕЙЕРНИК (Словакия)
В.А. МИТИШ (Россия)
В.И. ПРИМАКОВ (Беларусь)
О.В. ПЕШИКОВ (Россия)
А.А. ПОТАПОВ (Россия)
А.А. ТЕПЛОВ (Россия)
Т.Ш. ШАРМАНОВ (Казахстан)
А.А. ЩЕГОЛОВ (Россия)
С.Н. ГУСЕЙНОВА (Азербайджан)
Prof. Dr. KURBANHAN MUSLUMOV (Azerbaijan)
Prof. Dr. DENIZ UYAK (Germany)

ТИББИЁТДА ЯНГИ КУН НОВЫЙ ДЕНЬ В МЕДИЦИНЕ NEW DAY IN MEDICINE

*Илмий-рефератив, маънавий-маърифий журнал
Научно-реферативный,
духовно-просветительский журнал*

УЧРЕДИТЕЛИ:

**БУХАРСКИЙ ГОСУДАРСТВЕННЫЙ
МЕДИЦИНСКИЙ ИНСТИТУТ
ООО «ТИББИЁТДА ЯНГИ КУН»**

Национальный медицинский
исследовательский центр хирургии имени
А.В. Вишневского является генеральным
научно-практическим
консультантом редакции

Журнал был включен в список журнальных
изданий, рецензируемых Высшей
Аттестационной Комиссией
Республики Узбекистан
(Протокол № 201/03 от 30.12.2013 г.)

РЕДАКЦИОННЫЙ СОВЕТ:

М.М. АБДУРАХМАНОВ (Бухара)
Г.Ж. ЖАРЫЛКАСЫНОВА (Бухара)
А.Ш. ИНОЯТОВ (Ташкент)
Г.А. ИХТИЁРОВА (Бухара)
Ш.И. КАРИМОВ (Ташкент)
У.К. КАЮМОВ (Тошкент)
Ш.И. НАВРУЗОВА (Бухара)
А.А. НОСИРОВ (Ташкент)
А.Р. ОБЛОКУЛОВ (Бухара)
Б.Т. ОДИЛОВА (Ташкент)
Ш.Т. УРАКОВ (Бухара)

12 (86)

www.bsmi.uz
https://newdaymedicine.com E:
ndmuz@mail.ru
Тел: +99890 8061882

2025
декабрь

Received: 20.11.2025, Accepted: 06.12.2025, Published: 10.12.2025

UDC 616-0736:615.849.2:616.61-008:616-006

ANALYSIS OF DISEASES DEVELOPING IN THE CERVICAL REGION OF THE SPINE

Sattorov Bexruz Kobilovich <https://orcid.org/0009-0001-4760-7438> E-mail: sattorov.behrutz@bsmi.uz

Khudoyberdiyev Dilshod Karimovich <https://orcid.org/0009-0004-7508-7400>

E-mail: dilshod.khudoyberdiyev@mail.ru

Bukhara State Medical Institute named after Abu Ali ibn Sina, Uzbekistan, Bukhara, st. A. Navoi.

1 Tel: +998 (65) 223-00-50 e-mail: info@bsmi.uz

✓ Resume

Excessive strain on the spine-heavy lifting, injuries, or degenerative processes within its structure leads to a rupture of the fibrous ring. The spine forms the foundation of the musculoskeletal system, and a number of anatomical and physiological characteristics can lead to the development of a herniated disc in the cervical spine. Neck pathologies and pain remain a common problem, especially in industrialized countries, as this condition is more common in people of working age.

Keywords: spine, herniated disc, neck pain, ergonomic guidelines, osteochondrosis

АНАЛИЗ ЗАБОЛЕВАНИЙ, РАЗВИВАЮЩИХСЯ В ШЕЙНОМ ОТДЕЛЕ ПОЗВОНОЧНИКА

Сатторов Бехруз Кобирович <https://orcid.org/0009-0001-4760-7438> E-mail:

sattorov.behrutz@bsmi.uz

Худойбердиев Дилшод Каримович <https://orcid.org/0009-0004-7508-7400>

E-mail: dilshod.khudoyberdiyev@mail.ru

Бухарский государственный медицинский институт имени Абу Али ибн Сины, Узбекистан,

г. Бухара, ул. А. Навои. 1 Тел: +998 (65) 223-00-50 e-mail: info@bsmi.uz

✓ Резюме

Чрезмерная нагрузка на позвоночник – подъем тяжестей, травмы или дистрофические процессы в его структуре – приводит к разрыву фиброзного кольца. Основу опорно-двигательного аппарата составляет позвоночник, ряд анатомических и физиологических особенностей которого может привести к развитию грыжи межпозвоночного диска в шейном отделе позвоночника. Патологии и боли в области шеи остаются актуальными, особенно для индустриально развитых стран, поскольку эта патология чаще встречается у людей трудоспособного возраста.

Ключевые слова: позвоночник, грыжа межпозвоночного диска, боль в шее, эргономические правила, остеохондроз

УМУРТҚА ПОҒОНАСИНИНГ БЎЙИН ҚИСМИДА РИВОЖЛАНАДИГАН КАСАЛЛИКЛАР ТАҲЛИЛИ

Сатторов Бехруз Кобирович <https://orcid.org/0009-0001-4760-7438>

E-mail: sattorov.behrutz@bsmi.uz

Худойбердиев Дилшод Каримович <https://orcid.org/0009-0004-7508-7400>

E-mail: dilshod.khudoyberdiyev@mail.ru

Абу али ибн Сино номидаги Бухоро давлат тиббиёт институти Ўзбекистон, Бухоро ш.,

А.Навоий кўчаси. 1 Тел: +998 (65) 223-00-50 e-mail: info@bsmi.uz

✓ **Резюме**

Умуртқа погонасига ҳаддан ташқари босимнинг ошиши – оғир юк қўтариш, жароҳат ёки умуртқа погонаси структурасидаги дистрофик жараёнлар фиброз халқанинг йиртилиши билан якунданади. Таянч ҳаракат тизимининг асоси бу - умуртқа погонаси бўлиб, унинг бир қатор анатомик ва физиологик хусусиятлари бўйин умуртқалараро диск чурраси ривожланишига олиб келиши мумкин. Бўйин соҳасидаги патология ва оғриқлар айниқса саноати ривожланган мамлакатлар учун долзарблигича қолмоқда, чунки бу ҳолат меҳнатга лаёқатли ёшдаги одамлар учун кўпроқ ҳосилдир.

Калит сўзлар: умуртқа погонаси, умуртқалараро диск чурраси, бўйин оғриқлари, эргономик қоидалар, остеохондроз

Relevance

The foundation of the musculoskeletal system is the vertebral column, and several of its anatomical and physiological features may contribute to the development of cervical intervertebral disc herniation. Excessive pressure on the spine such as heavy lifting, trauma, or dystrophic processes within spinal structures often results in the rupture of the fibrous ring. Cervical pathologies and neck pain remain especially relevant for industrialized countries, as these conditions are more common among individuals of working age [7].

According to statistical data, the incidence of neck pain has increased by 27–48% in recent years. This rise can be attributed to a sedentary lifestyle, work habits, and widespread use of gadgets. Several factors contribute to the development of this pathology. In particular, prolonged static loads on the cervical spine, maintaining forced postures, and improper workplace ergonomics play a significant role [12]. A high prevalence of neck pain has been documented among office workers who sit for extended periods, surgeons who perform operations while standing for long hours, dentists, and students [12,20].

Research has established a connection between non-compliance with ergonomic principles and the development of various musculoskeletal disorders, including neck pain [21]. Sitting at a desk for long periods without breaks may lead to neck pain, whereas reducing work time and taking breaks can help decrease this risk [18]. Among individuals especially students who frequently work with their heads bent forward, the rate of neck pain is notably high. The main reasons for this include improper use of computer monitors and additional digital devices. Regular physical exercise reduces both the severity and the likelihood of neck pain [17].

According to the authors, the use of karate techniques in physical education classes was found to influence the physical development of children aged 6–7. At the beginning and end of the educational experiment, the condition of the participants' spinal column and lower limbs was assessed. The data obtained from the study allow us to conclude that the developed method contributes to the harmonious physical development of preschool-aged children and helps correct spinal and lower-limb abnormalities [1].

Due to demographic aging, reduced physical activity among the population, large-scale industrialization, and mechanization, the number of people suffering from degenerative dystrophic diseases particularly spinal injuries continues to increase [11].

It is well known that the human vertebral column consists of four sections: cervical, thoracic, lumbar, and sacral. The cervical section contains 7 vertebrae, the thoracic section 12 vertebrae, and the lumbar section 5 vertebrae. At the lower part of the vertebral column is the sacral bone, formed by the fusion of several vertebrae into a single structure. The cervical spine is composed of 7 vertebrae and is slightly curved forward. This makes the cervical region the most mobile part of the vertebral column. Cervical lordosis is the slight forward curvature involving all cervical vertebrae and the first thoracic vertebra, with the most pronounced curvature occurring at the C5 and C6 levels [9].

It is known that the vertebral column serves as the primary support structure that enables the human body to maintain an upright posture. Numerous external and internal factors influence the development and growth of the spinal cord, including specific spinal diseases and congenital abnormalities. Using standard and modern morphometric methods, the morphometric parameters of the vertebral arteries and the transverse foramina of the cervical vertebrae were studied during human ontogenetic development. It was found that the parameters of the vertebral arteries and their canals increase unevenly throughout

development, which is associated with age-related remodeling and the loss of elasticity in the connective tissues of arterial walls in older individuals [3].

Neck pain (NP) is currently widespread and is considered a global problem due to its indirect financial burden. Neck pain ranks fourth among the conditions that lead to disability worldwide [4]. At present, the clinical manifestations of osteochondrosis occupy the second place after respiratory infections in the overall structure of temporary loss of work capacity, accounting for an average of 20–30% [7,8].

It has been established that the vertebral column is an osteoligamentous structure consisting of six curvature segments and representing a kinematic chain that unites the entire skeleton. Damage to one or several of its segments may impair its protective function. Standard parameters of the vertebral column are essential for the effective and early diagnosis of spinal pathologies, prevention of possible diseases, and prediction of clinical outcomes. Cervical intervertebral disc herniation, which develops in cases of cervical osteochondrosis, belongs to chronic diseases and is frequently observed among individuals of working age, often limiting their activity [5,10,14].

The vertebral column is a complex and highly mobile supporting structure, where the main load falls on intervertebral discs composed of an elastic, shock-absorbing nucleus pulposus surrounded by a fibrous ring [17,21]. Several anatomical and physiological features of the spine predispose the cervical region to the development of intervertebral disc herniation. Excessive pressure on the spine such as heavy lifting, trauma, or dystrophic changes within spinal structures may lead to rupture of the fibrous ring [15]. Clinical manifestations that arise in cervical vertebral pathology depend on the combination of numerous “pathogenetic conditions” [14,19].

At present, anatomical studies of the vertebral column attract the attention of many researchers, including anatomists, anthropologists, and radiologists. The advent of MRI and CT, along with traditional radiography, has made it possible to visualize the anatomical structure of the spine, determine its morphometric characteristics, and assess pathological changes. These technologies also require a more detailed and deeper study of developmental variations and anomalies, as well as the anatomy and biomechanics of the vertebral column. According to the authors, the emergence of modern imaging diagnostics has provided the opportunity to study the morphology of the human spine both under normal conditions and in disease states [2].

Intervertebral disc herniation occurs when microtrauma or osteochondrosis disrupts the integrity of the disc located between the vertebrae, causing the nucleus pulposus to break through the fibrous ring and protrude outward. The clinical course of this condition is mainly characterized by pain in the neck and shoulder region, often radiating into the arms [7].

The vertebral column is considered the main component of the musculoskeletal system and plays a crucial role in human functioning. The intervertebral fibrocartilaginous disc helps reduce the load exerted on the spine and decreases stress levels. The progressive development of degenerative spinal diseases among people in various professions is considered an occupational pathology. There are certain occupations in which completely eliminating this condition is nearly impossible. In today's era of informatization and computer technologies, working conditions and job requirements have significantly reduced the level of physical movement among many professionals.

Sedentary lifestyle and repetitive, heavy physical loads in human activity contribute to the development of structural and functional disorders of the spine. These conditions are primarily manifested by the formation of spinal protrusions and hernias. The complex structure of the intervertebral disc and the variability of its topographic localization necessitate a carefully developed treatment algorithm. Therefore, it is essential to conduct a comprehensive analysis of the morphology and topography of the intervertebral disc, as well as to determine its histological structure. Studies indicate that the intervertebral disc lacks a direct blood supply in its topography, and therefore it receives nutrients mainly through diffusion from surrounding tissues. After impacts and various loads, structural changes occur in the disc, particularly a loss of elasticity and thinning or tearing of the fibrous ring. When patients experience loads exceeding physiological norms, the disc undergoes temporary deformation. During this process, the tissues of the nucleus pulposus may shift from their usual position and contact the inner fibrous ring before returning to their original location, which is considered a normal physiological process [10,17].

Research conducted by A. Shodiev and colleagues shows that cervical intervertebral disc hernias develop due to the following factors: physical strain - 46.0%, low mobility and excess weight - 35.4%, occupational hazards - 6.4%, spinal trauma and postural abnormalities in childhood -1.6% [18].

Furthermore, regarding the localization of cervical disc hernias, they are most frequently observed between the C6–C7 vertebrae (30.6%), followed by C5–C6 (25.8%), C4–C5 (19.4%), and C3–C4 (11.3%). In the study, 38 patients (61.2%) had hernias in two discs simultaneously.

A comprehensive treatment approach does not always guarantee positive outcomes. This is largely due to the fact that spinal osteochondrosis is a polyetiological disease. Its development, progression, and clinical manifestations involve a variety of mechanisms and triggering factors, whose interactions are not always fully accounted for [7]. This contributes to an increased number of complications associated with prosthetic interventions. Therefore, the growing attention of physicians to spinal pathologies, along with the widespread use of surgical procedures in patients, makes the prevention of complications, early diagnosis, and the development of treatment strategies particularly urgent and socially significant.

Conclusion

The development of cervical spine pain is relatively higher among young people, individuals who do not follow ergonomic principles, those living in socially developed regions, and employees engaged in low-activity work. As a result, the likelihood of microtraumas or osteochondrotic changes in intervertebral discs increases. This, in turn, leads to a significant rise in the number of surgical interventions applied for treating these conditions and their potential complications.

LIST OF REFERENCES:

1. Аканеева Е.А. Влияние занятий физической культурой с использованием средств каратэ на физическое развитие детей дошкольного возраста //Вестник Томского государственного университета. 2020;455:152-156.
2. Аксенова О.А., Чаплыгина Е.В., Бабаев М.В., Орлова С.В., Сикоренко Т.М., Самохина О.С. Возможности и перспективы использования методов лучевой диагностики при изучении анатомии позвоночного столба //Журнал анатомии и гистопатологии. 2017;6(3):111-116.
3. Виссарионов С.В. Попов И.В. Вопросы диагностики нестабильности позвоночника у детей (обзор литературы) //Травматология и ортопедия России. 2009;4:119-122.
4. А.Н. Коновалов, А.В. Козлов ; Е.И. Гусев, В.И. Скворцова Неврология и нейрохирургия, учебник: в 2 т. - 2009.
5. М.Х. Қориев. Ғ.М.Қориев. Нейрохирургия [Матн] Тошкент: Muharrir nashriyoti. 2018; 480 бет.
6. Адамбаев З.И., Киличев И.А. Динамика соматосенсорных вызванных потенциалов в процессе лечения при дегенеративном стенозе позвоночного канала шейного отдела позвоночника // European Reserch: сборник статей XX Международной научно-практической конференции European Reserch.- Пенза: МЦНС «Наука и Просвещение». 2019. – С. 280–282.
7. Адамбаев З.И., Киличев И.А. Эффективность папайянизации при лечении дегенеративно-дистрофических заболеваний позвоночника // Бюллетень ассоциации врачей Узбекистана. – Ташкент, 2016;3:41–45 (14.00.00. №17).
8. Бывальцев В. А., Белых Е. Г., Алексеева Н. В. И др. Применение шкал и анкет в обследовании пациентов с дегенеративным поражением поясничного отдела позвоночника: метод. рек. Иркутск: ФГБУ НЦРВХ СО РАМН; 2013; 32.
9. Гринь А.А., Кайков А.К., Крылов В.В. Профилактика и лечение осложнений у больных с позвоночно спинномозговой травмой (часть 1). Нейрохирургия. 2014. №4. С. 76-86., Кайков А.К. Ошибки и их профилактика в диагностике и лечении больных с травмой позвоночника и спинного мозга: дис. ... канд. мед. наук: М, 2013. 184 с
10. Дегтярев И.П. Возрастные морфологические изменения фиброзного кольца поясничных межпозвонковых дисков человека. Патология позвоночника: матер. II Новосибирской конф. по лечению заболеваний и повреждений по-звоночника. Новосибирск; 1966: 224–226.

11. Крылов В.В. Травма позвоночника и спинного мозга. В.В. Крылов, А.А. Гринь. М.: 2014; 420 стр.
12. Ипполитова Е.Г., Верховина Т.К., Арсентьева Н.И. Сравнительный анализ электронейромиографических показателей при плечелопаточном болевом синдроме дегенеративно-дистрофического генеза и остеохондрозе шейного отдела позвоночника // Бюл. ВСНЦ СО РАМН. 2016;4(110):36-39.
13. Мамадалиев А.М., Шодиев А.Ш., Буйин, кукрак, бел остеохондрозининг этиологияси, патогенези, кликаси консерватив ва жаррохлик усулида даволаш муаммолари. «Вертебрологиянинг долзарб муаммолари» мавзусида утказилган илмий-амалий конференция илмий ишлари туплами. 22 май 2004 й. Самарканд, 12-бет.
14. Маркин С.П. Современный взгляд на проблему боли в позвоночнике // Русский медицинский журнал. 2009;11:794. [Markin SP. Modern view on the problem of spinal pain. Russian Medical Journal. 2009;(1):794. In Russian]. медицинский журнал. 2008;16(26):1739-1744.
15. Молчановский В.В., Тринитатский Ю.В., Ходарев С.В. Вертеброневрология V. Фармакологическое лечение больных с неспецифической вертеброневрологической патологией. В 5 ч.- Ростов-на-Дону: Изд-во СКНЦ ВШ ЮФУ, 2014.- 376 с.
16. Петров, К.Б. Остеохондроз позвоночника: в защиту нозологической, терминологической и классификационной индивидуальности /К.Б. Петров //Медицина в Кузбассе. 2012;1:52-58.
17. Черноротов В.А., Крадинов А.И., Крадинова Е.А., Прокопенко О.П., Баркетова Д.А., Черноротова Е.В., Машихина Л.А. Мультиспиральная компьютерная томография в определении перспективы восстановления функций (реабилитационного потенциала) у больных остеохондрозом шейного отдела позвоночника. //Таврический медико-биологический вестник. 2016;19(4):106-112.
18. Шодиев А.Ш., Равшанов Д.М., Примов З.А. Диск чурралари ривожланган бўйин остеохондрозларининг этиопатогенези ва клиник манзараси //Academic research in educational sciences 2021;2(6) | ISSN: 2181-1385 Scientific Journal Impact Factor (SJIF) 2021: 5.723 Academic Research, Uzbekistan 583 www.ares.uz
19. Percutaneous cervical laser discectomy, thermoannuloplasty, and thermonucleoplasty; comparable results without surgery. Epstein NE.Surg Neurol Int. 2017 Jun 21;8:128. doi: 10.4103/sni.sni_164_17. Collection 2017.PMID: 28713631.
20. Reliability of cervical radiculopathy, its congruence between patient history and medical imaging evidence of disc herniation and its role in surgical decision.
21. Mostofi K, Khouzani RK.Eur J Orthop Surg Traumatol. 2016 Oct;26(7):805-8. doi:10.1007/s00590-016-1801-z. Epub 2016 Jun 18.PMID: 27318668
22. Feasibility of Early and Repeated Low-dose Interscalene Brachial Plexus Block for Residual Pain in Acute Cervical Radiculopathy Treated with NSAIDS.
23. Iwata T, Mitoro M, Kuzumoto N.Korean J Pain. 2014 Apr;27(2):125-32. doi:10.3344/kjp.2014.27.2.125. Epub 2014 Mar28.PMID: 24748940

Entered 20.11.2025