

UNIT 13.

BACK PAIN AND DISCOPATHY

The back is a very sophisticated structure that needs to be both strong and flexible. Because we have an upright position of the body, it has to withstand a lot of weight and strain. Simultaneously, it is involved in practically all movements we make. If we work hard physically, spend a lot of time in the same position (especially sitting), if we stoop, bend and twist our trunk, repeat the same movements or lift heavy objects, we may easily overload our back and as a result develop back pain. This can originate in different tissues and structures: in spinal joints, strained muscles or tendons, and in nerves trapped between other structures. A common source of a problem is also a spinal (intervertebral) disc.

Discopathy – prolapsed intervertebral disc (PID)

A spinal disc is a structure located between two vertebrae. It is composed of a tough outer fibrous ring (annulus fibrosus) and a soft jelly-like central portion (nucleus pulposus). Its function is to absorb shock exerted on the spine in all activities. As a result of a trauma, bending, lifting, or great physical effort, especially without training the muscles before, the nucleus pulposus may change the position and move backwards. The disc may then bulge out of the spinal column, a condition called a disc protrusion or disc bulge. If left untreated, the fibrous ring may tear, allowing the nucleus to escape beyond it, a condition known as a disc extrusion or disc hernia. In both cases the disc may compress the adjacent structures, such as ligaments, nerve roots, spinal cord, and cauda equina. This causes pain, inflammation, movement limitations, muscle spasms and sometimes numbness.

The problem may occur at any level in the spine, but in most cases it is located in the lumbar region, mostly between L4–L5 and L5–S1. If that is the case, a prolapsed disc may compress or irritate the roots of the sciatic nerve. This causes sciatica, in which pain radiates along the nerve and so may be felt in the lower back, buttock, and down the leg.

WORDLIST

- absorb shock /əb'zɔ:b 'ʃɒk/ – amortyzować wstrząs
acute /ə'kjʊ:t/ – ostry
adjacent /ə'dʒeɪs'nt/ – przyległy, sąsiedni
annulus fibrosus /'ænjʊləs faɪ'brəʊsəs/ (pl. annuli fibrosi /'ænjʊləɪ faɪ'brəʊsaɪ/) – pierścień włóknisty
anti-inflammatory drug /'æntɪn'flæmətəri 'drʌg/ – lek przeciwzapalny
appropriate /ə'prɒpriət/ – odpowiedni
assume /ə'sju:m/ – przyjąć
bulge /bʌldʒ/ – wybrzuszyć się, wypuklina
cauda equina /'kɔ:də i'kwainə/ – ogon koński
centralise /'sentrəlaɪz/ – centralizować
compress /kəm'pres/ – uciskać, ścisnąć
core /kɔ:/ – centrum, rdzeń, jądro
design /dɪ'zaɪn/ – projektować, mieć na celu
disc bulge /'dɪsk bʌldʒ/ – wypuklina dysku
essential /ɪ'senʃl/ – istotny
exert /ɪg'zɜ:t/ – wywierać
extrusion /ɪks'tru:ʒn/ – ekstruzja
hernia /'hɜ:niə/ – przepuklina
hyperextension /,haɪpə'riks'tenʃn/ – przeprost
implement /'ɪmplɪmənt/ – wdrożyć
individual /,ɪndɪ'vɪdʒʊəl/ – osoba, jednostka
intervertebral disc /,ɪntə'vɜ:trɪbrəl 'dɪsk/ – krążek międzykręgowy
irritate /'ɪrɪteɪt/ – podrażniać, powodować podrażnienie
jelly-like /'dʒelɪlaɪk/ – galaretowaty

Treatment

Acute severe back pain is first treated with analgesics, muscle relaxants and anti-inflammatory drugs. When an acute phase is over, a course of physiotherapy should be implemented. This may include physical therapy (cold and heat treatments, ultrasound, TENS, interferential treatment), traction, manual therapy and massage. An essential point in the treatment programme is exercises strengthening the muscles supporting the spine (core stability exercises). Besides, the patient should be educated on ergonomics and proper body mechanics.

A popular method of treating individuals with spine problems is the McKenzie Method, mostly applied to patients with disc-related pain radiating to the limbs. The method concentrates on mechanical diagnosis and therapy, so it is also called MDT. When using it, a therapist checks pain responses in a patient who assumes different body positions. Next he or she offers exercises designed to centralise the pain (move it from the limb to the area over the spine), and finally to eliminate it. The basic exercise in the method is spinal hyperextension, in which the disc is pushed forward and its nucleus is restored to its normal position in the spine.

In extreme cases, a badly damaged disc needs to be removed surgically, which must be followed by appropriate rehabilitation.

EXERCISES

I. Answer the questions.

1. What are the causes of back pain?
2. Where in the back can we feel the pain?
3. What is the structure of a spinal disc?
4. What is the difference between a disc protrusion and extrusion?
5. What are the symptoms of discopathy?
6. How can physiotherapy help in the case of back pain?
7. When is the McKenzie Method applied?
8. What is the centralisation of pain?

II. Compose noun compounds equivalent with the following expressions according to the example.

pain that you feel in the back – back pain

1. protrusion of the spinal disc –
2. stability of the core of the body –
3. the method designed by Robin McKenzie –

nerve root /'nɜ:v ru:t/ – korzeń nerwowy

nucleus pulposus /'nju:kliəs pəl'pəʊsəs/ (pl. nuclei pulposi /'nju:kliəri pəl'pəʊsai/) – jądro miazdżyste

numbness /'nʌmənəs/ – drętwienie

prolapsed intervertebral disc /prəʊ'læpsɪd ,ɪntə'vɜ:tɪbrəl 'dɪsk/ – dyskopatia, wypadanie krążka międzykręgowego

protrusion /prə'tru:ʒən/ – protruzja

radiate /'reɪdiət/ – promieniować
response /ri'spɒns/ – odpowiedź

sciatic nerve /saɪ'ætɪk ,nɜ:v/ – nerw kulszowy

sciatica /saɪ'ætɪkə/ – rwa kulszowa
simultaneously /,sɪm'ʌltɪmeɪsli/ – jednocześnie

sophisticated /sə'fɪstɪkətɪd/ – wyszukany, wyrafinowany, złożony
source /sɔ:s/ – źródło

spinal disc /'spainəl dɪsk/ – krążek międzykręgowy

stoop /stu:p/ – garbić się, pochyłać się

traction /'trækʃən/ – trakcja

trap /træp/ – uwięzić, pułapka

withstand /wɪð'stænd/ – wytrzymać, znieść

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4. a drug which relaxes the muscles –
5. treatment by means of high temperature –
6. programme of treatment –
7. limitation of movement –
8. exercises which improve stability of the body –
9. mechanics of the body work –
10. first part of the nerve near the spine –

III. Take one word (the first or the second part) from each compound in Exercise II and create a new compound according to the example.

back pain – back problems, chest pain

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

IV. Complete the sentences with the modal verbs. Use *can, can't, may, may not, should, shouldn't, must, have to, mustn't, don't have to*. Sometimes more than one option is possible.

1. If you start feeling the pain while exercising, you continue.
2. The pain is not so bad; I move about normally.
3. You divide your shopping bags evenly between your two hands.
4. If you want to lift an object, you stoop. Instead, stand close to it and bend your knees, keeping your spine straight.
5. If you don't strengthen your postural muscles, your condition get worse.
6. He's a great physio. If you want somebody to help you, you go and see him!
7. As for Mr. Jones, I apply TENS. That's what the doctor has ordered.
8. You do belly dance at the moment. It won't be good for your spine.
9. You exercise every day; three times a week will do.

V. Complete the passage with the provided words.

acute, decompressed, examination, experiment, hyperextended, mechanical, mild, nucleus, sciatica, therapist

In 1956 a Robin McKenzie had a patient called Mr. Smith, who was experiencing an episode of low back and leg pain. His prolapsed spinal disc compressed some nerve roots, causing Unfortunately, standard treatment brought no relief.

On one visit Mr. Smith was asked to enter the office, lie face down on the
..... table, and wait for Robin McKenzie. Incidentally, on that day the room had just
been left by a patient with a knee problem, so the head of the table had been elevated to around 45
degrees. Mr. Smith entered and lay down, as instructed.

When McKenzie joined him, he was alarmed by his patient's position, as his spine was
.....! Surprisingly, however, Mr. Smith reported that his leg pain had gone
and he just felt some pain in the lower back.

Now we know what happened. The of Mr. Smith's disc was
moved from its pathological position, the nerve got, and there
occurred the pain centralisation. At that time, however, it was something completely new.

This experience inspired Robin McKenzie to with
movement of patients with back pain. Over time, he developed a standardised method of
..... diagnosis and therapy.