


DOWNLOAD

[Esercizi Di Fisica 2 Risolti E Commentati.pdf](#)

Bracing and supporting of the lumbar spine

S. SCHROEDER, H. RÖSSLER, P. ZIEHE and F. HIGUCHI

Department of Orthopaedic Surgery, University of Bonn, West Germany.

Abstract

The orthopaedic surgeon should be familiar with various supports and braces for the treatment of low back pain. Severe cases of spinal instability always need a Hohmann overbridging brace, whereas the milder form of motion-segment instability is treated with one of the elastic supports. In cases of osteoporosis of the spine and insufficiency of the lumbosacral junction the Lindemann 2/3 semi-elastic brace is prescribed.

Incidence of low back pain

Low back pain affects 80% of all persons during their lifetime. In 70% of the cases the patients recover within 1 month. After 3 months 90% are back to work. Of the remaining 10%, 50% never go back to work (Cailliet 1981).

Orthopaedic diagnoses of low back pain

The term "low back pain syndrome" includes diseases such as lumbosacral strain, facet syndrome, herniated disc, degenerative disc, spinal stenosis, unstable functional unit. Besides these, low back pain can be caused by degeneration and fatigue of the spine and inflammation within the spine (spondylitis). Another cause of pain can be the growth of a tumour.

Anatomy

Knowledge of the anatomy of the motion segment is mandatory to understand the function of the spine. The motion segment consists of an intervertebral disc, its two adjacent vertebral bodies and surrounding ligamentous tissue including the facet joints (Fig. 1). The total spine can be thought of as a motion segment (Kulak et al, 1975). Each vertebra can be divided into an

Fig. 1 Flexion (left) and extension (right) of the motion segment. The large arrows indicate nucleus shift (Kapandji, 1974).

anterior and a posterior element. The dividing line lies behind the posterior border of the body. The anterior elements provide the major support of the column and absorb various impacts. The posterior structures control the pattern of motion.

Control of trunk motion is performed by different muscle groups. The cross section (Fig. 2) of the abdominal cavity shows that 4/5 of its circumference is made up of abdominal wall muscles. In addition to the trunk motion in the leg lifting position (knees slightly flexed and back straight) lifting is performed mainly by the quadriceps muscles.

Fig. 2. Cross section of the trunk at level L3/L4.

[Esercizi Di Fisica 2 Risolti E Commentati.pdf](#)

DOWNLOAD

Primo video di esercizi sull'elettrostatica: ci occupiamo di campo elettrico e forza elettrica, con ...

esercizi risolti e commentati di fisica tecnica

esercizi risolti e commentati di fisica tecnica, esercizi di fisica risolti e commentati pavan pdf, esercizi di fisica risolti e commentati vol.1 pdf, esercizi risolti e commentati di fisica tecnica pdf, esercizi risolti e commentati di fisica tecnica santini

esercizi di fisica risolti e commentati vol.1 pdf

esercizi risolti e commentati di fisica tecnica santini

1dff872cbc