

Vincenzo Canali talks about My Back

At the origin of back pains and traumas deriving from compression of the vertebral column, there may be direct load traumas but, in most cases, there are iterative load traumas.

The cause is to be researched in the lack of flex-extension relationships between kinetic chains or in the absence of balance between them, so that a starter articulation is forced to perform a movement without using the proper muscle synergies, since its potential is reduced in breadth and in its static-dynamic connections.

In the alternating of standings, decubitus and attitudes in our everyday lives, synergies take place on a basis of scarce mobility, and the passage from passive mobility to active mobility cannot take place without the production of articular overloads.

The connections between rib cage and the posterior leg muscles, for the intermediary of the abdominal muscles, in the extension of the lower limbs on the torso, hence often loses efficacy and the repetition of a common movement (such as walking or lifting one's arms) entails some limitations of the interested articulations, also reducing the specific functionalities of some muscles. The scapula-humeral girdle enters into the same mechanism, acting as a restriction and as an overload for the abdominal muscles, every time the degree of extension required by it is not satisfied by the actual extension. That is, when passive mobility and active mobility (both in the static and dynamic forms) do not coincide and eccentric exercises are not applicable.

In the dynamic complex, the vertebral column is forced to sustain the excessive loads deriving from these postural errors.

The resolution is complex and requires a protocol of passive, active and eccentric exercises meant as the structure of the kinetic chain *in toto*, using the development of different synergies in order to improve the rapports of flex-extension.

MY BACK

Performs the function of passive exercise in different moments of the day in the best possible way: before and after physical activity and/or as prevention or as compensation for an ascertained problem.

Why does it perform this role in the best possible way?

Because the starting position, with legs flexed, allows to zero the resistance of the posterior kinetic chain and at the same time, reduces the dominance that the quadriceps could create (contrary to the pelvis extension consequence of the correct retroversion), when summed with the iliopsoas.

In this case, even in persons whose pelvis tends towards anteversion, whose quadriceps are dominant with respect to the abdominal muscles of the anterior kinetic chain, with a scarce mobility of the scapula-humeral girdle and hence a further burden for the pelvic position and further penalty for the abdominal muscles, we can maintain a correct posture that can provide for the stretching of the spine because:

1. the iliopsoas loosens its tension
2. the quadriceps is stretched from the position of the leg
3. the hamstring muscles do not detain the pelvis because knee bending does not exalt its traction in the opposite insertion
4. the scapula-humeral girdle is not extended and hence resistance on the abdominal muscles is reduced, which is also favored by the flexion of the hip also on the torso.

In this situation, keeping the back at various levels in contact with the seat, the column, with no muscle resistances/tractions, can tend to align itself and to restore the physiological distances between vertebrae, using the amount of body weight that vertically affects it, distributing itself in the spine arch in proportion to the height selected.

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