

The Real Reasons for the Lowering of the Internal Arch

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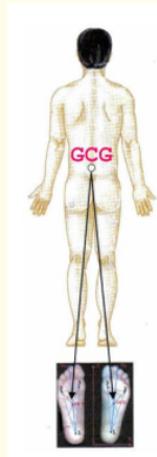


Figure 1

This question may seem strange to physicians, but how will they explain that over the past 60 years, the percentage of deformities of the feet and spine has increased from 7 - 19% to 87 - 95%. Such rapid growth has not been observed in previous centuries. It may not be treated that way, or it is a problem that medicine is not a science, and the doctor is a narrowly educated specialist.

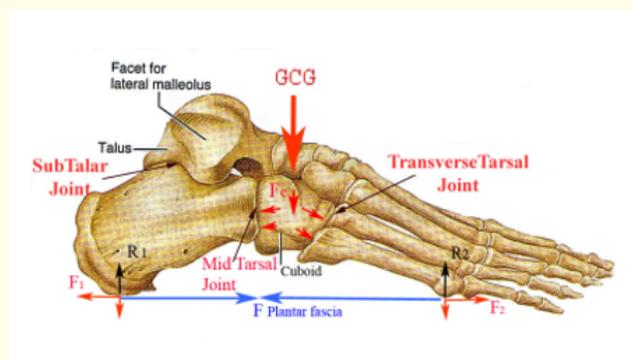


Figure 2



Figure 3



Figure 4

The term deformation refers to the section of mechanics, biomechanics, from the standpoint of which they should be considered. Displacement in the joints is a consequence of the action of forces that the muscles cannot compensate. When they cannot cope with the load, the ligaments perceive it. They are stretched and the bones are displaced from a neutral position. If, after the termination of the forces, the bones do not return to their original neutral position, then this is a deformation. The force leading to the displacement of the bones of the skeleton are static and dynamic forces arising from the displacement of the General Center of Gravity of the body from the axis of symmetry of the skeleton. Deformities cannot be considered as “symptoms” of the disease. And although there really is a physiological relationship between deformations and disturbances in the functioning of the body, doctors do not pay attention to this. Their actions are not aimed at identifying the root causes of violations of the pumping function of the muscles - the processes of metabolism in the body, which is a consequence of the deformations that have arisen. Thus, considering the relationship between the functionality of the arches of the feet and the position of the subtalar joint, they say that supination of the rise of the inner arch of the foot leads to the closure of the tarsal joints into a rigid lever for pushing. This situation is also observed when using high heels, which in these cases leads to circulatory disorders. The height of the heel should correspond to the neutral position of the skeleton of the arches, which orthopedists do not know how to determine. With pronation, the feet easily adapt to the profile of the supporting surface. But in all these observations it is not said,

due to what this happens, under the influence of what forces. Biomechanics explains that all movements are the result of the action of forces arising from the displacement of the body's GCG. Walking is a fall of the body's GCG, and in order not to fall, we substitute the leg. The neutral position of the subtalar joint provides the foot, like any other joint, with dynamic stability, which prevents accelerated wear of cartilaginous rubbing surfaces. When flat feet are considered as a decrease in the height of the internal arch, and not as a result of the deviation of the body's CG relative to the CG of the supporting triangle of the feet, then the actions to raise the internal arch are illiterate. They do not affect the position of the bones of the subtalar joint. This is described in the works of Root M., e.a., 1977. But, and he did not indicate the relationship between the difference in leg lengths and the position of the body's GCG, as the main cause of bone displacements in the joints. The situation is similar in other branches of medicine, when the actions of a doctor of a narrow specialization are abstract, scientifically unfounded. Thus, raising the inner arch with an insole, filling the gap under it, deprives the foot of the ability to cushion, which gives the foot artificially created flat feet. They talk about a violation of arterial circulation in the limbs, they do not think about the fact that this is a violation of the outflow of venous blood, the sequence of contraction of the muscles of the venous-muscular pumps.

Orthopedic specialists do not know the laws of geometry, mechanics, that the main arches are the supporting external and transverse arches. All deformations begin with deformations of these vaults. The internal arch rests and begins to tip over on the calcaneus of the subtalar joint when a support appears under the top of the external arch, its cuboid bone. This is how the moment of forces (M) arises relative to the resulting fulcrum.



Figure 5



Figure 6

But no one diagnoses and corrects the supporting vaults. Two surfaces have three common points of contact with each other. You will not find them in orthopedic insoles and modern shoes. This is the tubercle of the calcaneus and the heads of the first and fifth metatarsal bones. The supporting triangle of the feet is formed by the outer (1-2) and transverse (2-3) arches. They keep the BCT of the body in the area of support, i.e. body from falling. The function of the internal arch is to dampen the speed of transfer of the leg from 18-30 km/h to zero, before starting to move from the second limb. The overturning moment also occurs when walking with the feet turned outward. The

greater the stop angle, the greater the overturning moment. By placing the feet parallel, the calcaneus and lateral bones will take a natural position without the use of an insole. Therefore, when correcting the arches, it is necessary to pay attention to the nature of the gait. You have to walk with your feet parallel to each other. It is laid down by nature. This is how we run and this is how we need to keep our feet when walking.



Figure 7



Figure 8

The inner vault consists of five joints, allowing you to lay down on a complex curvilinear ground surface. When reference points appear under any point of the outer arch, then on the opposite side of the inner arch its pronation will be observed - overhanging. The highest point of the inner arch describes a long path in an arc, which can be equated to the braking distance of a car. But the main reason for the occurrence of deformities is that each individual has an anatomical difference in leg lengths. To compensate for it, it is first necessary to eliminate the functional component of shortening, which is achieved by insoles. Only after this, the body's GCG is brought to the vertical axis of the body, by compensating for the anatomical difference in leg lengths. All this brings the bones of the subtalar joint into a neutral position. Without this, it is impossible to correct the arches of the feet, eliminate the misalignment of the iliac-sacral joints of the pelvis, the support of the spine, which are the root causes of the formation of scoliotic posture. All these actions will eliminate disturbances in the work of lymphatic and venous-muscular pumps, metabolic processes of body cells. Speaking about the height of the internal arch, it

must be remembered that it is associated with muscle tone. Today, most people (65%) have it elevated. This is manifested in the sensation of cold feet and hands, cramps and heartburn, in increased human activity. In its pure form, flat feet are rare, it's still the same 7-19%. All other variants of supporting arch deformities are derivatives associated with deformation of the supporting arches, deviations of the calcaneus from the vertical on the long limb, which ultimately determines the displacement of the body's GCG. Incorrectly made shoes and incorrect walking only add to the statistics of the development of deformities.



Figure 9



Figure 10

The foot is in the shoe for a long time and the work of the muscles is limited. Muscles do not contract on a hard surface. To this should be added the fact that 90% of the shoes began to distort the position of the fulcrum of the foot skeleton. This has already begun to manifest itself in children 3-7 years old, during the formation of the foot. Hence, the percentage of spinal deformities and diseases of internal organs among children has increased.

Specialists who make orthopedic insoles work with skeletal structures that lie at the level of the ankle joint. So the knee and hip joints, and with them the position of the pelvis, became ownerless. There is no one to correct posture, to help the body restore its functions. Foot deformities cannot be considered outside the relationship with the state of the spine, with the biomechanics of walking. Otherwise,

the meaning of stop correction is distorted. The overload of the central nervous system is also not taken into account, which, together with the vestibular apparatus, ensures the stability of the body, brings the head and the vestibular apparatus into a vertical position. Misunderstanding of the root causes always leads to incorrect actions, which in turn further disrupt the functionality of the organism as a whole. Work on the correction of the musculoskeletal framework requires knowledge and ability to work with the load, the reactions of the forces that arise in the joints, which must compensate the muscles. 50% of body weight is muscle. Internal organs are responsible for their activity and performance.

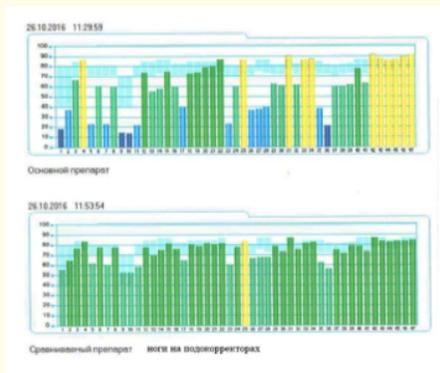


Figure 11

By eliminating deformities of the feet and spine, it means restoring lymph and blood circulation, cell energy, and the self-regulating function of the body. Functional correction of the musculoskeletal framework is the basis for restoring the body's self-regulating function.

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