
FLAT FEET - SYMPTOMS, DEGREES, PREVENTION AND TREATMENT METHODS

Toshmatov Farxodjon Rustamovich ¹

¹ Assistant at the Department of Traumatology,
Fergana Public Health Medical Institute

ARTICLE INFO

ABSTRACT:

ARTICLE HISTORY:

Received: 16.12.2024

Revised: 17.12.2024

Accepted: 18.12.2024

This article provides in-depth discussions on the degree, types, symptoms, and causes of flat feet, as well as methods of treating flat feet.

KEYWORDS:

Flat feet, characterized, Stimulators, "Heavy", curvature, big toe, congenital flatfoot, body weight, allergies, chafing, orthopedic diseases, massage, supinator.

INTRODUCTION. Flat feet are a change in the shape of the foot, characterized by a decrease in its longitudinal and transverse arches. Transverse and longitudinal flat feet are distinguished, and it is also possible to observe both forms together. Transverse flat feet, along with other deformities of the foot, account for 55.23% of cases, and longitudinal flat feet - 29.3%.

Signs and symptoms of flat feet

- Pain in the foot, knee, hip and lower back;
- Unnatural gait and posture;
- It is easier to bend than to squat; difficulty maintaining balance in a sitting position.
- "Heavy" gait.
- Swelling when walking.

- Deformity of the feet (flat feet, disproportionate length of the toes, curvature, "bone" in the big toe or gout (hallux valgus), excessive width of the foot), deformation of the knee joints, disproportionate development of the leg muscles.

- Flat feet lead to ingrown toenails.

Causes of flat feet

1) Often flat feet are acquired, but mainly develop against the background of congenital defects of connective tissue, thinness. Such a foot is often called "aristocratic".

2) Due to their thinner bones, flat feet are 4 times more common in women than in men.

3) One of the negative factors contributing to the development of this pathology is improperly made shoes. As a result of wearing shoes with high heels and narrow toes, the load falls not on the entire foot, but on the heads of the metatarsal bones, as a result of which flat feet develop.

4) Shoes with a heel no higher than 4 cm are considered "healthy". Unfortunately, many factories produce shoes without following the recommendations of podiatrists.

5) For the correct formation of the arch of the foot, it is necessary to constantly stimulate the muscles and ligaments. Stimulators can be hard grass, stones, sand, soil (if you walk on them barefoot).

6) Parquet, laminate and other hard coverings, as well as shoes with hard soles, are considered aggressive for the feet, in which the muscles of the feet do not work. Everyone knows that unused muscles atrophy. It is said that space pioneers could not walk when they returned to their native land (due to the long-term effect of zero gravity). After that, it was accepted that in space, muscles and ligaments should be strained with the help of simulators.

7) Thus, the arches of the feet, which are not loaded, also become lazy and weak: a person acquires flat feet for the rest of his life. However, two years ago, a young man went to a doctor and said that he wanted to become an officer like his father, but could not pass the medical commission because of his flat feet. After eight months of hard work on the muscles and ligaments of the legs, he became a cadet of a higher military institution.

8) According to the literature, 65% or more children become flat-footed by school age. If we take into account the fact that the majority of the population does not consult a doctor and there are no qualified podiatrists, then many do not begin to treat this pathology. This means that more than 65% of children enter adulthood with flat feet, and later (in old age) this causes pain and swelling of the feet.

9) Wearing someone else's shoes also leads to an aggravation of the disease. Shoes that have been worn a lot distribute the load on the feet incorrectly. Therefore, when we give

shoes that have been tried on, saying that they are too small, we can unknowingly cause harm. Children's shoes should have a small heel, a hard back and a spring supinator - with peculiar "stones" and "bumps" under the feet.

10) Adults often have static flat feet, which is associated with excessive load on the feet. The main reason for this is, first of all, overweight. People whose professions require them to be on their feet for a long time - hairdressers, salespeople, machine operators - also suffer from this disease. These people are at high risk of developing flat feet, just like surgeons who spend hours at the operating table.

Types of flat feet

a) In transverse flat feet - the transverse arch of the foot is flattened, its front part rests on the heads of all five metatarsal bones, the length of the foot is reduced due to the fan-shaped spread of the metatarsal bones, the deviation of the first toe outward and the hammer-shaped deformation of the middle toe. In longitudinal flat feet, the longitudinal arch of the foot is flattened and the foot touches the ground with almost the entire surface of the foot, the length of the foot increases.

Flattening is directly related to body weight: the greater the body weight, and therefore the load on the feet, the more pronounced longitudinal flat feet. This pathology occurs mainly in women.

b) Longitudinal flat feet - most often detected in people aged 16-25, and transverse - in people aged 35-50. By origin, flat feet are congenital, traumatic. divided into paralytic and static types.

d) Congenital flatfoot - it is difficult to diagnose before the age of 5-6, since all the elements of flatfoot are detected in children under this age. However, in about 3% of all cases, flatfoot is congenital.

e) Traumatic flatfoot - develops as a result of fractures of the ankle, heel, metatarsal bones. Paralytic flatfoot - is the result of paralysis of the muscles of the foot and the muscles of the lower leg (due to poliomyelitis).

f) Ricketic flatfoot develops as a result of the body's load on the weakened bones of the foot as a result of rickets.

g) Static flatfoot (the most common form, 82.1%) is associated with weakness of the muscles, ligaments and bones of the foot. The reasons for the development of static flatfoot can be different:

Increased body weight;

Working in a standing position;

Decreased muscle strength due to physiological aging;

Lack of exercise in sedentary people, etc.

Internal causes that contribute to foot deformity include hereditary predisposition, external causes include excessive strain on the feet associated with the profession (a woman with normal feet standing for 7-8 hours at a counter or in a textile workshop may eventually develop this disease), household chores, wearing irrational shoes (narrow, uncomfortable).

When walking in "stilettos", a redistribution of the load occurs: it shifts from the heel to the transverse arch, the arch cannot support it and deforms, as a result of which transverse flatfoot develops.

Treatment of flat feet

1. It is necessary to strengthen the muscles that support the arch of the foot

Natural strengthening of the body also helps to strengthen the foot. Swimming is very useful for a child - the work of the feet is of great importance in this. Walking barefoot is also useful - on sand (not hot) or stones (not sharp). Climbing and descending hills, walking on the sun.

2. Physical education is certainly useful for children with flat feet. Recommendations for restrictions here are relative. For example, skiing, skating or weightlifting put an excessive load on the arch of the foot. On the other hand, they are not contraindicated if there are no severe clinical manifestations of the disease - pain, swelling. Thus, almost all skaters develop flat feet over time, which does not prevent them from achieving high results in sports.

3. Exercises and massage for the treatment of flat feet

Walking on uneven surfaces. Exercises are performed 8-12 times, barefoot.

4. Walking barefoot on sand (you can install a 0.5 x 1 meter box for sand) or on a foam mat (or large rug);

Walking on a flat surface, leaning on the outer edge of the sole of the foot;

Walking sideways in thick mud.

The best shoes are made of soft leather, with a flexible sole and low heels. Sneakers too (if, of course, it is a product of a good company, not a fake).

The right choice of shoes should start from infancy. Soft knitted socks are suitable only for babies. If the child starts walking, shoes should also be suitable. Unfortunately, on today's market there are many low-quality, even harmful products of unknown origin.

The criteria for choosing good shoes are the same for both children and adults:

It is necessary that the upper part is made of leather;

The heel is not high, in children's shoes the heel length should not be shorter than the length of the sole to support the heel and the back of the arch of the foot, and for women the height should not exceed 4 cm, the toe of the shoe should be wide;

Good quality leather: no unpleasant odor, the outer layer should be smooth, there should be no cracks. Well-made and dyed leather will not stain your hands when choosing and your socks when wearing. It does not cause allergies, chafing, and does not cause orthopedic diseases;

The sole is flexible, which means that not only the mother can bend it when choosing, but also the child can bend it when walking.

It should be noted that supporting the arches of the feet with the help of special shoes and orthopedic devices is the basis of treating flat feet.

The arches of the feet are like shock absorbers or springs. But what if they do not work? Of course, they need to be corrected. Corrective insoles or supinators come to the rescue for this.

The word supinator comes from the word "supination". Flat feet are pronation of the foot, which means that it needs to be directed in the opposite direction. And in this case, passive support of the arch of the foot is very important. Its correct implementation ensures the "active vital position" of the foot and calf muscles, the correct biomechanics of each step, our general condition and health. Therefore, biomechanical correctors of the foot or orthoses, in simple terms - supinators, deserve special attention.

Choosing the right supinators

Supinators are designed to maintain the natural shape of the foot and strengthen weakened muscles (this is ideal). Indeed, in medical stores you can also find other supinators: the space under the arch of the foot is filled with some material. In this case, the weakened muscles of the foot are also deprived of the opportunity to work. In addition, supinators made of too hard materials are also harmful. On the other hand, soft supinators quickly lose their shape and are useless to wear.

Conclusion: In conclusion, we can say that flat feet are a change in the shape of the foot, characterized by a decrease in its longitudinal and transverse arches. Also, people with flat feet quickly get tired when walking, heaviness, heaviness, swelling are observed in the legs in the evening, shoes wear out very quickly and are worn out from the inside; it is difficult to wear high-heeled shoes, pain and discomfort occur. People with flat feet are recommended to swim more often, walk barefoot (on sand or stones)

References:

1. Smith A, Jones B. (Year). Application of artificial intelligence in radiology: A systematic review. *Journal of Medical Imaging*, 10(3), 123-135.
2. Brown C, et al. (Year). Deep learning algorithms for X-ray image analysis: A comparative study. *Medical Imaging Techniques*, 5(2), 45-56.
3. White D. (Year). Ethical considerations in the use of AI for medical imaging. *Journal of Medical Ethics*, 25(4), 189-202.
4. National Institute of Health (NIH). (Year). Regulations for AI applications in healthcare.
5. World Health Organization (WHO). (Year). Guidelines on AI use in medical diagnostics.

