

# Hallux valgus treatment

## Hallux valgus: characteristics, causes, treatment and prevention

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A really interesting issue to deal with is hallux valgus.

There are many possible ways to treat this pathology with surprising results. Since there is no cause without a consequent effect, many are the reasons why the hallux starts to deform.

If we look at people living in the desert or other populations walking barefoot, as it happened in the ancient times, nobody of them suffers from hallux valgus or other foot/toes-related problems. Actually, their toes are perfectly tapered and straight, with the right space between each other. There are no cases of hallux valgus, deviated toes or hammertoes, fallen metatarsal arches, etc.

Let's find out what hallux valgus is, what its causes are, how it is possible to intervene in this pathology and how to prevent it. Technically, hallux valgus is an external-oriented deviation of the first toe, which goes nearer the second toe and, in the worst cases, moves it from its normal position or climbs it over. In some cases, together with hallux valgus it is possible to observe that also the other toes have gone through alterations, contributing in the bad dynamics of the foot.

First of all, let's speak about the correct shape of the foot under a biomechanical point of view.

The anterior part of the foot (forefoot) includes the five toes and the regions with which they articulate, i.e. the metatarsus. The bones constituting the barefoot are therefore the metatarsal bones and the phalanges of each toe. These bones connect in the metatarsophalangeal articulations at the base of the toes and in the interphalangeal articulations which connect the toes with each other.

Try to do a postural analysis on yourselves: standing barefoot with the feet united, gently contract all the toes upwards, i.e. in dorsal flexion, stimulating the extensor muscles of the toes. In this position you should be able to see the five tendons emerge, starting from the metatarsus and reaching all the toes. If everything is ok, each toe should result perfectly straight from their tendon on; if this is your case, you will notice a space between each toe, as it should be. Toes, in fact, should not be too close one to each other, or climb one each other, or be deformed or hammertoes. Also the fifth toe should be straight. Though its small dimension, in fact, it is the most important toe, since it works as a posture stabilizer, both statical and dynamical. It has its own "abductor muscle"



Figure 1 Hallux valgus condition in which the deviation from the central axis is visible.

which allows it to be able to better share the body weight. However, its important function is almost always compromised due to the type of shoes we use every day.

When the hallux becomes valgus, as we said before, it results deviated towards the external margin of the foot, against the second toe. In that situation, the first metatarsophalangeal articulation uniting the hallux to the metatarsus forms an obtuse angle and in this way the metatarsal arch emerges. The metatarsal arch is the typical bony protuberance often resulting red and painful due to the rubbing it goes through and to the mechanical annoyances it inevitably undergoes every day.

It is fundamental to let the patient understand how important our feet are, and how necessary it is therefore for them to always be in a good mechanical and functional condition.

Unfortunately many patients come to us not to develop a preventing strategy when their hallux has just started to deform, but when they already have difficulties in walking or suffer from painful feet. When people are in good health, they hardly appreciate the fact that their feet are in a good condition and that they can walk, run, or jump; they do not realize how important and fundamental that is because it seems something obvious and natural. On the contrary, when they cannot do the simplest daily actions, than they remember how good it was to walk and run freely and their dream is to walk barefoot on the grass.

How does this pathology develop?

Sometimes it can be caused by genetic factors, but more often this problem is consequent to mechanical causes related to the shoes we wear, to the fact that we do not walk barefoot anymore and to postural problems of the high part of the body.

We will not deal about the genetic causes, since they are a minority of the cases; instead, what is more important is that we do not walk barefoot anymore and that we wear shoes that are distant from the shape and the needs of our feet. Shoes are tight, with narrow extremities and plantar supports that are not adequate to the need of our plantar arch (which has to auto-support itself thanks to the stimuli it receives from the plantar arch when we are barefoot, i.e. we do not have any artificial support). Moreover, heeled shoes often lead the foot to move forwards, toward a narrow top that forces the toes to squeeze one against the other. This is one of the ways in which hallux valgus develops over the time. Heels, as a matter of fact, are not something created following human nature. Otherwise, nature would have given them to us ages ago. It is important then, not to confuse fashion with real needs of the body. Sometimes women suffering from calf pain or cramps are suggested to use low heels, since they are not used to walk without heels anymore. This solution can be an acceptable compromise, but it would be advisable to combine it with specific exercises to restore muscle elasticity and joint freedom. An approach of this kind would allow them to stand without back or feet pain. If you cannot resist to high-heeled shoes, it would be better to use them just in special occasions.

Sometimes hallux valgus is accompanied by flat foot, which favors its formation, and which in turn is connected to postural problems. In particular, it is related to an “abitus astenicus” posture, i.e. the posture of a tired person who appears to be almost oppressed by gravity or by life. In that case, the cause is to be found in muscular and articular factors, i.e. in **short muscular chains** due to excessive tension, stress, wrong postural habits, traumas, accidents, mechanical jobs, etc.

Since muscular chains are made of the different muscle of the body, which are connected with each other, a neck problem can interfere until the feet and vice versa. To treat a hallux valgus is then fundamental to observe carefully also the other elements of the body, in particular knees.

We analyze the patient standing with feet united. Patellae need to be in axis, otherwise there would be problems of premature usury and an inferior stability of the structure. Internally rotated patellae can contribute both in flat foot and hallux valgus. Here is how in posturology we find that many problems of the feet come from the high part of the body. For instance, if coccyx has gone through modifications and results dislocated due to a fall on the bottom, the spine will inevitably modify as well, triggering a modification of the posture of the whole system. The effects of such a modification might show in various ways: with a different stand of the foot on the ground, hammertoes, an internal rotation of a hallux that can also become valgus.

In a holistic, i.e. global, vision of the problems, the one used in posturology and for instance mass physiotherapy, any pathology has to be evaluated observing the whole posture. For example, nowadays it is clear that there is a connection among dental problems, temporomandibular joint problems and posture; between visual problems and posture; between retracted/stiff muscles and posture; and that all these elements are related one with each other. “Everything is related to everything”.

We have causes and we have effects. The therapists should not try to treat the area of the body where the problem shows itself, but try to find the triggering cause of pain, pathologies, and arthrosic processes.

What to do in case of hallux valgus



After doing an accurate postural evaluation, the first thing to do is try to understand how the hallux has become valgus. Then it is important to involve in the work any muscular district (chains) that might have caused the pathology and to do specific exercises in order to bring the hallux back to its correct position.

Observe how to position the patient in figure 2 so that his/her posterior muscular chain, the most important one, undergoes tension and allows a bottom-to top interaction and vice versa. The picture shows a position in global approach. In such a position, the interesting thing is that any exercise we will do for the hallux, it will cause crisis and tension to the

muscles responsible for the valgus condition. Another surprising element concerns the surprisingly quick changes in that deformities people have always thought to be irreversible. So here is a way to give back the patient the happiness and the chance to walk better and without any pain.

Only in real bad cases it is necessary to undergo surgery, when it is not possible to intervene with physical therapies anymore. The one we propose is a treatment made keeping a correct postural layout in order to act both locally on the foot and on the whole posture, by putting in tension the muscular chains (Figures 3-4-5).



Figure 3: First phase – traction and derotation of the hallux to put it back in the right position, i.e. on the line of its tendon.



Figure 4: Second phase – maintain the traction of the hallux and stretch the whole foot by flexing the toes in closure.



Figure 5: Position the hallux so that it is aligned with the other toes and maintain in the correct pose for at least 90 seconds.

The above mentioned exercises need to be done keeping the whole body in specific poses, breathing in a particular way and with constant tractions, in order to obtain deformations of the connective and muscular tissue involved in the pathology. Without entering in the details of each maneuver, this technique can notably reduce the annoyance and pain, allowing the patient to walk at his/her best since the first sessions of work. Of course, there are also other exercises that can be done in the studio, and others that the patients are suggested to do at home, so that they can experience long-lasting results in less time. It is possible to ask the patient to do some simple actions that can help restoring the space among the toes: for instance walk barefoot any time they can, wear comfortable and flexible shoes, with no or low-heels, large sole or flip flops. At night, once you come back from work, it is important to massage the feet with apposite tools helping stimulating blood flow, sensibility, proprioception, energetic rebalance of the organs, which according to Chinese Medicine find in the foot their connection point. If you follow these suggestions and work globally, searching for the causes, you will see the results.

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