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 Board-Certified Nursing Foot Care & Teaching
 Clinic, Residential, Group-Settings, Tucson, Arizona
www.HFHE.us - (520) 579-4340 - office@HFHE.us



Hand-Out

How to Take Care of
-Corns, Calluses, Bunions, and Hammertoes at Home-
or with surgery

07/15/14

Knowledge is power, and this hand-out offers you tips on how to prevent the formation of bunions and hammertoes, as well as the formation of corns and calluses!

The hand-out also offers you tips on how to protect bunions and hammer-toes and how to reduce the formation of corns and calluses!

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1-Uncontrollable factors for development of bunions and hammer-toes:

Genetic factors: Genetic factors play a role in the development of bunions and hammer-toes. Genetic factors often mean that you are “predisposed” to developing a certain condition, such as bunions or hammer-toes.

Look at the controllable factors in chapter 2, and try to be preventive by following the various kinds of advice.

Age, gender, and race: Of these, the factor of “age” is the most important. Our life-span is limited to less than 100 years in most cases. Our human body starts deteriorating in all aspects and at different ages. All of us can expect changes in our feet as we get older, sometimes in the forms of bunions and hammer-toes, due to generalized deterioration of our circulatory systems, our muscle strength, our nervous systems, and our bone structure.

Diabetes: Diabetes affects the nerves and circulation. Therefore, diabetics may be at higher risk for developing corns, calluses, and especially ulcers from the pressure points created by bunions and hammer-toes.

Arthritis: Arthritis can be a reason for developing bunions and hammer-toes due to the swollen joints, extra bone growth on the joints, and contractures.

Gout: After an acute gout attack, the affected joint may develop chronic inflammatory arthritis. This is caused by the uric acid crystals that destroy the cartilage of the affected joint. It causes arthritic changes with swelling and pain. This usually happens in the big toe, but it can also happen in the first metatarsal joint and contribute to a bunion, or in one of the other toes and contribute to a hammer-toe.



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Any kind of systemic disease that affects the muscles and nerves:

Loose muscle tone can result in a weakened medial longitudinal arch, whereas unrelieved muscle tone can result in contractures. Nerve damage can result in inability of muscles to contract. Any or all of the above, from various chronic diseases or acute conditions, can result in the formation of bunions and hammer-toes.

2-Controllable factors for development of bunions and hammer-toes:

This section has a lot of repetition from the hand-out on “buying shoes and socks,” but, it will not be as extensive. Please take the time to review the hand-out on buying shoes and socks for a more thorough explanation.

Shoes, over-the-counter inserts, or custom-made orthotics:

The medial longitudinal arch of the foot relaxes in the adaptive phase of gait where the foot flattens out and pronates up to 4 degrees to allow for the foot to adapt to the surface, without sustaining any injuries. During the propulsive phase of gait, the arch tightens up and the foot supinates. This rigid structure of the foot allows the body to propel forward in gait. If the foot pronates more than 4 degrees in the adaptive phase, continuous pronation takes place and the foot is at risk for developing bunions and hammer-toes.

An “artificial” arch to support the medial longitudinal arch of the foot can help prevent or correct pronation, and possibly the formation of bunions and hammer-toes, caused by pronation. Some tennis shoes have an arch that is adequate. A few over-the-counter inserts will do the job. However, often a custom-made orthotic is needed where the casting of the foot is done in a neutral sitting position.



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Muscle strength in the feet and lower legs and patency of the medial longitudinal arch:

The hand-out on “plantar fasciitis” shows various exercises that can be done easily at home to strengthen the muscles that support the medial longitudinal arch of the foot. All these exercises will help prevent or correct pronation of the foot, as well as plantar fasciitis. Consequently, the chance for developing bunions and hammer-toes is also minimized.

3-How to prevent corns and calluses (and ulcers) in areas of the foot affected by bunions and hammer-toes:

This section also has repetitions from the hand-outs on “buying shoes and socks,” “taking care of skin and nails,” and “where to buy shoes, socks, and foot care supplies.” Please review these hand-outs for more thorough information.

If the bony structure of the foot has developed bony points that rub against the skin from the inside of the foot, any additional rubbing in the same place from the outside, such as from a shoe or from the floor while weight-bearing, will cause formation of corns and/or calluses.

Calluses are thickening of the keratin layer of the skin, caused by repeated friction or intermittent pressure. Calluses are formed on top of the skin.

Corns, on the other hand, are thickening of the keratin layer of the skin, also caused by repeated friction or intermittent pressure, that form a cone or tubular shape into the skin towards the source of the internal pressure.



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Calluses and corns are caused from both internal and external friction or pressure. You may not be able to do anything about the internal source of friction or pressure, except for surgical correction; however, you can cushion the area of friction or pressure on the outside of the foot, or redistribute it.

- This can be done by wearing a shoe that is big enough to prevent rubbing against the area(-s) to prevent the formation of both corns and calluses from the bony points on bunions and hammertoes.
- This can be done by using open or closed foam or gel sleeves over the affected toes, by wrapping lamb's wool around the affected toes, or lifting the hammer-toes with a hammer-toe crest to prevent the formation of corns or calluses on the bony joints of the hammer-toes.
- This can be done by applying adhesive disks with the center removed over the bony points on the metatarsal pad of the foot, which is the location of the first joint of the affected hammer toe(-s). By redistributing the pressure, the formation of a corn can be prevented.
- Finally, a bunion cushion can be placed over the great toe above the bunion. The cushion will cover the area surrounding the bunion and divert the pressure and friction away from the center of the bunion.

Corns and calluses that are unrelieved may crush the underlying tissue and cause the formation of an ulcer. If you're diabetic, or have poor arterial circulation for other reasons, it's important to get medical attention for this.



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4-How to remove corns and calluses in areas of the foot
affected by bunions and hammertoes:

Calluses can be removed at home with an emery board when the skin is dry or with a pumice stone when the skin is wet. A podiatrist or foot care nurse can also remove the calluses with a dremel tool. The “egg” with a built-in razor blade is not recommended as you're unable to visualize the area where the callus is being shaved away. You almost have to wait for an injury to occur to know when to stop.

It is not recommended that you try to remove corns at home. Medicated corn pads use acid to remove the corn; however, the acid often destroys the surrounding healthy tissue, as well. If you're diabetic, you may not feel the associated pain; however, if your nerves are able to signal pain, you'll quickly realize that this is very painful. A podiatrist or a foot care nurse with the proper credentials can easily remove your corns safely with a sterile scalpel.

5-How to treat ulcers in areas of the foot affected by
bunions, hammer-toes, corns, and calluses:

An ulcer caused from the crushing pressure of unrelieved calluses and corns is painful. Another clue that an ulcer is forming under a corn or callus is that it often leaves specks of dried blood in the keratin layer of the skin.

The ulcer needs to be cleaned and treated by professionals, and the pressure or friction also needs to stop to prevent further damage. Off-loading may be necessary until the ulcer heals. It's important to reduce the corns and calluses before they cause an ulcer to develop. Or, even better, it's important to prevent the corns and calluses from developing in the first place.



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6-Surgery, recovery, and complications from bunions and hammer-toes:

Surgery to correct a physical condition of the foot should always be the last choice among treatment options; however, it may be the best option.

Because bunions and hammer-toes often are caused by a pronated foot with a weakened medial longitudinal arch, causing the vertical and horizontal angles of the metatarsal bones to deviate, surgical correction of bunions and hammer-toes can be difficult. If the problem of the bunion or hammer-toe originates in the mid-foot, fixing the bunion or hammer-toe at the site of the damage may not be a permanent solution, unless the problem of the mid-foot is addressed, as well. It may be necessary to also wear orthotics after the surgery to correct the pronation.

Make sure to discuss with the surgeon what the expected outcome looks like and what the chances are that the surgery will or will not be a permanent success.

Also, discuss the recovery period. Many people would not be able to follow the requirements for a successful recovery due to the extended time that “normal” walking is prohibited.

7-References and links:

Please review the various hand-outs from my website, www.HFHF.us with additional information. The four most relevant hand-outs are the ones on “plantar fasciitis,” “buying shoes and socks,” “taking care of skin and nails,” and “where to buy shoes, socks, and foot care supplies.”