Get in the Comfort Zone with 3D Printed Custom Foot Orthotics

About L. David Richer, DPM

Dr. David Richer is the founder of the Foot, Ankle & Leg Center, a premier podiatry practice in Scottsdale, AZ providing exceptional medical and

surgical care in a comfortable, relaxed setting where we treat patients like family. Our mission is to eliminate your pain and get you back on your feet quickly so you can enjoy your favorite activities and live your best life. Our specialty areas include heel pain, sports injuries, chronic foot & ankle pain, ingrown toenails, flat feet, plantar warts, fungal toenails, and neuropathy. We have a modern office with the most advanced technologies. We offer 3D printed custom foot orthotics, Swift Immunotherapy for plantar warts, Radial Pulse Wave Therapy for heel pain, Lunula laser therapy for fungal toenails, MLS laser therapy for painful conditions, and regenerative medicine such as PRP therapy. You don't have to walk in pain. Request an appointment today.















Have you been dealing with foot or ankle pain that isn't getting better, is slowing you down, or preventing you from enjoying your favorite activities? Most patients with foot or ankle pain have a misalignment of their foot and/or ankle causing their condition. Having too low of an arch or too high of an arch places additional stress on the joints and soft tissues of the foot and ankle and can lead to conditions such as plantar fasciitis, bunions, bone spurs, arthritis, hammertoes, Morton's neuroma,

Achilles tendonitis, arch tendonitis, and even ingrown toenails. Knee, hip, and low back pain are common as well.

A misalignment of the foot or ankle is usually treated with supportive shoes, and custom foot orthotics. Orthotics are prescription-strength devices, worn in your shoes, to correct a misalignment.

There has been a recent technological revolution in the fabrication of custom foot orthotics. Now, we can accurately measure your foot with a 3D laser scanner. A thorough analysis of how you walk, and how pressures are distributed while you walk, is performed with a gait plate with 40,000 sensors. Once the data is captured, artificial intelligence within the software

suggests appropriate modifications of the orthotic to optimize your foot function and comfort. The orthotic is then printed on a 3D printer in a lattice arrangement, with different densities in different areas, giving you more support where you need it, allowing for precision support and control of your foot. The result is an extremely lightweight and comfortable device that gives unparalleled support.

If you have been suffering from foot or ankle pain, give us a call to see if 3D printed custom foot orthotics could benefit you and get you back in the game.





Dealing With Foot Blisters

Blisters, though painful and annoying, serve a useful purpose. Friction causes thin layers of skin to separate. To prevent further damage, the body gets our attention via pain and fills the gap with fluid — a buffer effect — forming the signature bubble.

Besides ill-fitting footwear or socks (too small, too big, seams, etc.), foot conditions such as a bunion or Haglund's deformity can invite blister formation, as can moisture.

The best course of action for the average blister is to leave it alone — and remove the source of the friction. It should heal on its own in a few days, and the body will reabsorb the fluid inside. A simple band-aid will usually do. Avoid popping them since all you're doing is damaging more skin and rendering the area more vulnerable to infection.

For large blisters, there is a risk that the elevated layer of protective skin "gets caught" on something and tears off, exposing the injured area. In some cases, popping the blister might be best, if done correctly (those with diabetes should never pop a blister; diabetics are more susceptible to serious complications):

- Wash your hands and the blister with warm, soapy water.
- Sterilize a needle by heating it over a flame or dipping it into rubbing alcohol.
- Gently poke a hole or two along the blister's edge to allow the fluid to drain. You might need to gently push to aid the process. The overlying skin needs to remain intact for protection.
- Then apply an antibiotic ointment and bandage.

After popping a blister, stay alert for signs of infection: redness, swelling, warmth, or drainage. If they occur, give our office a call right away.

Mark Your Calendars

- **Aug. 1** Pinball Day: Until the mid-1970s, pinball was banned in most major U.S. cities.
- **Aug. 4** Chocolate Chip Cookie Day: "Cookie" comes from the Dutch word "koekje," which means "little cake."
- **Aug. 9** Smokey Bear Day: "Smokey Bear" is his real name, not "Smokey **the** Bear"; "the" got inserted into a song to maintain the rhythm.
- **Aug. 16** Tell a Joke Day: Did you hear the one about the constipated old-school mathematician? He worked it out with a pencil.
- **Aug. 19** Aviation Day: Being in an in-flight airline cabin reduces one's sense of taste by 30%.
- **Aug. 25** Banana Split Day: Walgreens drugstores are frequently credited with launching the banana split's popularity.
- Aug. 30 Toasted Marshmallow Day: Originally, the root of the mallow flower gave marshmallows their flavor. Mallow flowers grow in marshes.

 Voilà!



Healthy Fusion at Its Best!

Sweet, succulent pineapple is a summertime favorite. This "fruit" is actually comprised of multiple berries fused into a central stalk. Low-calorie pineapple is also loaded with manganese, vitamins B and C, and copper; rich in fiber; a great source of antioxidants; and provides an immune system, bone health, and energy boost. Its secret weapon, though, is bromelain, a multiple-enzyme substance that breaks down proteins. Pineapple has it in spades.

Bromelain has anti-inflammatory properties. When administered prior to surgery, it has been found to accelerate the healing process following surgery and reduces inflammation more quickly. It's noted for relieving the inflammatory pain associated with arthritis and is thought to assist in breaking down cholesterol plaque. Bromelain can also aid the digestive process, especially useful for those with stomach and intestinal issues.

In 2024, the top pineapple-producing countries in the world were Indonesia, the Philippines, and Costa Rica. Hawaii had been in the mix until the 1980s, when economic factors shifted production and canning to other countries. Del Monte closed shop in Hawaii in 2006.

Growing pineapples requires patience. It takes two to three years for a single pineapple to mature from a seed. The "fruit" grows above ground on top of a bush of spiky leaves, and once they're harvested, the maturation process ends — they're as sweet as they'll ever be. In addition, a pineapple's ridged skin rather than its color may best indicate its ripeness: the flatter the skin, the riper the fruit.

Consuming pineapple isn't always a tropical paradise. Eating (or drinking) too much can lead to digestive upset; those with acid reflux may have their symptoms exacerbated; and bromelain clashes with various medications. If you have questions, it's always wise to consult your physician.



Grilled Eggplant Parmigiana (Italy)

Servings: 4; prep time: 10 min.; cook time: 30 min.; total time: 40 min.

This recipe uses grilled eggplants instead of fried ones, maintaining wonderful, hearty flavors without being too heavy. A true comfort food — easy to make, extremely satisfying to eat.

Ingredients

- 2 medium eggplants, around 2 pounds total
- 1 medium onion
- 2 tbsp. extra virgin olive oil
- 3 cups tomato purée
- salt and pepper, to taste
- 15 basil leaves
- 2 mozzarella balls, around 6 oz., diced
- 1/2 cup Parmesan cheese, grated

Directions

- 1. Preheat oven at 400°F.
- 2. Cut eggplants into 1/3-inch-thick slices and grill them on medium-high heat for 3 to 4 minutes, until slightly charred on each side.
- 3. Meanwhile, prepare the sauce. Mince onion and cook it in olive oil for a few minutes. When it turns golden in color, add tomato purée, salt, and pepper. Simmer on low heat for at least 10 minutes, but the longer the better. If you want, you can skip this step and use store-bought marinara sauce.
- 4. Cover the bottom of a 9x9-inch baking pan with a couple tablespoons of tomato sauce.
- 5. It's time to compose the parmigiana. Layer the different components following this order: grilled eggplant slices, tomato sauce, basil leaves, diced mozzarella, and Parmesan cheese. You should have enough ingredients to make around 5 layers.
- 6. Bake for 15 to 20 minutes, until bubbling and slightly golden.
- 7. Once ready, let it stand for 10 minutes before serving. If you want, you can garnish with some more basil leaves.

Recipe courtesy of www.mediterraneanliving.com.



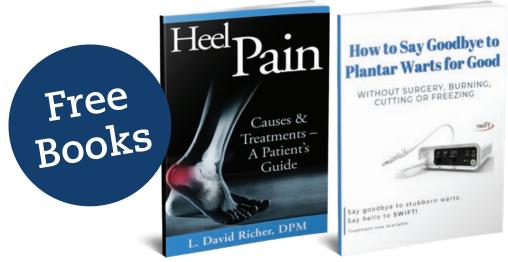
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One More Thing for Diabetes to Threaten

The CDC estimates that over 38 million Americans have diabetes — nearly 12% of the population — and 8 million of them don't even realize it. Uncontrolled diabetes can lead to cardiovascular disease, kidney damage, vision impairment, nerve damage, and

diabetic foot wounds. Sometimes overlooked is the effect diabetes has on tendons, including the Achilles tendon.

When protein or fat mixes with sugar in your bloodstream, harmful compounds called advanced glycation end products (AGEs) form. At normal blood sugar levels, AGEs develop slowly and the body has ways of dispensing with them. But when blood sugar is elevated, such as with unmanaged diabetes, AGEs can run amuck.

Collagen, a type of protein, is a component of the Achilles tendon. When it bonds with excess sugar in the blood, the resulting AGEs can cause a diabetic's tendon to thicken, diminishing its ability to bear weight. This can lead to tendon damage, including complete tears.

Surgery or no surgery, unmanaged diabetes will slow the Achilles' healing process. Damage to the Achilles tendon limits ankle movement, which may transfer more pressure to the middle of the foot, raising the risk of dangerous foot ulcers. Even diabetics who undergo successful Achilles tendon surgery have a one out of three chance of needing it again in the future.

It's always best to stay one step ahead of diabetes. Lower your blood sugar, eat a healthy diet, exercise daily, shed excess weight, visit your doctor(s) regularly, and take medications as prescribed. Your Achilles tendon — and heart, blood vessels, brain, kidneys, eyes, and feet — will thank you.

Make our office part of your diabetic healthcare team!