



# Crush Injuries to Feet Can Be Life-Threatening

## About the Doctor

Terence D. Bredeweg, DPM



A West Michigan native, Dr. Terence Bredeweg was born and raised in the Grand Rapids area. He earned his bachelor's degree in cell and molecular biology from Grand Valley State University, then moved to the Chicago area to earn his doctor of podiatric medicine from the William M. Scholl College of Podiatric Medicine at Rosalind Franklin University.

Dr. Bredeweg returned to Michigan for his podiatric surgical residency at Henry Ford Wyandotte Hospital. He then moved back to the west side to join Kalamazoo Podiatry, and later became a partner in the practice in January 2015. He became lead podiatrist in January 2016, after Dr. Redmond's retirement from full-time practice.

Dr. Bredeweg believes that spending time with patients, educating them about their condition and treatment options, and helping them feel empowered to make decisions about their health care are key to providing the best outcomes.

In his free time, you might find Dr. Bredeweg reading a book or watching the game. He also enjoys outdoor activities, including golf, fishing, and skiing.

Feet struck by heavy, falling objects; run over by a car or agricultural/ industrial machinery; or injured in an auto accident often experience major crush injuries. Fractures, lacerations, mangled tissue, and nerve damage are frequently involved, along with pain, swelling, and sometimes numbness.

Crush injuries of the foot should be treated immediately by a podiatrist, or at the ER if after hours (but ask for a podiatrist). Not only do the above-mentioned effects need to be addressed, but the area will be assessed for acute compartment syndrome, a dangerous condition in which internal bleeding and/or swelling cause pressure to build between foot muscles and their surrounding sheaths. The pressure buildup can cut off circulation, resulting in severe, permanent tissue damage and sometimes death. If acute compartment syndrome is evident, emergency surgery will be performed.

It may take several hours to a couple of days for acute compartment syndrome to develop. You will be given instructions to return to our office or the hospital if you experience the following:

- intensified pain
- numbness or a pins-and-needles sensation
- tightness, increased swelling, or bruising
- new pain that feels like a deep ache in the affected area

In some cases, a crush injury might be relatively minor — such as dropping a moderately heavy book on your foot — meaning there is only superficial tissue damage, little pain, and perhaps light bruising. This injury may heal on its own through rest, icing, compression, and elevation (RICE), but it should be checked out at our office anyway. For example, a fracture may lurk behind a bruise. Don't self-diagnose.

Crush injuries are serious business. If you experience one, contact our office immediately.



# A 'Plantar Plate Tear' Sounds Rather Unpleasant

A plantar plate tear is a significant injury to the ball of the foot that is commonly mistaken for other conditions. An early and accurate diagnosis is key to preventing it from becoming a chronic issue and creating other problems.

Plantar plates are ligaments that hold the metatarsophalangeal (MTP) joints in place. Each foot has five MTP joints — they are the middlemen for the toes and the metatarsal bones (five long bones along the top of the foot). However, only the four lesser toes have plantar plates.

The plantar plates are responsible for keeping the toes contained in the MTP joints, which is especially critical when the toes bend and push off while walking or running, and then return to a straightened position. When a plantar plate stretches or tears, pain and swelling follow in the ball of the foot and extend to the toe; pain may be more prominent if you bend the toe upward; and the affected toe may “pop up” or drift to the side and form a “V” shape with a neighboring toe. The second toe is the most vulnerable to plantar-plate injury.

The following factors contribute to these injuries:

- Bunions can cause abnormal, repetitive stress on the plantar plate of the second toe.
- Excessive pronation, high-heeled shoes, and playing certain sports ripen the chances of plantar-plate dysfunction.
- A single traumatic event can disrupt the plantar plate.

Untreated plantar-plate injuries can lead to increased pain, hammertoes, and arthritis. In early stages, conservative measures are highly successful. Delayed treatment may lead to surgery and six weeks in a walking boot. The choice seems obvious ... our office stands ready to help.

## Mark Your Calendars

- May 5** Cartoonist Day: Gary Larson (The Far Side) has three insects named in his honor.
- May 7** Kentucky Derby: Winning horses bred outside U.S.: 4 (Canada, 2; Great Britain, 2).
- May 8** Mother's Day: Busiest restaurant day of the year! Day with most phone calls, too.
- May 15** National Slider Day: White Castle has and pitcher Steve Carlton had wicked ones.
- May 20** Pick Strawberries Day: The average strawberry has approximately 200 seeds.
- May 30** Memorial Day: Arlington National Cemetery, former property of Gen. Robert E. Lee.
- May 31** Save Your Hearing Day: Outer ears get bigger as we age. Blame gravity and cartilage.





# Nature, Science, and Motherhood

In the first few months following childbirth, most moms (70 to 85 percent) cradle their newborns on their left side. Makes sense for a right-hander (keeps the dominant hand free), but roughly two-thirds of left-handed moms do the same thing. Sensory information from the left side of the body is processed in the right side of the brain — the same hemisphere where emotions are processed. Many researchers believe holding the baby on the left side strengthens the mother-infant bond. Babies like the familiar, comforting sound of Mom's heartbeat, too.

Protective-mother instincts are well-documented among mammals, including normally docile cows. Over a recent 15-year span in Great Britain, cows killed 74 people. Most of the killers were cow moms with youngsters. Farmers comprised the majority of victims, but innocent walkers passing by got attacked, too. The government pleaded with farmers not to pen new bovine moms in publicly accessible fields.

Fifty to 80 percent of pregnant women report brain fog during pregnancy, which can last up to two years. The reason? Gray matter is temporarily lost during pregnancy. The good news is that women who suffer the greatest gray-matter losses rate highest on standard assessments of their attachments with their newborns.

Pregnant bottlenose dolphins begin whistling much more frequently about two weeks prior to giving birth. Each dolphin has a unique whistle; the baby in the womb becomes accustomed to this signature whistle prior to birth, giving it a fin up once hitting the outside world.

The adage "gain a child, lose a tooth" has merit. On average, mothers who give birth three or more times lose four more teeth over their lifetimes than moms with fewer than three pregnancies. Gum disease, calcium-absorption issues, and missed dental appointments during pregnancy can add up over time.

# Caramel Cheesecake Brownies ... from Scratch ... for Mom

Yield: 9 brownies; Prep time: 10 minutes; Cook time: 40 minutes

*An indulgent treat that Mom will appreciate!*

## Cheesecake Filling Ingredients:

- 4 ounces cream cheese
- ½ cup mascarpone
- 3 tablespoons sugar
- 1 tablespoon all-purpose flour

## Brownie Batter Ingredients:

- ⅔ cup all-purpose flour
- 1 tablespoon instant espresso powder
- 1 teaspoon baking powder
- ½ teaspoon salt
- 2 ounces dark chocolate chips
- 2 ounces caramel chips
- ½ cup unsalted butter, cubed
- 1¼ cups sugar
- 2 large eggs, room temperature
- 1 teaspoon vanilla extract

## Cheesecake Filling Instructions:

Place cream cheese in a microwave-safe bowl, then heat for 30 seconds until easily spreadable. Add the mascarpone, sugar, and flour, then whisk to combine. Set aside.

## Directions

1. Preheat oven to 325° and place rack in the middle position. Line an 8" x 8" baking pan with aluminum foil, then spray well with nonstick baking spray.
2. Whisk together flour, espresso powder, baking powder, and salt. Set aside.
3. Combine chocolate and caramel chips with butter in a bowl, then microwave in 30-second increments until completely melted, stirring after each interval.
4. In a large mixing bowl, whisk together sugar, eggs, and vanilla. Add the chocolate-caramel mixture, then whisk until smooth. Add flour mixture and fold until just combined.
5. Pour all except 1/2 cup of the brownie batter into the prepared pan. Top with cream cheese filling, and spread evenly along the top.
6. Dollop the remaining brownie batter on top, then use the edge of a knife to swirl batter into cream cheese.
7. Bake for 40 minutes, or until toothpick or cake tester inserted into the brownies comes out clean. Let cool in pan for 1 hour. Cut into 9 equal squares.

Recipe courtesy of [www.aheadofthyme.com](http://www.aheadofthyme.com).





# KALAMAZOO PODIATRY

333 Turwill Lane Kalamazoo, MI 49006  
269-373-1019

305 Thomas Street Allegan, MI 49010  
269-673-8757

[www.KalamazooPodiatry.com](http://www.KalamazooPodiatry.com)



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## Keep Feet and Ankles Healthy While Gardening

According to the National Gardening Association, roughly 25 percent of American households are engaged in gardening, whether at home or at a community garden. Gardening is an excellent outdoor activity, but be mindful of your feet and ankles.

Before getting down to horticultural business, do some lower-extremity stretching (and upper). It can lower the odds of aches, strains, and stiffness the next day. Gardening involves a lot of bending, squatting, extending, and lifting.

Never go barefoot, and avoid wearing flip-flops or sandals. Feet will be susceptible to puncture wounds from stepping on a gardening tool, thorns, nails, sharp stones, etc. In addition, there's no protection against miserable toe stubs, which sometimes fracture bones or damage ligaments. Preexisting conditions like plantar fasciitis, tendonitis, and arthritis can be exacerbated, too. Barefoot gardeners are also vulnerable to a host of bacteria and viruses found in soil that can enter cracks in the soles of the feet and stir up trouble.



Wear durable, supportive shoes, such as sneakers or boots, to minimize the risk of puncture wounds and to provide ankle support while walking on uneven garden ground. Speaking of which, in order to avoid ankle sprains and fractures, keep your eyes peeled for holes dug by pesky critters that might not be immediately obvious.

Water intake plays a key role as well. Proper hydration while gardening can help prevent cramping and reduce swelling in the feet and lower legs.

If gardening takes a toll on your feet and ankles, schedule an appointment with our office. We'll help them to blossom once again.