

# This doctor would rather not do another amputation. So, she invented a monitoring device to help patients.

Dr. Karen Cross's handheld device could help revolutionize care for people with diabetes.

By **Kate Rae** | April 07, 2020



*Dr. Karen Cross founded Mimosa Diagnostics as a way for people to monitor their diabetes from home after her grandfather lost his foot to the disease. Here, Kate Rae talks to her about how the device works and what it will mean for patients.*

“The surgical part of an amputation is relatively straight-forward. I am focused, I am in the moment, I know exactly what to do. But placing the limb in the bucket is something else entirely. You know that life has changed forever for that patient. I always take a moment to grieve for them, and for their loss.

It may not seem like a huge deal — many people can have active, healthy lives after the loss of a limb, of course, but for someone with diabetes, it's a terrifying time, both mentally and physically. Thirty percent of patients die within a year, because by the time we're having to amputate, the disease has really taken over and other organs may be involved, plus the trauma of the removal elicits an intense immunoresponse in the body and incredible stress.

My wonderful grandfather is one of those patients who lost his leg. He lives in rural Newfoundland, and he battled for years to keep it. My mother took incredible care of him, regularly sending me pictures of his feet, and I'd desperately try to guide them from Toronto. One day it hit me: We're doing this all wrong. We need to have a way for people to bring the necessary technology into their own homes. Because the ulcers that diabetics can develop on their feet are treatable — if they're caught early.

I'm so proud to have created [a handheld device](#) that uses near-infrared light to accurately and non-invasively assess tissue health at [Mimosa Diagnostics](#). It can be easily used by a patient or a caregiver, and the images produced will help inform your next steps: you need to see a podiatrist, you may need a vascular surgeon to help with the blood flow, or you may need more urgent treatment.

We're still a couple of years away from it being in people's hands, but I am so excited about it.

Right now, monitoring your diabetes takes about three hours a day. Having to inspect your feet on top of that can feel incredibly overwhelming. You may also have difficulty with your sight, or mobility issues, and a loss of feeling means that problems can become advanced without you knowing. Loved ones can help, of course, but they don't always know what they're looking for, and getting to a healthcare provider just may not be possible — especially for patients in rural communities, who are two to three times more likely to lose a leg. Mimosa is going to change that.

There can be so much negativity in our healthcare system, and as a patient, it can be really easy to lose hope if you don't have great cheerleaders. My grandfather has that in me and my mother. Now I can do that for others, too." —*as told to Kate Rae*

*Photo credit: Jenna Marie Wakani*



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