

BroadcastMed | Insulin Pumps and Sensors: Treating Diabetes with Technology at Mayo Clinic

YOGISH KUDVA: Hi, I'm Yogish Kudva. I'm an endocrinologist at Mayo Clinic, Rochester, and my main area of interest is diabetes. The diabetes technology clinic at Mayo Clinic, Rochester was set up several years ago and has several colleagues of mine with particular interest in diabetes technology. These colleagues include MDs, as well as nurse practitioners to provide care. Using these devices to improve diabetes care requires continuing education, and therefore, we have diabetes educators, whose area of expertise is diabetes oriented devices.

Patients who would benefit from using diabetes technology are patients with certain kinds of diabetes. This includes type 1 diabetes, patients with type 2 diabetes, who are using insulin pumps, and other categories of patients, such as patients who've had their pancreas removed for whatever reason, and therefore have diabetes, as a result of that. Patients with these kinds of diabetes may particularly benefit from diabetes technology if they have extreme swings in glucose, resulting in low glucose and high glucose frequently.

If you have this kind of diabetes, then appropriate use of diabetes technology could transform your life. But to use it properly, you need to come to a clinic and meet with providers who have deep experience with using these technologies and can help you use technology, so that you avoid these distressing issues in the future, to the fullest extent possible.

So specifically, I would like to draw your attention to three different devices. One is the insulin pump, and the insulin pump continues to improve year to year. There are two kinds of insulin pump now. There is the conventional pump, which has got large tubing and usually is like a pager like device worn on the belt, and there is the patch pump, which essentially is a cartridge of insulin that could be used anywhere on the body, and powered by a handheld device.

The second device that has become more and more utilized is the continuous glucose monitor, and the continuous glucose monitor has this ability to provide alarms and alerts when the sugar goes low or high. And devices that are able to merge the two, such as continuous glucose sensors and insulin pumps in one system-- and these devices are called closed loop systems. Each of these is available for various kinds of patients, and I think one of our challenges from the diabetes technology clinic is to make sure we see patients early enough after these devices are released, such that we can get them the benefits of using these devices as early as possible.