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Disaster Relief for Brain Cells

An Interview with **Antoine M. Hakim**, Brain Scientist, University of Ottawa
2017 Canada Gairdner Wightman Award Laureate

Think of a stroke, when it happens, a blood clot has gone up. A part of the brain is now deprived of its blood. Think of it like you would of an earthquake. In the middle, the buildings are crumbled. No one will ever live in them again. But just outside of that, the buildings, the walls are cracked. The buildings are eventually going to crumble unless you hurry up and go in there, and strengthen those walls back up into good function.

That's exactly what happens. There's a gradient of blood flow in the brain around where the clot has just come and impacted itself.

So we actually study patients, to whom I owe an incredible debt of gratitude, who had just suffered a stroke a few hours before, brought them into the PET unit, brought them into imaging, and studied what was going on, and confirmed that in fact that region that is affected doesn't immediately die. It's not working, it's resulting in deficits, but it's alive. All of a sudden, we had work to do.

There was a drug that was invented that busted the clot, and if the patient got this drug in a short period of time after symptoms appeared, they came in handicapped and walked home the following day.

That led to the creation of the Canadian Stroke Network, which I had the enormous honour of leading.

That is a beautiful Canadian invention. Bringing science to the public, switching stroke from a lifelong handicap to a temporary problem that you can walk away from has been a major achievement that I will always be very proud of.