

LIFE HEALTH

A miner could save millions from blindness



By [Dr. W. Gifford-Jones](#), Special to Postmedia Network
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Would I, as a doctor, ever expect to meet a miner?

As Mark Twain remarked, "A mine is a hole in the ground with a liar at the top."

Luckily, I accepted an invitation to do just that, and discovered there is something new under the sun. This week, how DIAGNOS, a Canadian company in Montreal, has developed what's called a computer-assisted retinal analysis (CARA). This computer software will save millions of people around the world from blindness due to Type 2 diabetes. So, did a miner become a retinal expert?

The slogan of DIAGNOS is, Beat it in a blink. Patients simply look into a camera and a photo is taken of their retina, the back part of the eye. It's the only part of the body where doctors can see arteries and veins and thus diagnose early diabetes.

Today, millions of people either suffer from Type 2 diabetes, or have undiagnosed diabetes. This disease is notorious for causing atherosclerosis (hardening of arteries) which decreases the flow of oxygenated blood to the retina. It's largely a silent disease that, undiagnosed, often leads to blindness.

<http://www.orilliapacket.com/2016/12/05/a-miner-could-save-millions-from-blindness>

So how can CARA prevent loss of vision? All that's needed is to do the math. In North America alone there are 28 million people with diabetes and millions more with pre-diabetes. Yet there are only 1,800 retinal specialists. This means that, even on this continent, millions will never see a retinal specialist, and never have a chance at early diagnosis.

So how did this miner become a retinal expert? I soon learned that miners drill hundreds of holes searching for the elusive big discovery. I also learned that each drill sample is different and is analyzed by a computer. In this case, the CARA computer, developed by a miner, is programmed to detect minor and major changes in the retina.

DIAGNOS computers have a huge advantage. Looking at retinas daily is tiring work and a weary doctor may miss a diagnosis. Remember my medical tip that, if you have a choice, the best time for surgery is at 8 a.m., not late in the day. But computers are never subject to fatigue and can screen 1,000 patients a day. So mass screening of the population is the secret of early diagnosis and treatment to prevent blindness.

There's also a major humanitarian aspect to this medical discovery. The CARA project is not only going to prevent blindness in this country. It is the only way to prevent loss of vision in many parts of the world where obtaining highly-specialized treatment is non-existent. Here, we complain of waiting to see a doctor. In some countries there are no retinal specialists to see.

The good news is that this project is not a dream that may happen in the future. It's already at work because governments now realize that early diagnosis of retinal disease means early treatment of diabetes, less loss of vision, and decreased cost of medical care.

For instance, the Minister of Health in the United Arab Emirates says, "With CARA we were able to know what patients are at risk, counsel them, and make a positive difference in their lives."

There is another advantage to the DIAGNOS project. We know that huge amounts of time are lost waiting to see doctors. Then more time is required to get to a clinic. In this case, DIAGNOS is a turn-key operation with a number of roving vans bringing the CARA program right to the patient's door. Currently, it's operating here in North America as well as in faraway places such as India, Dubai, Mexico Turkey, and Poland.

So, this week, I learned there's a lot more to miners than digging holes in the ground, and that sometimes, they strike gold. This miner developed a smart computer to save untold numbers from blindness. We know that the early detection of diabetes can prevent 85 to 95 per cent of cases of vision loss.

So it may not be too long before a CARA van stops at your workplace. Then a blink may save you from tragedy.

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