The amazing woman who can smell Parkinson’s disease — before symptoms appear

By Yanan Wang October 23, 2015

Joy Milne has always had a keen sense of smell, so she was unfazed. He was an anesthesiologist who worked long hours, and Milne assumed a growing tiredness that was explained by a devastating diagnosis:

“I could always smell things other people couldn’t smell,” Milne said. The charity Parkinson’s UK, where the other Parkinson’s patients’ smells were tied to the condition.
After the 65-year-old Perth woman off-handedly mentioned this observation to a few scientists, they decided to investigate. Researchers at the University of Edinburgh gave T-shirts to six people with Parkinson’s and six people without the disease. After the subjects wore the shirts, they were passed on to Milne, who then had to determine by smell whether each wearer had Parkinson’s. Her diagnoses were eerily accurate — and have potentially groundbreaking implications for people living with the disease. Milne made correct assessments for 11 out of the 12 cases. In the one case she got “wrong,” she insisted that a T-shirt worn by a member of the control group had the warning scent.

Eight months after the study was conducted, she was proven right, bringing her accuracy rate up to one hundred. The supposedly healthy individual contacted one of the doctors and informed him that he had, in fact, just been diagnosed with Parkinson’s.

“That really impressed us,” Edinburgh University scientist Tilo Kunath told BBC. “We had to dig further into this phenomenon.” Intrigued by Milne’s abilities as a “supersmeller,” scientists at the universities of Manchester, Edinburgh and London are undertaking a project to identify differences in the skin chemicals of people with Parkinson’s. Scientists believe that people with early Parkinson’s experience skin changes that produce a particular odor, the BBC reports. If they find the molecular signature responsible for the smell, it may be possible to develop a diagnostic test for Parkinson’s as simple as swabbing a person’s forehead.

As our understanding of it stands now, the disease is incredibly difficult to diagnose; doctors still rely on an observational technique developed in the early 1800s.
There is currently no cure for Parkinson's, a degenerative disorder of the central nervous system which causes shaking, slowness of movement and difficult walking as well as behavioral problems like dementia and depression.

Arthur Roach, the director of research at Parkinson's UK, said in the announcement that in addition to having a “huge impact” on diagnostic procedures, “[The research] would also make it a lot easier to identify people to test drugs that may have the potential to slow, or even stop Parkinson's, something no current drug can achieve.”

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