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PARKINSON'S DISEASE

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As we approach the bicentenary of James Parkinson's seminal paper on what he called "shaking palsy", it is clear that our understanding of Parkinson's disease has become significantly more nuanced (see page S2). Alongside the characteristic physical traits such as rigidity, tremor and shuffling gait, we know of other problems, such as loss of smell and the death of neurons that serve the heart. These symptoms often cause patients more trouble than their motor issues, and they also start earlier. Researchers are now exploring whether these non-motor symptoms might be useful as early diagnostic indicators (S5).

Diagnosis may be advancing, but treatment is still lagging. Deep brain stimulation has been available since the late 1980s and in many patients is very effective at controlling motor problems. But despite decades of research, its mechanisms remain murky (S10).

A clearer understanding of what drives Parkinson's would help in the search for treatments that can slow or halt the disease, and for biomarkers by which to analyse it (S4). One tantalizing suggestion is that Parkinson's is a prion-like condition that is caused by the spread of misfolded proteins in the brain — a theory that has been described as "the single most controversial question in the field right now" (S13).

Technology promises to alter the Parkinson's landscape. Smartphones, packed with sophisticated sensors, make it easy to monitor patients as they navigate the real world, helping physicians make informed treatment decisions (S8).

We thank the editors of *npj Parkinson's Disease* for their advice regarding the content of this Outlook.

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Michelle Grayson
Senior supplements editor

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