Multiple Sclerosis vs. Parkinson’s: Similarities and Differences

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Parkinson's vs. MS

It may seem like multiple sclerosis (MS), and Parkinson’s disease are a lot alike. When we review the symptoms, there are some similarities. And they’re both chronic, degenerative neurological conditions.

But they’re different conditions.

Let’s take a look.

Similarities and Differences

Both conditions affect the central nervous system, which is the brain and spinal cord. This means that the disease can affect almost everything that we do on a daily basis – sleep, eat, walk, talk, and feel. They also affect the nerves:

- In MS, the myelin (coating) of the nerves are broken down.
- In Parkinson’s, the nerve cells in the brain slowly begin to die.

And in both diseases, the symptoms generally start mild, but the symptoms typically progress and worsen over time.

Plus, they have similar symptoms, which we will discuss shortly.

However, there are distinct differences.

MS is an autoimmune disease. This means that the body perceives something as foreign, and it attacks itself – in the case of MS, it begins to attack the myelin. Parkinson’s is not an autoimmune disease.

The age at onset varies in these conditions; MS typically occurs between the ages of 20 and 50, while Parkinson’s usually happens after 60. In both conditions, it is not common for younger people to get the disease, but it is possible.

Symptoms of MS and Parkinson’s Disease

You’ll notice that there are some similarities – and differences – in MS and Parkinson’s disease.

Symptoms of MS:

- Fatigue. This is one of the most common symptoms associated with MS, affecting about 80 percent of people with MS.

- Numbness and tingling. This is often one of the first symptoms that people experience, and it may occur in the face, body, or extremities.
- Walking difficulties.
- Spasticity. Muscle stiffness with associated involuntary muscle spasms are experienced. This is most often experienced in the legs but can occur in any muscles.
- Weakness. This typically occurs as a result of unused muscles, as well as damage to nerves.
- Vision problems. This is also one of the first problems that are experienced; problems experienced are pain with eye movements, blurry vision, and poor contrast.
- Pain. Pain syndromes, in general, are common with MS and occur in approximately 55 percent of people with the disease.
- Dizziness and vertigo.
- Bladder and bowel problems. Bladder problems can occur in upwards of 80 percent of people with MS. Constipation is also exceptionally common, as is the ability to control bowel movements.
- Sexual problems. Sexual responses can be affected due to damage from the central nervous system. They can also by psychological factors, fatigue, and spasticity.
- Cognitive changes, emotional changes, and depression. All are exceptionally common; up to 50 percent of people experience cognitive changes, "including the ability to process incoming information, learn and remember new information, organize and problem-solve, focus attention and accurately perceive the environment." Emotional changes can be a result of the stresses of living with MS, and depression may the most common symptom of MS.

Symptoms of Parkinson's disease:

- Tremors. The tremors usually start in the hands and may begin with a back-and-forth of the thumb and forefinger, known as a pill-rolling tremor.
- Bradykinesia, or slowed movements.
- Rigid muscles. This can limit your movement, range of motion, and cause you pain.
- Poor balance and posture.
- Loss of autonomic movements, such as blinking, smiling, swinging of the arms while walking – all unconscious movements.
- Speech changes, such as speaking more softly, quickly or slurring. You may notice that your speech is monotone.
- Writing changes. You may notice that your writing has become very small or that it is hard to write.

Is It Possible to Have MS *and* Parkinson's Disease?

Unfortunately, yes – it is possible to have co-existing MS and Parkinson's disease. Given their similarities, you would think that they are too similar for them to co-exist together. They both affect the CNS, they are degenerative neurologic conditions, and it *just wouldn't be fair.*

However, MS is an autoimmune disease. Parkinson's is not. Given this fact alone, it is entirely possible for them to co-exist.

In 2015, a team of researchers set out to determine if co-existing MS and Parkinson's disease was coincidental or were a cause-effect situation – meaning, in this particular study, did the presence of Parkinson's increase the likelihood of developing MS?

The researchers studied 8947 MS cases with 44735 control cases. According to the study, "Our results suggest a causal effect of MS on PD in MS - whether this can be explained by the localization of lesions alone is not clear."

The Bottom Line

Although MS and Parkinson's are similar, they are entirely different diseases. Also, it is also entirely possible to have both conditions. Research indicates that Parkinson's disease may have a causal effect on the development of MS, but this remains to be proven.

Resources

Mayo Clinic (Parkinson’s Disease – Overview)

National Multiple Sclerosis Society (MS Symptoms)

Neurology (Parkinson’s Disease in Multiple Sclerosis: A Population-Based, Nationwide Study in Denmark)

WebMD (MS and Parkinson’s: Is There a Link?)