



Your Questions Answered

PARKINSON'S DISEASE

Q My two older brothers and older sister all have Parkinson's disease. My two younger brothers and I have shown no symptoms of the disease at this time. What are the odds that we three other siblings will develop PD?



DR. ZBIGNIEW K. WSZOLEK RESPONDS:

A The chance that you have the genetic form of Parkinson's disease is relatively high, but it's impossible to say how high without knowing more about your family history. For example, knowing if you have a parent or grandparent with Parkinson's can clarify whether your family carries one of five major genes thought to cause the disease.

The best advice I can give you would be to visit a genetic clinic—available at most major universities—where you can undergo a test to learn whether you are a genetic carrier or not. A genetic counselor can also explain to you the pros and cons of testing. It's important to realize that knowing you are a mutation carrier will not change anything, because we don't have a treatment available to halt progression of the disease. But some people are interested in genetic testing because they feel they can use the information to modify their lifestyle; some may choose not have children, for example, while others may decide to join clinical trials. Also, knowing whether or not you are a gene carrier may bring some piece of mind.

Zbigniew K. Wszolek, M.D., is professor of neurology at the Mayo Clinic College of Medicine in Jacksonville, FL, and clinical core director of the Morris K. Udall NIH/NINDS Parkinson Disease Center of Excellence grant awarded to the Mayo Clinic Jacksonville.

DO YOU HAVE A QUESTION TO ASK THE EXPERTS?
Send it to neurologynow@lww.com

NEUROFIBROMATOSIS

Q What is the latest on neurofibromatosis, which causes tumors to grow on nerves?



DR. SCOTT R. PLOTKIN RESPONDS:

A There's a lot of new research being done on neurofibromatosis. Here are two areas that I think are interesting:

WHOLE-BODY MRI

My research team and I are currently studying this technique, in which a person is scanned from head to toe in 45 minutes, and the stations are fused into a single image through sophisticated software. This technique has a number of potential advantages over traditional MRI scans. First, if patients have multiple tumors spread throughout their body, all the tumors can be imaged in a single MRI session. Second, these scans can help estimate a patient's overall response to treatment, even if their doctor is treating a specific tumor in their left arm.

CHEMOTHERAPY

Most neurofibromatosis-related tumors are benign, and their cells don't divide as rapidly as those in malignant (or cancerous) tumors. Instead of trying to kill dividing cells with traditional chemotherapy, we are using novel chemotherapy drugs that can suppress inappropriately activated signaling pathways that cause tumor growth. Researchers are interested in effective chemotherapy drugs since surgical removal of tumors is associated with risks. Another benefit is that chemotherapy treats the entire person rather than one specific tumor.

Scott R. Plotkin, M.D., Ph.D., is director of the Neurofibromatosis Clinic at the Massachusetts General Hospital Cancer Center in Boston, MA.



Whole body MRI scan of a patient with neurofibromatosis. Tumors are outlined in red.

SPINAL STENOSIS

Q What causes spinal stenosis, and what treatments are available for it?

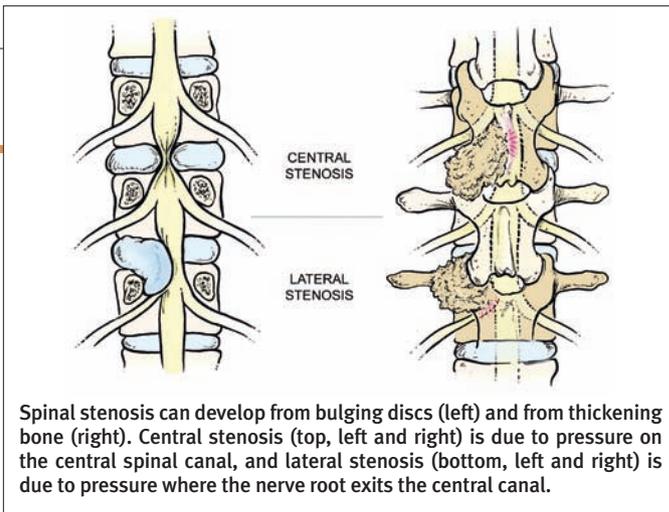


DR. MICHAEL Y. WANG RESPONDS:

A Spinal stenosis is primarily caused by arthritis, which in turn is caused by age. As people get older, the bones in their spine thicken and enlarge. These changes narrow the lumbar spinal canal, putting pressure on the nerves and spinal cord and in many cases, causing pain.

CURRENT TREATMENTS INCLUDE:

- Physical therapy
- Steroid injections
- Pain medications
- Spacers: A surgeon places a spacing device between the spinal column, which opens up the spine and relieves some of the pressure on the nerves.
- Laminectomy: A surgeon will remove the bone, cartilage, or ligament that is pressing on the spinal nerves.



Spinal stenosis can develop from bulging discs (left) and from thickening bone (right). Central stenosis (top, left and right) is due to pressure on the central spinal canal, and lateral stenosis (bottom, left and right) is due to pressure where the nerve root exits the central canal.

- Spinal fusion: If there is painful movement between two vertebrae in the spine, a surgeon will try to close the gap by growing the bones together. This can be done with real or fake bone.

Researchers are currently looking at using physical therapy to relieve neural compression around the spine and its ligaments. Other promising approaches include new injectables that are more effective at reducing inflammation with fewer side effects, and minimally invasive laminectomy and fusion procedures that cause less pain and shorter hospital stays.

Michael Y Wang, M.D., is associate professor of neurological surgery at the University of Miami Miller School of Medicine.

“CHEMO BRAIN”

Q I had chemotherapy recently and now am having trouble concentrating and remembering things. A friend told me I might have “chemo brain.” What is this? What can I do for it?



DR. SUSAN M. CHANG RESPONDS:

A “Chemo brain” was first reported in the 1980s and referred to the cognitive impairment following chemotherapy experienced by some breast-cancer patients. These women described symptoms of confusion, mental foginess, and forgetfulness. They also said they had a decreased attention span and trouble concentrating after chemotherapy.

This problem is real but may need a new name to

better reflect the issues people face when they undergo cancer treatment. Now experts are recommending that the condition be called “cancer and cancer therapy-associated cognitive change” because there are several factors that can contribute to it. It’s possible that chemotherapy affects how your brain functions, but people receiving cancer treatment who don’t undergo chemotherapy can also experience “chemo brain” symptoms. One possibility is that the hormonal changes that occur with hormonal cancer therapy can cause these symptoms. Another probable culprit is that the fatigue from the treatments can make you less able to concentrate or multitask. Feeling depressed about your cancer can also affect your ability to focus.

You should let your doctor know that you are experiencing these symptoms. Treatment will mostly depend on ruling out things like depression or lack of sleep that can affect the way you think.

Susan M. Chang, M.D., is director of neuro-oncology and the Lai Wan Kan Endowed Chair and Vice Chair of the Department of Neurological Surgery at the University of California, San Francisco School of Medicine.