

Flight Surgeon Notes #10

The Flight Surgeon's Report is Devoted to Common Health Concerns of Senior Citizens.
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Parkinson's Disease

Parkinson's disease is a complex neurologic disorder that has characteristics of a motor disorder, in which both upper and lower extremities are involved. It requires the diagnostic and therapeutic expertise of a specialist in Neurology (Neurologist). However, it is not limited to movement disorders since symptoms of delusions and hallucinations may also occur.

Parkinsonism is any condition that causes a combination of the movement abnormalities seen in Parkinson's disease — such as tremor, slow movement, impaired speech or muscle stiffness — especially resulting from the loss of dopamine-containing nerve cells (neurons). It has many signs and symptoms. **Tremor:** can occur at rest, in the hands, limbs, or can be postural. **Muscular:** stiff muscles, difficulty standing, difficulty walking, difficulty with bodily movements, involuntary movements, muscle rigidity, problems with coordination, rhythmic muscle contractions, slow bodily movement, or slow shuffling gait. **Sleep:** early awakening, nightmares, restless sleep, or sleep disturbances. **Whole body:** fatigue, dizziness, poor balance, or restlessness. **Cognitive:** amnesia, confusion in the evening hours, dementia, or difficulty thinking and understanding. **Speech:** difficulty speaking, soft speech, or voice box spasms. **Nasal:** distorted sense of smell or loss of smell. **Urinary:** dribbling of urine or leaking of urine. **Mood:** anxiety or apathy. **Facial:** jaw stiffness or reduced facial expression. **Also, common:** blank stare, constipation, depression, difficulty swallowing, drooling, falling, fear of falling, loss in contrast sensitivity, neck tightness, small handwriting, trembling, unintentional writhing, or weight loss.

Population Statistics

- Nearly one million will be living with Parkinson's disease (PD) in the U.S. by 2020, which is more than the combined number of people diagnosed with multiple sclerosis, muscular dystrophy and Lou Gehrig's disease (or Amyotrophic Lateral Sclerosis)
- Approximately 60,000 Americans are diagnosed with PD each year.
- More than 10 million people worldwide are living with PD.
- Incidence of Parkinson's disease increases with age, but an estimated four percent of people with PD are diagnosed before age 50.
- Men are 1.5 times more likely to have Parkinson's disease than women.
- *Young adults rarely experience Parkinson's disease.* It ordinarily begins in middle or late life, and the risk increases with age. People usually develop the disease around **age 60 or older.**

Estimated Healthcare Costs Related to PD in the U.S.

The combined direct and indirect cost of Parkinson's, including treatment, social security payments and lost income, is estimated to be nearly \$52 billion per year in the United States alone. Medications are available to help control symptoms. But they are not cheap.

Medications alone cost an average of \$2,500 a year and therapeutic surgery can cost up to \$100,000 per person. Not everyone who has Parkinsonism has Parkinson's disease. There are many other causes of Parkinsonism (secondary Parkinsonism), including:

- **Medications**, such as those used to treat psychosis, major psychiatric disorders and nausea
- **Repeated head trauma**, such as injuries sustained in boxing
- **Certain neurodegenerative disorders**, such as multiple system atrophy, Lewy body dementia and progressive supranuclear palsy
- **Exposure to toxins**, such as carbon monoxide, cyanide and organic solvents
- **Certain brain lesions**, such as tumors, or fluid buildup
- **Metabolic and other disorders**, such as chronic liver failure or Wilson's disease

Certain **lifestyle changes** also may help you cope with Parkinsonism:

- **Stay physically active.** To the extent you're able, try to sustain your normal daily activities, exercise regularly, and incorporate physical and occupational therapy as needed.
- **Create a safe environment.** If gait and balance become impaired, consider modifying your environment. For example, install grab bars next to your toilet or in your shower; remove obstacles, such as throw rugs; and keep frequently used items within reach.

The question has been raised about the beneficial effects of coffee/caffeine in preventing this disease. *I find this somewhat ironic since my Puritan upbringing has endowed me with the suspicion that anything pleasurable is evil!*

However, a significant study, published in the Annals of Neurology in 2001, provides evidence that caffeine is protective against Parkinson's. The study included 47,351 men and 88,565 women who were free of Parkinson's. The follow-up period was 10 years for men and 16 years for women. There was a definite inverse relationship between caffeine consumption and the incidence of Parkinson's. The lowest risk was observed with moderate intakes of 1-3 cups of coffee/day. These results support a possible protective effect of moderate doses of caffeine on the risk of Parkinson's disease. Since that original study, multiple other studies have confirmed this relationship between caffeine and prevention of Parkinson's.

Shingles

Shingles is an infection with the *Herpes zoster* virus. In its early life the viral infection was by *Varicella*, the virus of chicken-pox fame. It remains in the human body and mutates into the *Herpes zoster* virus. It usually presents with a linear rash that follows the path of a spinal nerve. The rash is a series of blisters that are accompanied by pain. It can become quite serious in different forms. I, personally, have 3 episodes of it in my life. It is most dangerous when it involves the eye region. There is treatment for it if begun very early, but, overall; it is better prevented than treated. A vaccine developed several years ago was not completely effective in preventing the disease. A recent newer vaccine, given as a series of two injections has greater promise. Thus far, side effects are few and it is worth the investment.

Flu Shots

It is appropriate to obtain the flu shot at the usual time in the autumn. At this time there are too many unknowns about the COVID-19 virus and any conflicts with future vaccines. Even after the COVID-19 vaccine is available, I would be reluctant to recommend it until it has been tried by a "few million people." So much of this type research is "*trial and error.*" Let others be the guinea pigs!

Low Dose Aspirin

Talk with your doctor about whether daily aspirin therapy might help you prevent a heart attack. Your doctor may suggest daily aspirin therapy if:

- You've already had a heart attack or stroke.
- You haven't had a heart attack, but you have had a stent placed in a coronary artery, you have had coronary bypass surgery, or you have chest pain due to coronary artery disease (angina).
- You've never had a heart attack, but you're at high risk of having one.
- You have diabetes and at least one other heart disease risk factor — such as smoking or high blood pressure — and you're a man older than 50 or a woman older than 60. The use of aspirin to prevent heart attacks in people with diabetes but no other risk factor is controversial.

The U.S. Preventive Services Task Force recommends daily aspirin therapy if you're age 50 to 59, you're ***not at increased bleeding risk***, and you have an increased risk of heart attack or stroke of 10 percent or greater over the next 10 years. If you're age 60 to 69, ***you aren't at increased bleeding risk***, and you have a high risk of heart attack or stroke of 10 percent or greater over the next 10 years, talk to your doctor about daily aspirin therapy.

More research is needed to determine the benefits and risks of daily aspirin use in adults younger than age 50 and older than age 70 before a recommendation can be made for or against aspirin use to prevent cardiovascular disease and colorectal cancer for these age groups.

Although aspirin has been recommended in the past for certain groups of people without a history of heart attack, there's some disagreement among experts about whether the benefits of aspirin outweigh its potential risks.

The Food and Drug Administration doesn't recommend aspirin therapy for the prevention of heart attacks in people who haven't already had a heart attack, stroke or another cardiovascular condition.

Vitamin Supplementation?

Vitamins are co-enzymes for the multitude of chemical reactions in the human body. They are found in infinitesimally small quantities in nature and in foods. Theoretically, if you have a perfect diet, you don't need vitamins, but who/what defines a "perfect diet?" Medical science has absolutely no idea what the daily requirement is for the human body, no less than it can define the optimum level of vitamins in the human body. Most research revelations of "*minimum daily requirement*" are based on a variety of animals, from mice, rabbits and dogs. We do know what vitamins cause a few vitamin deficiency conditions, such as lack of Vit. C causes Scurvy. British sailors avoided Scurvy by eating limes. Thus, the nickname for a British sailor is "*Limey*." Other conditions are *Rickets* of Vitamin D deficiency that deforms bone growth in children. *Pellagra* results from Vit. B₃ or Niacin deficiency. My GG Grandmother died of Pellagra during the Civil War.

We live most of our lives out of the sun. Vit. D is manufactured in the skin on exposure to sunlight. A number of studies in both England and this country have documented that supplementation with Vit. D-3 is very effective in nursing home patients. With higher doses of Vit. D-3, patients *lived longer* and ranked *higher on intellectual testing*. My recommendation for daily Vitamins is: (1.) a good all-purpose multi-vitamin to cover our ignorance. (2.) Vitamin D-3, 1000 i.u..

Future columns will note other issues of aging. Suggestions are welcome!

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