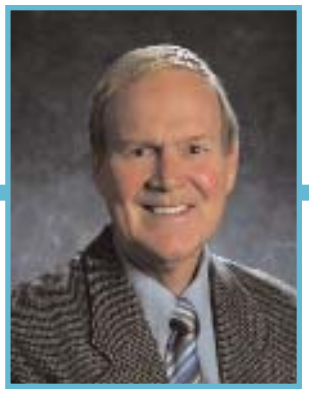
Ask Dr. Maynard



Frederick M. Maynard, MD

Question: ***My physiatrist says that paraplegics have a lot more diabetes, so I started wondering how post-polio and spinal cord injury compare with regard to the disease.***

A: You are right that people with chronic spinal cord injury paralysis do develop glucose metabolism abnormalities and diabetes (by criteria) more often than their age cohorts. I attended a 90-minute course on this topic and obesity among people with spinal cord injury at a recent meeting of the American Academy of Physical Medicine and Rehabilitation. The new information reminded physicians how important muscle is to insulin utilization and, therefore, to serum glucose levels.

During the lecture, I was thinking about people who had polio, with their extensive muscle atrophy, because I expect the same issues exist for them. Not only are people with extensive muscle paralysis (paraparesis and quadriparesis, independent of causation) predisposed to obesity because they cannot move and exercise as much to burn up calories, they also are predisposed to store fat because the relative lack of muscle mass (as a proportion of the body) leaves high circulating levels of insulin which combines with serum glucose to store fat.

A recent study of body composition among polio survivors in Taiwan found a higher proportion of fat, independent of body weight as considered from the standard of Body Mass Index (BMI). Normally a BMI (calculated from height and weight) of 25 to 27 is considered "overweight" and over 30 as "obese." Almost all polio survivors studied, even those not overweight/obese by BMI, had an increased proportion of fat by body composition measurements, a proportion that would typically be expected only in overweight/obese individuals.

I would expect there is a correlation between glucose metabolism abnormalities and increased fat proportion of body composition.

Question: ***My father-in-law is 88 years old and has post-polio syndrome. He has had trouble sleeping for the past several years, and he claims that it "takes more medication for people with post-polio syndrome." My wife is his caregiver and controls his medications so he will not overdose. What is your professional opinion?***

A: Your father-in-law is mistaken about need for higher medication doses for post-polio people. Generally, they are more sensitive to medications and require lower doses because their bodies distribute medications differently through body tissues and fluids due to reduced muscle mass. I would be very careful with sleeping medication doses, in particular, because of their potential to affect breathing during sleep (suppression) and the likelihood of creating dizziness/balance problems on awakening (leading to greater falls risk) – both greater problems among polio survivors than the general population.

Encourage him to keep talking to his doctor about what is and is not helping and to try several different types of medications or other techniques

to attain "good sleep" without just dangerously taking higher doses of prescribed sleeping pills.

Question: ***I have a severe rotator cuff tear and an orthopedic surgeon has recommended a shoulder replacement because of the severity of the tear and the presence of significant arthritis. I had polio in my right leg and use my left leg to lift/stabilize myself on crutches. Apparently the increased dependency has weakened my arms and, perhaps, injured them. The surgery may help or may create complications. Can you share any knowledge to help me make an informed decision?***

A: You raise several important issues related to the pros and cons of shoulder replacement in polio survivors. First of all, if you never had any significant residual weakness in your shoulder muscles as part of your original polio, then it is unlikely that your shoulder problems are, anatomically at least, related to polio. You may have worn them out and/or injured them as you suggested, and the shoulder problem can be surgically treated like anyone else's.

Definitely get a second opinion about whether the best treatment is arthroplasty (replacement). In addition to a second opinion from a shoulder surgeon specialist, I recommend a second opinion from a non-surgeon, such as a physical medicine and rehabilitation specialist in post-polio. That person cannot only advise about non-surgical alternatives for the shoulder problem, but also advise you on preparations for the post-operative period, if you do elect to have the shoulder replacement.

Certainly, you should at least practice transferring and walking and caring for yourself with only one arm, since you will not have much use of the arm after surgery for at least three months. You are facing a difficult and important decision. Don't make a hasty one, especially if you are not suffering severely. Take all steps possible to inform yourself about the pros and cons. ▲

SEND YOUR QUESTIONS FOR DR. MAYNARD TO INFO@POST-POLIO.ORG.

Calcium, Vitamin D and Bisphosphonates. Oh My!

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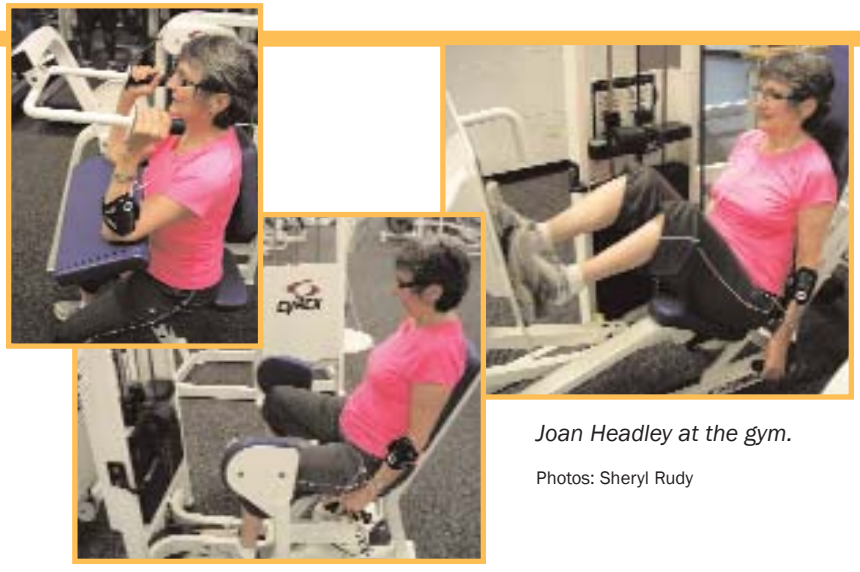
with calcium added and tomato juice. Because my polio effects are mostly in my left leg and because I can, I participate in specific targeted exercises at least three to four times a week at the gym in order to maintain my strength and therefore decrease my risk of falling, and weight-bearing exercises also help deposit calcium into bone. I will decide soon if I should end my holiday. ▲



Joan Headley at the gym.

Photos: Sheryl Rudy