My Doctor Prescribed Steroids . . . Should I be concerned?

(From the Polio Paradox, by Dr. Richard L. Bruno, PHD.)

Sugar, Steroids and Stress.

Bill looked like a severe, but not unusual, PPS patient. He came to us complaining of muscle weakness and overwhelming fatigue. When I met him he was leaning heavily on a rolling walker and could hardly stay awake. His head resting in his hands, he couldn’t remember the questions I was asking, let alone give me answers. A clear case of post-polio muscle weakness, and brain fatigue, yes? Well, no.

We measured Bill’s blood sugar—and found that it was 350! I called his doctor, who gave him oral medication for diabetes, and his sugar came down to a normal 105. As Bill’s blood sugar decreased, so did his muscle weakness and fatigue. He “woke up,” grew mentally sharp, and discarded the walker.

Bill’s story again underscores that all PPS are diagnosed by exclusion. It is crucial that all potential causes for new symptoms be ruled out before a diagnosis of PPS is made. Bill’s PPS symptoms were in fact the result of his diabetes and very high blood sugar having a terrible effect on his polio virus-damaged spinal cord and brain-activating system neurons. Once medication treated his diabetes, his post-polio neurons could eat hearty and function well again.

You should also know that there is a medication that actually prevents neurons from eating well. Steroids, such as prednisone, are the most powerful of anti-inflammatory medications; they’re sometimes given when polio survivors have serious lung infections. But being anti-inflammatory, steroids are sometimes given when doctors can’t figure out what else to do for polio survivors’ joint pain when non steroidal anti-inflammatory drugs, like ibuprofen, don’t help. Unfortunately, steroids block neurons’ ability to take in blood sugar—not exactly helpful when polio survivors have trouble taking in blood sugar all by themselves. So here’s another Post-Polio Precept:

Polio survivors should not take steroids unless they have a serious medical condition, and they should not take steroids for pain.

Serious medical conditions would include pneumonia, asthma, and rheumatoid arthritis. But as you know from Chapter 10, the treatment of osteoarthritis and joint pain—for all PPS—is neither a steroid nor any other medication but taking the load off overused limbs and following The Golden Rule.

BLOOD SUGAR AND EMOTIONAL STRESS

The likelihood of a shortage of blood sugar receptors on polio virus-damaged neurons in the brain-activating system and spinal cord may help explain the unexpected finding in our 1985 Survey that emotional stress was reported to be the second most common trigger for PPS symptoms. In chapter 9, I mentioned that cortisol, the body’s internally manufactured steroid and its main anti-stress hormone, may be the missing link between emotional stress and muscle weakness, because cortisol interferes with neurons’ ability to sprout, to make proteins, and to use blood sugar. Having too few blood sugar receptors on polio virus damaged neurons may conspire with cortisol to starve spinal cord motor neurons when they most need sugar—when you’re under stress—and cause stress-induced muscle weakness. Polio survivors’ fatigue during stress may also be caused by the combination of too much cortisol and too few blood sugar receptors.

The stressful attention tests we give to polio survivors cause even non-disabled folk to report fatigue, decreased energy, trouble focusing attention, and drowsiness, symptoms that are found to increase as their bodies produce more cortisol. What’s more, cortisol not only prevents neurons from taking up blood sugar and inhibits the manufacture of proteins, but also directly slows the activity of reticular formation neurons. Even worse, people who are Type A release more cortisol in response to stress, and it takes longer for cortisol to return to normal levels.

Finally, a shortage of blood sugar receptors in the polio virus damaged hypothalamus may prevent it from “knowing” when sugar is low and stop it from releasing the brain activating hormone ACTH. This may explain our finding that
fatigued polio survivors do not release ACTH in response to stress, and that the more fatigue polio survivors report, the less ACTH they release.

Is it any wonder that emotional stress plays havoc with polio survivors’ bodies and brains?