

DR. BERNSTEIN'S

# DIABETES SOLUTION

A COMPLETE GUIDE TO ACHIEVING NORMAL BLOOD SUGARS

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## ***Chapter 23: What You Can Expect from Virtually Normal Blood Sugars***

I am convinced, from my personal experience, from the experiences of my patients, and from reading the scientific literature, that people with normal blood sugars do not develop the long-term complications of diabetes. I am further convinced that diabetics with slightly elevated blood glucose profiles may eventually develop some of the long-term complications of diabetes, but they will develop more slowly and likely be less severe. In this chapter, I will try to describe some of the changes that I and other physicians have observed when the blood sugars of our patients dramatically improve.

### **Mental Changes**

Most common, perhaps, is the feeling of being more alert, and no longer chronically tired. Many people who "feel perfectly fine" before their blood sugars are normalized comment later that they had no idea they could feel so much better.

Another common occurrence relates to short-term memory. Very frequently patients or spouses will refer to their "terrible memory." When I first began my medical practice, I would ask patients to phone me at night with their blood sugar data for fine-tuning of medications. My wife, a physician specializing in psychoanalytic medicine, sometimes overheard my end of the conversation and would comment, "That person has a dementia." Weeks later, she would again hear my end of a conversation with the same individual, and would comment on the great improvement of short-term memory. This became so common that I introduced an objective test for short-term memory into the neurologic exam that I perform on all new patients. About half my new patients indeed display this mild form of dementia, which appears to lift after several weeks of improved blood sugar. The improvement is usually quite apparent to spouses.

### **Diabetic Neuropathies**

Diabetic neuropathies seem to improve in two phases--a rapid partial improvement that may occur within weeks, followed by sustained very slow improvement that goes on for years if blood sugars continue to remain normal. This is most apparent with numbness or pain in the toes. Some people will even comment, "I know right away if my blood sugar is high, because my toes

feel numb again." On the other hand, several patients with total numbness of their feet have complained of severe pain after several months of near normal blood sugars. This continues for a number of months and eventually resolves as sensation returns. It is as if nerves generate pain signals while they heal or "sprout." The experience is very frightening and distressing, especially if you haven't been warned that it might occur.

Erectile impotence affects about half of diabetic males, and is the result of years of elevated blood sugars. It may be defined as an inability to maintain a rigid enough penile erection for adequate time to perform intercourse. It usually results from neuropathy, blocked blood vessels, or both. We can perform simple tests to determine which of these causes predominates. When the problem is principally neurologic, I frequently hear the comment, sometimes after only a few weeks of near-normal blood sugar profiles, "Hey, I'm able to have intercourse again!"

Unfortunately, this turnaround only appears to occur if the man was able to attain at least partial erections before. If at the original interview, I'm told, "Doc, it's been dead for years," I know recovery is unlikely to occur. If testing shows that the problem was due primarily to blocked blood vessels, I never see improvement. Note, however, that it's normal to be unable to have erections when blood sugars are too low, say below 75 mg/dl.

Another remarkable change relates to autonomic neuropathy and associated gastroparesis. I have documented major improvement of R-R interval studies in many patients, and total normalization in a few. Along with this, we see reduction in symptoms of gastroparesis. Usually such improvement takes place over a period of years. Although it occurs most dramatically in younger people, I've also seen it occur in seventy-year-olds.

### **Vision Improvements**

Diplopia, or double vision, is caused by neuropathy of the nerves that activate the muscles that move the eyes. It is a very common finding on physical examination, but rarely severe enough to be noticed by patients on a day-to-day basis. Here, again, when testing is redone after a few years, we find improvement or even total cures with blood sugar improvement.

Vacuoles are tiny bubbles in the lens of the eye. They are thought to be precursors of cataracts. I have seen a number of these vanish after a year or two of improved blood sugars. I have even seen the disappearance of small spokes on the lens that signify very early cataracts. I've seen cases of glaucoma cured by normalization of blood sugars.

### **Other Improvements**

Improvements in risk factors for heart disease, such as mild hypertension, HDL-cholesterol ratios, triglycerides, and fibrinogen levels, are commonplace. They usually can be observed after about two months.

Similarly, improvements in early changes noted on renal risk profiles are often obtained, usually after one or two years, but sometimes after a few months.

Most dramatic and commonplace is the feeling of satisfaction and control that nearly everyone experiences when they produce normal blood sugar profiles. This is especially true for individuals who had already been taking insulin, but appears also to occur in those who do not take insulin.

Last but not least is the feeling that we are not doomed to share the fate of others we have known, who died prematurely after years of disabling or painful diabetic complications. We come to realize that with the ability to control our blood sugars comes the ability to prevent the consequences of high blood sugars.

I have long maintained that diabetics are entitled to the same blood sugars as nondiabetics. But it is up to us to see that we achieve this goal.