

after learning how to eat in a healthy way, we have lost weight and improved our immune systems as well as our general health.

Our approach may seem strange. The experts argue that calorie intake is the most important element in weight loss and gain. But they have overlooked what is right before our eyes. The truth is that we must pay attention to the water in our bodies as well as to calorie intake and exercise. But most people in the United States are not tuned to their bodies or to their reactions to certain foods.

Finding out how to change my eating habits to achieve and maintain a healthy weight as I age has demanded experimentation—trial and error. The approach we take makes the journey a work in progress, but I have found some things that work and wish to share them here.

But first, Sam’s explanation of water vs. fat weight—or how to put your digestive and lymphatic systems in good working order.

What We Asked

What’s the difference between water weight and fat weight?

You may think a pound is a pound, but there are two kinds of weight gain and the difference is crucial. Excess weight may be categorized as net “fat” weight or as water weight trapped in the lymphatic system (we’ll explain that later).

Net fat weight is the result of excessive calorie intake—of simply eating too much, that is, more calories than you burn.

Water weight is the accumulation of water in the lymphatic system—caused by eating certain things that are harder to digest—especially as you get older. The water accompanying partially digested proteins eventually leaks into the lymphatic system, is trapped in the lymph nodes, and blocks the flow of lymph (lymphatic fluids). This results in fluid retention in the lymphatic system. Medical professionals commonly call this condition high-protein edema.

To lose weight, you must differentiate net fat weight from water weight and treat each with appropriate methods.

What role does my digestive system play in water-weight gain?

Certain foods are more difficult to digest than others. All proteins, for instance, are digested into the smallest components—amino acids. These amino acids are absorbed through the linings of the gastrointestinal (GI) tract into the blood. Your body uses amino acids to build various tissues.

As you age, your digestive enzymes diminish, and your body is not able to digest food so thoroughly as when you were younger. Partially digested food (macronutrients consisting of clumps of amino acids) clings to the lining of the GI tract, often leaking into the vascular circulation, or blood. The lining of the intestines and colon (gastrointestinal mucosa) filters out most of the larger undigested macronutrients. But the smaller macronutrients pass through the lining in a condition commonly referred to as Leaky Gut Syndrome (altered permeability of the GI tract). Medical and weight-loss professionals often overlook this condition common to both women and men. Genetics, age, hormones, medications (prednisone, especially), infections, parasites, toxins produced by bacteria or fungi, and many other factors contribute to an increase in the permeability, or leakage, of macronutrients into your blood.

What happens to the undigested proteins that seep into my blood?

While many nutritionists and physicians are familiar with Leaky Gut Syndrome, they assume that the liver detoxifies undigested proteins in the blood. Instead, the lymphatic system provides the disposal system for these clumps of amino acids.

While the liver detoxifies some of the clumps of amino acids delivered from the bloodstream, partially digested protein leaks from the capillaries (the smallest blood vessels) into the interstitial space, or space between the cell walls of your body. Undigested protein (small clumps of amino acids) then drain slowly into your lymphatic system. (See Key 5 for the parts of the overall digestive system.)

What is the lymphatic system and what is it for?

Lymph originates as blood plasma that leaks from the circulatory system into the surrounding tissues. The tissues collect this fluid (lymph) and return it to the circula-

tion while working with your white blood cells to protect your body from infection. There is no central pump, and the movement is slow.

Undigested proteins draining into the lymphatic system may cause extra water retention within the system. Once in, they clump onto the lymph nodes along the entire system. Whenever and wherever clumps of amino acids (foreign proteins, at this point called antigens) drain into the lymph nodes, your body mounts an antibody or immunity reaction. These form an antigen-antibody complex that blocks drainage from the nodes and lymphatic vessels that drain through them. This slows the drainage of lymph downstream from the interstitial space. The space between the cell walls then swells with water, the basis of high-protein edema.

The extra protein load within the lymph nodes and lymph vessels also draws water into the lymphatic system to balance the osmotic pressure (difference between the amount of protein in the lymphatic fluid and in the blood vessel). The result is an accumulation of water in the lymphatic system and in the interstitial space. This is the water weight that makes many middle-aged persons heavier in their midsections. The heightened immune response, sometimes misdirected to other parts of the body, results in inflammation of those areas too.

What happens then? Why doesn't my lymphatic system take care of it?

Once the undigested proteins or antigens form antigen-antibody complexes in the lymph nodes, your body begins the slow process of breaking the protein complexes into smaller pieces that can drain easily through the lymph nodes, into the larger lymphatic system, and eventually into your bloodstream.

Is there anything I can do to help it?

Clearing and cleaning your lymphatic system, particularly the lymph nodes, allows more efficient flow of the lymph. When you flush your lymph nodes clean, you eliminate stored-up, stagnant, lymphatic water—and you get rid of the water weight! This is one of the first things you notice when you go on a high-protein diet—you lose a large amount of weight in the first few weeks. But reduced calorie intake