Protein Power

One piece of any wasting-prevention program is getting enough of this vital nutrient

May 1, 1997 By Lark Lands, PhD

Perhaps PWAs can never be too rich, but they can definitely be too thin. What may begin for many as fashionably svelte can all too soon become the late-stage wasting that's a major cause of AIDS-related deaths. And stepping on the scales may trick you. Total body weight is not the best indicator for this problem, since the weight may consist of too much water or fat without enough *body cell mass* (BCM), created mostly from protein.

Retaining your BCM--the cells that compose your muscles and organs (heart, liver, lungs, kidneys and so on)--is the key to staying alive. Studies show measures of BCM to be a more reliable predictor of survival than CD4 counts. Columbia University wasting researcher Donald Kotler, MD, has shown that when BCM drops to 54 percent of normal, death results. It doesn't matter what cause the downhill slide--and infection, changes in hormones or cytokines (immune-system messenger cells), inadequate intake of calories, malabsorption or a combination of these and other problems. Lose enough BCM and the body turns off.

You need protein not only to maintain BCM--thus keeping those muscles and organs in good shape--but also to produce enzymes and hormones, make the hemoglobin that carries oxygen to your cells, and maintain your immune response. The combination of many problems, including inadequate intake or absorption of food, can force the body to rob its muscles of that life-sustaining protein.

Avoiding this can require an aggressive, multifaceted approach: Eliminating infections, healing the intestines (to improve absorption), improving digestion, correcting abnormal levels of hormones and cytokines, doing muscle-building exercises and replenishing depleted nutrients.

Diet change is another important piece of the puzzle. One aspect is boosting daily calorie intake, since your needs are increased by HIV infection and further boosted by other infections. So you may have to eat a lot more food than you did bfore and make sure that food includes plenty of protein. Protein-containing foods provide you with the amino acids needed by the body. *Complete* proteins, found mostly in animal foods such as eggs, dairy products, meats, fish and poultry contain all of the essential amino acids in one food. *Complementary* proteins can be created by combining grains, nuts, seeds, beans and peas.

Because the body consumes more energy in extracting protein from food combinations, those PWAs already experiencing muscle loss and low appetite may find it easier to concentrate on animal foods. However, plant foods are much cheaper. So when cost is an issue, remember that combining a grain and a legume (for example, rice and beans, bread and peanut butter, or hearty vegetable soup with pinto beans and barley) will form a complementary protein. Small amounts of added animal proteins (such as chicken chunks mixed with the rice and beans, or fish pieces in the vegetable soup) can ensure such combinations work without upping the price too much. And eggs top the list for high-quality *and* inexpensive protein.

How much protein is enough? Nutritionists generally agree that a good guideline is 15 percent to 20 percent of your total daily caloric intake. More than that may do harm, particularly by overloading the kidneys (a special risk for those on kidney-stressing drugs). And the high fat content of some high-protein foods such as meat and dairy products can cause diarrhea for people with fat malabsorption. Lactose intolerance can cause it as well. Protein powders are one way to boost your intake, but don't overdo them; too much of these highly concentrated products can cause diarrhea.

Because of PWAs' increased nutrient needs, many will need up to 0.7 grams of protein per pound of body weight daily. To calculate how much you require, multiply your body weight by 0.7, and check a table of food components to translate that figure into servings. In times of body stress, especially opportunistic infections, your daily requirement may have to be boosted substantially. Consult a nutritionist or dietitian for assistance.

To find out if you are succeeding in maintaining your BCM, you'll need to measure it; just getting weighed does not do the job. The best measure is a bioelectrical impedance analysis (BIA). This test is quick, painless, inexpensive (generally insurance-reimbursable) and available at some hospitals, weight-loss centers and gyms. Tracy Scott, RD, a dietician with a large HIV practice in Tulsa, Oklahoma, recommends that people with CD4 counts above 200 have a BIA done at least every six months, while those with counts below 200 should try to aim for every three months.

Downturns in the BIA can be a clear warning that wasting is beginning and that you need to do everything you can to avoid it. Remember: Your survival depends on it.

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