



Eat well before, after surgery

GOOD nutrition is always important for health, but it can become even more important before and after surgery. Nutritional preparation for surgery means making sure the body has the nutrient building blocks for optimal immune system function and for tissue repair.

A healthy immune system is especially important when the skin is cut and bacteria can invade. Although great care is taken during surgery to minimize the entry of bacteria, complete prevention of invasion is impossible. Consequently, it is important to enter into an operation with an immune system that can handle these invaders.

The cells of the immune system are located throughout the body, but about 75 percent of them are along the walls of the intestinal tract to block bacteria or viruses that get into the intestine along with food from getting across the intestinal wall into the blood. When they do get by, immune system cells in other parts of the body are called into action.

CELLS of the intestinal tract are replaced about every four days. This replacement, and the production of antibodies by the immune cells and the healing

process after an operation all require an adequate supply of dietary protein.

Although most Americans get plenty of protein in their diets, some senior citizens have very low calorie needs due to low levels of physical activity, and thus consume very little protein. For them, it is important to eat more protein prior to and after surgery.

One particular amino acid (L-glutamine) has very beneficial properties. Glutamine is used throughout the body by the immune system and is particularly important for the health and function of the intestine. Glutamine also has been shown to be especially helpful during recovery from injuries like major burns where significant amounts of body tissue must be repaired and replaced.

Many of the drugs taken before and after surgery can damage the beneficial bacteria in the lower intestines. These bacteria compete with potentially disease-causing bacteria, reducing or eliminating harmful effects. To reinforce "good" bacteria, foods containing live cultures of acidophilus and bifidus or other active forms of the bacteria -- such as yogurt -- can be consumed.

These beneficial intestinal bacteria can be especially helpful after taking antibiotic drugs that kill off most bacteria in the colon.

TAKING a multivitamin-mineral supplement that meets 100 to 200 percent of the RDA also can help to assure that the body has the nutrients it needs for both immune and tissue repair functions. But taking too much of a supplement can backfire. For example, vitamin E in doses greater than 800 IU per day can impair immune function.

Making sure that you have adequate building blocks for blood formation is also critical. Many older individuals have cut back on food sources containing iron. This may compromise their ability to manufacture blood adequately. Eating foods like meat or fortified breakfast cereals, or taking a dietary supplement may help bring up the reserves. Spinach is a poor source of iron since the iron is bound to naturally occurring oxalates.

No single nutritional supplement is likely to greatly enhance immune function. A balanced and varied diet may prove to be the best protection for most of us.

Alan Titchenal, Ph.D, CNS and Joannie Dobbs, Ph.D, CNS
are nutritionists in the Department of Human Nutrition, Food and Animal Sciences,
College of Tropical Agriculture and Human Resources, UH-Manoa.
Dr. Dobbs also works with the University Health Service.
