

**A**fter injury or surgery, our bodies require ample time to ensure complete recovery and repair. Follow these guidelines to aid the healing process and accelerate your return to normal activity levels. For best results, combine these recommendations with a healthy diet and VitaMedica's *Recovery Products*.

- 1. Schedule elective surgery when you're healthy.** If you are planning elective surgery, try to schedule it during a period of relatively good health. This will optimize your immune system and improve the chances for a speedy recovery.
- 2. Do not smoke 2 weeks prior / after your surgery.** Smoke inhibits wound healing because less oxygen is supplied to the operative site. In addition, smoking increases the risk of various complications during surgery. If you smoke use this surgical procedure as opportunity to quit.
- 3. Discontinue use of certain supplements around surgery.** While generally beneficial and safe, the use of certain supplements around the time of surgery should be discontinued. The majority of these supplements include botanicals like ginkgo biloba but also includes common nutrients like vitamin E. For a comprehensive list, go to: <http://www.vitamedica.com/html/discontinue.html>.
- 4. Do not take aspirin or aspirin-containing products for ten days prior to surgery.** Aspirin is not recommended prior to surgery because it is an anti-coagulant (blood thinner) and can promote bleeding during surgery.
- 5. Do not drink alcohol 72 hours prior / after surgery.** Alcohol suppresses the immune system and should be avoided around the time of surgery.
- 6. Stay well-hydrated by drinking water.** It is important to drink at least 6-8 glasses of high quality water each day and especially the day prior to surgery, to help cleanse and hydrate the body. Water is especially important prior to surgery, as fluid intake is reduced the day of surgery. To avoid complications during surgery, be sure that you do not drink anything after midnight the night prior to your surgery, unless instructed otherwise by your surgeon.
- 7. Rest, Ice, Compression, Elevation (RICE) after injury.** RICE is a proven standard in treating acute and chronic injury and assisting in rehabilitation. RICE started immediately after a minor injury can help to relieve the pain and keep the area from swelling. RICE can be used for minor injuries such as bruises, sprains, strains, and pulled muscles. The earlier the RICE treatment is started after an injury, the better it works.
- 8. Take extra antioxidants.** The process of surgery and various types of anesthesia can cause a significant increase in cellular oxidation. The result is the formation of free-radicals which can have many harmful effects including suppression of the immune system. Antioxidants prevent or minimize this damage. Key antioxidant supplements include carotenoids (e.g., beta-carotene), vitamin A, vitamin C, zinc, selenium and bioflavonoids.
- 9. Supplement your diet with bromelain and Arnica Montana.** Bruising, swelling and inflammation often accompany an injury or surgical procedure. Bromelain, which is extracted from the stem of the pineapple, is an excellent anti-inflammatory and is often used in the treatment of swelling and pain. Homeopathic Arnica Montana is a remedy that has been used for over 200 years to reduce the discomfort, bruising and swelling associated with soft tissue injury.

10. **Supplement your diet with vitamin A, vitamin C and zinc.** Anesthesia, stress and pain can substantially alter the immune system which impacts how quickly you heal. A number of nutrients especially vitamin A and zinc play a crucial role in maintaining an optimal immune response. With a healthy immune system, your body can fight off pathogens which reduce your chance of complications or infection. These nutrients, along with vitamin C, also play an important role in wound healing – an orderly process that builds new tissue especially collagen, the most abundant protein in the body.
11. **Consume extra, high-quality protein.** Two of the most important healing elements are calories and protein. Extra protein is needed to build new tissue and blood vessels, repair injured tissue and increase production of cells that repair the wound. An estimated daily protein requirement after surgery (in grams) is your weight in kilograms (weight divided by 2.2) multiplied by 1.2. For example, a 135 pound woman would need about 74 grams of protein daily ( $135 \text{ pounds} / 2.2 = 61.4 \times 1.2 = 73.6 \text{ grams}$ ) to support wound healing. Consume lean meats like wild salmon, turkey breast, chicken breast or filet mignon.
12. **Take a probiotics supplement.** After surgery, your doctor will often prescribe antibiotics. While beneficial against harmful bacteria, these medications often kill the beneficial bacteria that normally reside in the intestinal tract. Taking a probiotic helps to repopulate the gastrointestinal tract with beneficial bacteria and restore normal bowel function. Look in the refrigerated section of a natural products store to find brands with the highest count of live bacteria.
13. **Increase your fiber intake.** A common problem after surgery is constipation. This can be caused by a number of factors including limited fluid intake prior to surgery, anesthetic agents, pain medication and limited physical activity. Augment your diet with extra fruits and vegetables, which are a good source of fiber. Fiber can absorb large amounts of water in the bowels and this makes elimination easier. Or, consider taking a supplement made from senna - a plant that has a natural, safe, laxative effect.
14. **Participate in relaxation techniques.** Listening to relaxation tapes or soothing music, taking a yoga or meditation class are examples of relaxation techniques that help to reduce stress.
15. **Build a support structure.** Rely on your family and friends to help you during the stressful time of a surgery or following an injury. Ask them to bring foods that are nutritious and discuss feelings of fear or anxiety with supportive individuals.