

## Sports Injuries: Complementary/Alternative Medicine

Tendinitis; Acute or chronic pain localized in a tendon Limited range of motion

Bursitis; Severe pain of the affected joint, particularly on movement Limited range of motion

### QUICK REVIEW

Proper stretching and warm-up before exercise are important preventive measures.

- After an injury or sprain, immediate first-aid to the injured area (rest, ice, compression, and elevation) is very important.
- Deficiency of vitamin C is associated with defective formation and maintenance of tendon and bursal tissues.
- Vitamin A, zinc, vitamin E, and selenium, as well as vitamin C, are important not only for their wound healing properties, but also for their antioxidant effects.
- Bromelain has been reported in scientific studies to exert a wide variety of beneficial effects, including reducing inflammation in cases of sports injury or trauma.
- Curcumin, the yellow pigment of *Curcuma longa* (turmeric), exerts excellent anti-inflammatory and antioxidant effects.
- Physical therapy can aid in pain relief and recovery from injury.

### TREATMENT SUMMARY

Treatment of the muscle, joint, tendon, or bursal damage caused by acute and chronic injuries involves two phases: inflammation inhibition and protection of the injured tissues, followed by promotion of healing after the acute phase has resolved. For any serious injury, a physician should be consulted immediately. Indications for a physician include: severe pain, injuries to the joints, loss of function, and pain which persists for more than two weeks.

### RICE

- Rest the injured part
- Ice the painful area
- Compress the injured area with an elastic bandage
- Elevate the injured part above the level of the heart

The ice and compress should be applied for thirty minutes, followed by fifteen minutes without either to allow blood flow to return. After the acute inflammatory stage (twenty-four to forty eight hours), gradually increasing range-of-motion and stretching exercises should be used to maintain and improve mobility and prevent adhesions (abnormal scar formation).

### Nutritional Supplements

- High-potency multiple-vitamin-and mineral formula, as described in the chapter SUPPLEMENTARY MEASURES
- Vitamin C: 500-1,000 mg three to four times per day
- Flavonoids (choose one):

Grape seed or pine bark extract 50-100 mg three times per day  
Citrus bioflavonoids: 500-1,000 mg three times per day

### Botanical Medicines

- Curcumin (from turmeric): 200-400 mg three times per day between meals
- Bromelain (1,800-2,000 milk-clotting or gelatin-digesting units, mcu and gdu, respectively): 250-750 mg three times per day between meals

### Physical Medicines

- TENS: if needed for pain control
- Ultrasound: three times per week during the recovery phase and if adhesions or contractures develop

