***MOVING* towards better health.** By Karen Decker

Getting active with bone and joint injury.

Hello, good day, get moving! This is the inaugural submission to a new column to help readers get more active. As a physiotherapist, I will focus on how you can safely prepare for involvement in various activities and sports along with address any risks that may derail your fitness efforts. I will also talk about how exercise can both prevent and manage disease and injury.

As November was Osteoporosis Awareness month, let's deal with how to get active with this ailment. Exercising with Osteoporosis is safe when done correctly and is also the best form of managing the disease. Osteoporosis is a disease characterized by low bone mass and deterioration of bone tissue. It leads to decreased bone density and increased risk of fractures. Prevention of bone loss, or minimization of further bone loss if already diagnosed with the disease, involves weight-bearing exercises.

The safest exercises include aerobic activities with moderate impact and resistance training. Exercises should target the entire body i.e. the upper extremities, spine and legs. For example, aerobic exercise may include walking, dancing, hiking, rowing, skipping, stair climbing, and moderate running activities. This should be completed at least 30 minutes 3-5 times per week. Resistance training can involve the use of hand held weights, weight training machines, Theraband or tubing exercises, or even just body weight such as easy squats, lunges, and push-ups. These should be performed 3 times per week using resistance levels that are comfortable then progressed over time for the best results.

Another topic of interest is a similar sounding malady – osteoarthritis or OA. Osteoarthritis is a gradual, progressive loss of cartilage in joints. It can result in pain and inflammation of effected joints. Several causes exist including years of simple wear and tear or an old unmanaged injury. Advanced stages may involve the development of bony spurs and cysts at the margins of joints. The symptoms include swelling, pain, and stiffness in the affected joint along with loss of strength and range of movement if left untreated.

Treatment again includes exercise but different from that prescribed for osteoporosis. Where the former benefits from weight bearing exercise, osteoarthritic joints prefer non-weight bearing sports and activities. This includes biking, swimming, rowing, elliptical machines and walking over running activities. These aerobic activities will increase circulation to injured tissue and improve the healing environment. They can be completed daily for at least 20-30 minutes. Resistance exercises are also important to gain/maintain strength around joints but the safer form will again include non-weight bearing such as floor/mat work, Pilates and Yoga, Theraband and seated weight machines versus load bearing exercises such as squats, lunges, and push-ups. The joint(s) involved and the level of joint wear, will determine the intensity level and amount of weight tolerable.

Whereas osteoporosis will not benefit greatly from increased flexibility, degenerated OA joints will. Increased range will permit better function and reduction of joint compression. This can be achieved by completing simple stretches at home, after regular work-outs, or by joining a Pilates or Yoga class. Finally, OA joints have reduced stability. Balance exercises with the use of a balance board, BOSU, or simply standing on one foot with eyes closed can improve this function and reduce the risk of re-injury.

So do not let either of these diagnoses prevent you from getting active, because it is through activity that they are managed.

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