

The Power of Active Women

Feel the Power. Feel Fit!

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It was once said by a wise physician in the 4th century that the "physician of the future will treat with the tools of exercise and nutrition" as prevention of disease will take a high priority.

Youth and Adolescents

In the years of childhood and adolescence, young girls must pay particular attention to **building bone density**. A calcium rich diet combined with impact style exercise such as running or jumping is imperative to protecting her against osteoporosis in the later years. Seventy-five percent of bone density is built during the growing years and if this is not obtained then permanent damage and early osteoporosis may cause fractures and bone pain. Young women who are involved in intense sport or avid exercise may be at risk for **Female Athlete Triad Syndrome**, which is the presence of three inter-related factors; disordered eating (poor nutritional balance), amenorrhoea (lack of menstrual periods) and osteoporosis (reduced bone density). Girls and young women need to be encouraged and motivated to set **lifelong exercise habits**. Young women develop self-esteem and self-confidence through physical accomplishments and acceptance of one's body. This is a very sensitive time for their emotional well-being and a positive body image focusing on fitness and healthy nutrition is empowering.

Exercise Prescription:

Frequency	Daily -encourage school activity and extracurricular sports
Intensity	Monitor through Talk test/ menstrual cycle regularity
Time	30-45 minutes. No marathons ≤ 16 yrs, supervised weight training ≥ 12 yrs
Type	Family/team/individual. Broad exposure to many activities. Competition with caution.

Healthy Strategies:

1. Encourage team activities that build social skills and self-esteem. Focus on the enjoyment of sport not the final score or number of goals. Avoid asking "Who won?" on first impulse. Try instead, "Did you enjoy the game, tell me what was exciting".
2. If your youngster or teen is not interested in sport and competition, try and incorporate more family walks, hobbies like gardening or pottery or dancing to enjoy a new CD.
3. Encourage diversity from season to season and variety between impact, endurance and contact activities. Sport and physical activity become a new learning experience for coordination, social interaction and skill acquisition. Youth who have had some exposure to many types of sport will be more likely to pursue a sport when they are an adult.
4. If your youngster or teen is involved in elite sport and training for competition, educate them on healthy nutrition, weight training and exercise progression. Balance their intensity with some light cross training or coaching experience.

Pregnancy

Exercise during pregnancy and in the post-partum period has been **proven beneficial** in a growing number of studies focusing on the low risk pregnancy. Most studies suggest that exercise has no effect on the length of labour but will lead to less aches and pains during pregnancy and quicker recovery afterwards. Exercise has been prescribed safely in gestational diabetes and may reduce the severity of post-partum depression. The Canadian Society for Exercise Physiologist and the Canadian Academy of Sport Medicine recommend using the Parmed-X tool to assist doctors and their patients in finding the right amount of exercise for each woman. Please check www.csep.ca for the Parmed-X tool, download if free. If a woman has been active on a regular basis prior to pregnancy then she may maintain that activity level. If she has not been active, then it is recommended that exercise be deferred until the second trimester. She would certainly be encouraged to continue with her daily activity such as walks, gardening or stair climbing but regular exercise sessions would be deferred until second trimester. Exercise may gradually be increased during second trimester and tapered back in the third trimester.

Pre-pregnancy	Active	Inactive
Frequency	Wk. 0-12 Maintain at 3-4 x week, Week 13-29 may increase to 5 x week, 30-40 Decrease to 3 x week.	Start wk 13-29 with 3 x week, reduce after week 36 to 1-2 x week.
Intensity	Perceived Exertion scale =12-14/20, ≤ 17	≤ 140 beats/min. (65% of Max.HR)
Time	2 nd Tri increases $\leq 5\%$ wk	≤ 40 min.
Type	Avoid high altitude, hyperbaric or high risk	Cycling, walking, swimming

Healthy Strategies:

1. A woman's pre-pregnancy fitness levels determine her ability to maintain or continue training during pregnancy. Encourage women who are planning to become pregnant to prepare themselves with healthy lifestyle changes.
2. Pregnant women are encouraged to maintain aerobic fitness with low impact exercise such as walking, swimming, gentle running, dancing, tai chi.
3. Positioning must be modified as the pregnancy progresses to incorporate side lying or standing position exercise and avoid lying on your back or prolonged sitting.
4. Hydration is very important to the baby's well-being and 1 glass of fluid per 45 minutes of exercise is encouraged.
5. Many exercises classes are now modified for pregnancy participation.

Adulthood

Exercise during the adult years can be pleasurable as well as meeting goals of weight maintenance, cardiovascular fitness and disease prevention. Women are afflicted with higher rates of depression and anxiety than their male counterparts and studies are increasingly showing the benefits of exercise in treatment of mental health issues. Weight training, aerobics and mind-body activity (i.e. yoga, tai-chi) can improve psychological functioning, communication, animation, personal interest, motivation and insight into his body image.

Exercise Prescription:

Frequency	Fitness Maintenance 3-4 x week. Training 5-6 x week.
Intensity	75-85% of maximum heart rate.

Time	Fitness :30-40 min.(can be accumulative) Training: 45-60 min.
Type	Encourage weight bearing exercise. Active Living principles.

Healthy Strategies:

1. Many women in the age group are restricted by work hours, childcare responsibilities or caring for an aging relative. Try to encourage physical activity as a healthy outlet with social benefits. Workplace wellness programs are wonderful for reducing the time crunch that many women face.
2. This group needs to be encouraged to “Start Low and Go Slow”. Many women in this population have given up physical activity and are now returning for the health benefits. They should be encouraged with the success of small steps and progressive gains that take them towards their goals even if it takes ten times longer than expected.
3. Weight training for the purpose of toning is a wonderful activity that many women in this group have not tried and really enjoy the discipline, the progression and the benefits of increased spinal bone density.

The benefits of exercise include:

- Increased strength, flexibility and coordination
- Improved endurance with reduced fatigue
- Increased circulation of blood and lymphatic drainage
- Improved mood and stress reduction
- Improved hormonal balance with regulated metabolism
- Improved weight management to decrease disease associated with obesity
- Improved sleep patterns promoting restoration and recovery

Reducing the Risk of Disease:

Exercise Component	Heart Disease	Diabetes	Arthritis	Cancers
Aerobic	Very Beneficial	Very Beneficial	Low or no impact for comfort	Reduction of some cancers with lifelong exercise habits
Strength	Target arms and trunk	Target weight reduction areas	Very beneficial for joint stability	Incorporate into whole program
Flexibility	Helpful for stress reduction	Helpful for stress reduction	Very beneficial for joint mobility	Incorporate into whole program

Treating Disease Effectively:

Exercise Component	Heart Disease	Diabetes	Arthritis	Cancers
Frequency	4-5 x week	7 days a week	2-3 x week	3-4 x week
Intensity	Moderate to High	Moderate to High	Low to Moderate	Moderate
Time	45 -60 min.	30-45 min	20-30 min.	30-45 min.
Type	Run, cycle, walk, swim	Walk, swim, cycle	Walk, swim	Run, cycle, walk, swim

Menopause

During the menopausal years, many women are receiving the message that they need to exercise to maintain bone density along with healthy nutrition, hormonal supplementation and medications. The message that is not getting through is that walking is not enough. The exercise needs to have some impact such as dancing, light jogging, skipping or aerobics

Exercise Prescription:

Frequency	3-5 x per week, diversify activities to reduce joint soreness
Intensity	Progressive program with goal of 70-80% Max HR
Time	20-40 minutes/day
Type	Weight-bearing, walking, X-C skiing, low impact aerobics Include pelvic floor strengthening, Joint mobility as stretching

Healthy Strategies:

1. Exercise programs may need to be modified for health concerns such as arthritis, urinary incontinence, diabetes or cardiovascular disease. This is best done prior to starting an exercise program rather than as the program progresses and the women has pain or difficulty. Take a health inventory and symptom history prior to designing a program and then have the women keep an exercise log in the first month.
2. Arthritis modifications include; lots of range of motion exercise without heavy deep stretching, light aerobics without high impact and core trunk and leg strengthening.
3. Urinary Incontinence may be reduced by wearing a tampon to support the bladder, emptying the bladder fully prior to exercise and using low or no impact exercise. Water aerobics is often a great choice as the buoyancy of the water reduces the pressure on the bladder.