PT **PHYSICAL THERAPY**

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EXERCISE AND THE GOLDEN YEARS

Exercise is for everyone, and that includes both the aging and the elderly. While part of the natural life cycle consists of growing old, the quality of this aging process can be greatly enhanced by exercise. Medical research continues to offer evidence that many of the normal physiological effects of aging can be retarded by regular activity and specially designed exercise programs.

How do our bodies change with age? How are our systems affected? What can you do to maximize your potential as you grow older?

PHYSICAL CHANGES OF AGING

Cardiovascular System
Your heart, which is a muscle, remains the same size, but requires a longer resting time. The heart's ability to pump declines so that maximum cardiac output is decreased in rate and efficiency. There is an increased incidence of developing heart murmurs. Arteries become less elastic and more twisted, resulting in high blood pressure.

Respiratory System
Musculoskeletal changes result in a decreased ability for a person to fully expand his/her chest. The chest wall becomes stiffened and posture becomes more "round shouldered," decreasing the front-to-back dimension of the chest. This restricts the room in which the lungs can expand. The lungs themselves lose some of their elasticity so that air exchange is less efficient and breathing under stressful demands becomes hard work.

Musculoskeletal System
There is an age related decline in muscular strength due to a decrease in muscle mass. This reduction in muscle mass can lead to decreased endurance for activity.

Loss of elasticity of joint cartilage and ligaments, and of muscle, contributes to decreased flexibility and less precision in movement. **Osteoporosis**, or weakening of the bones caused by decreased mineral content of bone, increases the risk of fractures, especially in post-menopausal women. Degenerative arthritis occurs in the weightbearing joints, resulting in pain and stiffness.

EFFECTS OF EXERCISE

Cardiovascular System
A sedentary person has even less cardiac output than an active senior, causing ordinary activities to become fatiguing. Regular aerobic activity improves the efficiency of the heart's pumping capability, thereby improving circulation and leading to increased endurance to activity, as well as reducing risk of heart attack.

Respiratory System
Regular exercise in the normal older adults resulted in increased lung capacity and an improved efficiency of air exchange. This also means better endurance and less problems with shortness of breath.

Musculoskeletal System
Exercise slows down the rate of muscle atrophy (wasting) and maintains normal muscle tone and flexibility. It also decreases pain and stiffness associated with lack of mobility often seen in persons with arthritis. Weightbearing activities (along with proper nutrition) have been shown to prevent complications of osteoporosis by increasing mineral content of bone. Isometric exercises performed in a weightbearing position further strengthen bones.

GOALS OF AN EXERCISE PROGRAM

1 To increase endurance to activity
2 To prevent functional losses of strength
3 To improve flexibility
4 To promote a keener sense of body awareness
5 To facilitate a general sense of well-being
6 To decrease pain
7 To improve balance and coordination
8 To improve the QUALITY OF LIFE

GUIDELINES FOR A SUCCESSFUL PROGRAM

1 **MAKE EXERCISING FUN**; you will be less likely to quit after a few attempts

- X Exercise with a friend, or as part of a group. Join an exercise class or a senior center and workout with your peers.
- X Exercise to music.
- X Vary your routine. Swimming and walking are both great aerobic activities, switch between the two.

2 **BE CONSISTENT**

Exercise on a regular basis. Get in the habit of exercising at the same time each day so it becomes part of your routine.

3 **DON'T OVERLOOK THE OBVIOUS!**

- X Hobbies and household chores can be therapeutic, for example: gardening and bird watching.
- X Use a purse with canned goods or a teapot with various amounts of water in it for resistance during strengthening exercises.
- X If you aren't able to get out of the house to participate in an exercise program, your own home can be a great place to exercise with stair climbing or riding a stationary bike in front of the TV.

4 **DON'T OVER DO**

Each exercise session should begin with warm-ups. Stretching first will decrease risk of injury to muscles and joints. All stretches should be done slowly and methodically, and held for a least 30 seconds.

5 **RESPECT PAIN AND FATIGUE**

Give your body time to adjust to your new routine of increased activity.

6 **KNOW THE NORMAL RESPONSE TO EXERCISE**

- X Mild muscle burn or fatigue which does not involve your joints and that decreases within 24 hours can be expected.
- X A mild increase in heart rate which returns to normal in 3-5 minutes is healthy.
- X Chest pain, joint pain, dizziness, or decreased heart rate are NOT NORMAL responses to exercise.

SO, WHERE DO YOU START?

If you are uncertain about how to begin, a physical therapist can evaluate you to determine your needs and create an exercise program tailor-made for you.

WHAT ARE YOU WAITING FOR?

Your GOLDEN YEARS are a perfect time for you to start exercising for your health!

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