EXERCISE & WOMEN'S HEALTH ISSUES

EXERCISE ETC. INC.

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REMINDER:

Obtain medical clearance and physician's release prior to beginning an exercise program for clients with medical or orthopedic concerns.

What Are Auto-immune Diseases?

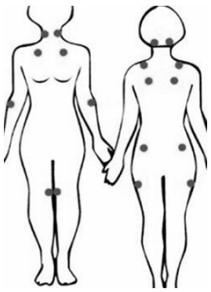
- "Auto-immune disease" refers to a variety of conditions in which the body's immune system begins to attack its own healthy tissues.
- Although the causes of these diseases are still not completely understood, it appears that they are triggered by:
  - Genetics
  - Viral infection
  - Environmental conditions
  - Stress

Side Effects of Immune System Medications

- Dizziness
- Retinopathy
- Weight gain
- Confusion
- Gastro-intestinal upset
- Mouth sores
- Depression
- Anemia

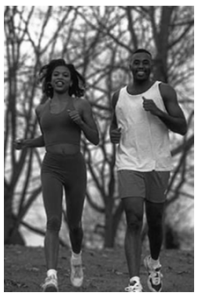
FIBROMYALGIA

- A debilitating auto-immune syndrome characterized by:
  - Pain at 11 of 18 “tender points”
  - Non-restorative sleep
  - Fatigue
  - Morning stiffness
  - Irritable bowel syndrome
  - Depression



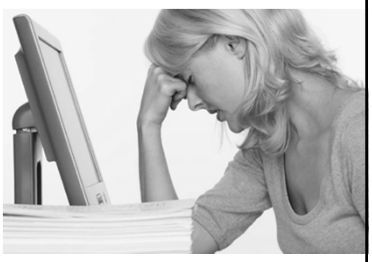
EXERCISE & FIBROMYALGIA

- Both aerobic and strength training have been found to:
  - Decrease pain at tender points
  - Improve sleep
  - Enhance mental outlook
- Aquatics was found to improve social wellbeing
- No evidence that Stretching is effective



SYMPTOMS AGGRAVATED BY:

- Weather
- Anxiety
- Stress
- Exercise
- Menopause



EXERCISE PROGRAM DESIGN

- Progressively increase duration and intensity
- Avoid delayed onset muscle soreness (DOMS)
  - Use light to moderate resistance for strength training
  - Avoid prolonged eccentric contractions or negatives
- Consider group activities for support

CHRONIC FATIGUE SYNDROME

- CFS is characterized by severe physical and mental exhaustion unrelieved by rest and exacerbated by even trivial exertion.

Understanding Chronic Fatigue Syndrome

- Syndrome = “collection of symptoms”
- No diagnostic or blood test
- Diagnosis of exclusion
- Symptoms common to other syndromes
- New research says it is controlled by AND & triggered by stress

Chronic Fatigue Syndrome

- Traditionally difficult to diagnose
- Commonly thought to be “figment of imagination” (Hypochondria)
- These patients “slow doctors down” they cannot be diagnosed in 6 – 9 minutes
- They are often angry & disillusioned with the medical community

Chronic Fatigue Syndrome: Legitimate At Last?

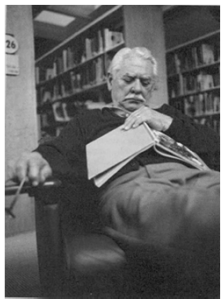
- 1 million Americans are diagnosed; that may be only 20% of the total…. 80% are not diagnosed
- Often confused with Lyme disease, Epstein Barr disease, depression or hypochondria
- November, 2006: CDC classifies it as a “real disease” to raise awareness of its severity & quality of life disruptions

Symptoms of Chronic Fatigue Syndrome

- Fatigue that reduces client’s abilities to perform ADLs for at least 6 months
- Fatigue must have no “known” cause (accident, injury, illness, chemotherapy)
- Fatigue may be mild to severe
- Severe mental & physical exhaustion, unrelieved by rest

Other Diagnostic Criteria Patient Must Exhibit 4 of 8:

1. Short term memory impairment
2. Sore throat
3. Tender lymph nodes
4. Muscle pain
5. Joint pain
6. Headaches
7. Non refreshing sleep
8. Post exertional malaise



IDENTIFYING RISK FOR CFS

- Physical or psychological stress
- Physical or emotional trauma is often a trigger
- Emotional instability
- 12% of all patients with serious infections have CFS in 6 months
- Hyperactive immune system…easy to turn on, hard to turn off
- Childhood trauma

CFS & EXERCISE RESPONSE

- Similar to that of profoundly de-conditioned clients
- Post-exertional Malaise (Push-crash phenomenon)
  - When fatigue is worse after a training day
  - Exertion beyond limits exacerbates disease, but the “limits” may change daily
  - With training, symptoms of Chronic Fatigue Syndrome decrease, often significantly

EXERCISE & CFS

- Daily, self-monitored exercise with “considerable education” to adjust intensity
- Exercise should not increase symptoms
- Goal is to prevent de-conditioning
- Start with flexibility training, add cardio (walking) and add strength as tolerated
- Fatigue may increase at first
- Do not overexert on “good” days

EXERCISE PSYCHOLOGY IN PAIN & FATIGUE

- Fearful of exercise & pain
- Poor adherence rates
- These tend to be “needy” clients
- A supportive, social environment is often very successful

Breast Cancer

- Leading cause of cancer death worldwide
  - Second to lung cancer in the USA
- 13% of American women will be diagnosed in their lifetime
  - 3% will die

Risk Factors for Breast Cancer

- Female Gender
- Age
- Age at Birth of 1st Child
- Personal History
- Atypical Hyperplasia or Non-invasive Lesions
- Early Menarche
- Late Menopause
- Hormone Replacement Therapy
- Family History
- Genetics

Contributing Lifestyle Factors

- Obesity
  - 18% increase for every 5 pt increase in BMI over 30
- Oral Contraceptive Use
- Alcohol
- Smoking
- Physical Inactivity

Lifetime P.A. Decreases Risk

- Women with greater lifetime physically activity have a 20% lower risk of developing breast cancer
  - *Most prominent for women who are active between age 14 and 20 and continue to remain active*

Treatment

- Mastectomy
- Radiation
- Chemotherapy
- Hormones

TREATMENT SIDE EFFECTS

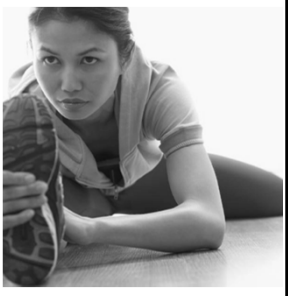
- Fatigue
- Decreased Functional Capacity
- Weight Loss
- Bone Loss
- Anemia
- Lymphedema
- Pain
- Body image problems
- Sleep disturbances
- Depression & anxiety

Exercise & Breast Cancer

- Exercise DURING and FOLLOWING treatment has been shown to:
  - Improve quality of life,
  - Enhance cardiovascular & muscular fitness,
  - Boost psychological variables including self-esteem
  - Decrease fatigue, and
  - Reduce risk of heart disease and osteoporosis during treatment

Exercise During Treatment

- Initial goal is restoration of function & ROM
  - Strength & Flexibility
- Start with 5 – 10 minute cardio intervals
  - A self-paced “brisk” walk is perfect
- Never skip exercise for more than 1 day

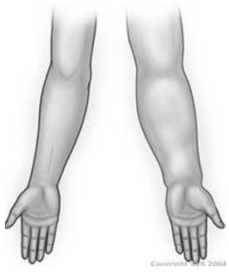


Exercise Following Treatment

- Psychological variables and high drop-out rates make supervised exercise essential
- 30-60 minutes of moderate intensity aerobic exercise 3 to 5 days per week
- Resistance exercise twice weekly
- Yoga
- Focus on regaining mobility in the shoulder and shoulder girdle

Lymphedema Risk

- Some breast cancer patients may be at risk of developing lymphedema
- Symptoms
  - Swelling
  - Pain, tingling, numbness
  - Loss of motor control



Exercise & Lymphedema

- Women with lymphedema may perform low intensity arm exercises without additional risk
- No heavy lifting
- Take blood pressure on unaffected side
- No smoking/alcohol use
- Wearing a compress may help, as may massage

Survival

- Regular exercise along with increasing fruit and vegetable intake reduces risk of recurrence by 50%
  - Equivalent of 30 minutes walking 6 days/week
  - Benefits increase up to 5 hours per week
  - Protection seems to be most effective for women who's breast cancer was estrogen-sensitive

Exercise & Osteoporosis

Overview

- After age 35 virtually all Americans have some loss of bone mass
- After age 60 most Americans have lost enough bone mass to make fracture imminent

Did You Know…..

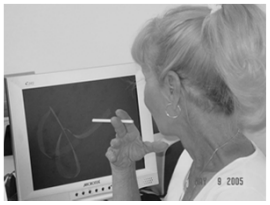
- An American woman's risk of a hip fracture exceeds her combined risk for breast cancer, uterine cancer & ovarian cancer?

What "Causes" Osteoporosis?

- Risk factors:
  - ✓Age
  - ✓Menopause
  - ✓Race/ Heredity
  - ✓Low estrogen
  - ✓Inactivity
  - ✓Low calcium intake
  - ✓Low body weight
  - ✓Smoking

Modifiable Risk Factors

- Smoking
- Alcohol abuse
- Excessive caffeine consumption
- Excessive dietary protein consumption
- Lack of dietary calcium
- Lack of sunlight exposure (to generate vitamin D)

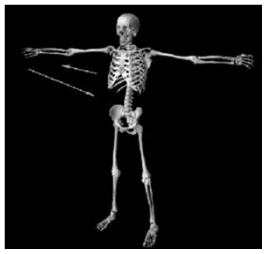


Osteoporosis & BMD (Bone Mineral Density)

- Osteopenia
  - BMD deviation of >1 below young normal values
- Osteoporosis
  - BMD deviation of >2.5 below young normal values

Exercise Concerns

- Vertebral fracture/ kyphosis
- Hip fractures
- Increased risk of falling
- Increased risk for CAD



Compression ("Wedge") Fractures of the Vertebrae

- Result in kyphosis
- This shifts center of gravity forward, increasing risk of falling
- Normal respiration is impeded, reducing cardio capacity
- Significant low back pain often occurs too

Hip Fractures

- Usually affects femoral neck
- 25% of women over 50 who suffer a hip fracture die within 1 year
- Hip fracture is a leading cause of nursing home admission

Side Effects of Common Osteoporosis Drugs

Biphosphonates (Fosomax)	Nausea, diarrhea, irritation of esophagus
Calcitonin (Miacalcin)	Minimal side effects
Raloxifene (Evista)	Improved lipid profile, lowered risk of uterine cancer

There is no support for the concept that exercise is an effective alternative for hormone replacement therapy (ACSM, 2008)

Exercise Guidelines

- Any type of cardio, without spinal flexion or twisting is indicated
- No impact for severe osteoporosis
- No floor work if getting up/down is a problem
- Reduced low back strength common with vertebral fractures
- Be wary on unstable surfaces (Swiss balls)
- It takes 9 – 12 months to determine effect

Actions to Avoid

- NO forward flexion
- NO spinal rotations
- Reduce eccentric joint actions
- Monitor for low back pain

Established Osteoporosis Exercise Programming

- Resistance Training
  - Emphasize closed-chain exercises over open chain exercises to overload hips
  - Focus on legs, abdomen & back for lower body strength & postural control
  - ***Avoid excessive spinal flexion (curl-ups, sit-and-reach, Pilates.)***

Core Stability: Seated Leans

- Goal is to maintain spinal alignment
- Begin with stable surface progress to unstable
- Begin with arms at sides progress to across chest, overhead, extended overhead


Suggested Exercises to Load Spine, Hips

Shoulder Press

Power lifts

Suggested Exercises to Load Spine, Hips


Squats

Suggested Exercise: “Heel Drop”

- Rise up on toes and land hard on heels
- This creates impact that translates up the leg and is absorbed by the neck of the femur
- This is thought to decrease the risk of hip fractures
- Not for severe cases

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