Exercise and Bone Marrow Failure Diseases: The Benefits and Challenges

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Why Exercise?
- Enhances overall health & quality of life
- Improves physical functioning of body
- Improves efficiency of heart & lungs
- Strengthens & firms muscles
- Reduces tension, anxiety, depression
- Reduces fatigue related to treatment
Exercise Benefits in a Pill

Organizations Promoting Benefits of Exercise
- American Heart Association
- American Cancer Society
- National Institutes of Health
- American College of Sports Medicine
- President’s Council on Physical Fitness & Sports
- U.S. Surgeon General
- Center for Disease Control & Prevention

What Kind of Exercise?
- Aerobic: Walking, Biking, GX classes
- Strength: free weight, tubing, body weight (Tai Chi, Pilates)
- Flexibility: stretching (Yoga, Pilates, Tai Chi)
Activity Pyramid

What Body Systems are Affected by Exercise?
- Circulatory/cardiovascular
- Respiratory
- Immune
- Nervous
- Lymphatic
- Muscular/skeletal

What are Safety Considerations of Exercising in Public?
- Avoid public gyms within one year post bone marrow transplantation and/or if WBC’s are low
- If have central line (PORT/PICC), avoid water, resistance training of muscles in area of central line
- If undergoing radiation therapy, avoid chlorine exposure
Are there Alternatives?
- Home based exercise programs
- Aerobic training: e.g. walking, use of exercise DVDs at home
- 10 minute stretch exercises if experiencing fatigue

How to Begin?
Part I
- Obtain permission from physician
- Begin exercising with short duration, low intensity work-outs, increasing gradually
- If experiencing fatigue, break up work-out to 5 minutes several times a day or 10 minutes in the AM & in the PM

How to Begin?
Part II
- Do what is FUN for you – INDIVIDUALIZE!
- Develop a support system
- Monitor your body’s reaction to exercise
- HYDRATE! HYDRATE! HYDRATE!
What are the Contraindications to Exercise?

- Development of irregular pulse (heart rate or palpitations)
- Sudden change in heart rate or pulse with consequent change in BP
- Chest pain or pressure, shortness of breath
- Dizziness, lightheadedness, blurred vision, faintness

Further Contraindications to Exercising

- Fever
- Paleness or cyanosis (bluish skin)
- Nausea, vomiting, diarrhea
- Other chronic health problems such as heart disease, diabetes, obesity
- Low blood cell counts: Platelets <50,000, Hgb < 10; WBC <3000; ANC <2500

Review of Research: Part I

- American Cancer Society website www.cancer.org article “Keeping your exercise program on track”
Review of Research: Part II


Review of Research: Part III (cont’d)


What is Our Take Home Message?

- Physical activity should be part of our daily lives; it doesn't have to be high intensity or inconvenient; and it should be fun!
- Eliminate old mantra “no pain, no gain” and replace with words of wisdom: “If you don’t have time for your health (physical, mental, spiritual) today, you won’t have health for your time tomorrow.”

Reference: *Nursing Spectrum*, DC/MD/VA June 14, 2010