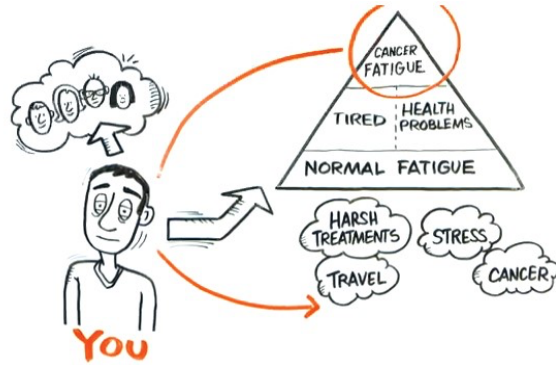


Exercise

Cancer Related Fatigue

<https://www.youtube.com/watch?v=YTFPMYG86s>



How can Physical Activity Help?

- ▶ Sense of control over your life
- ▶ Reducing cancer related fatigue
- ▶ Increase energy levels
- ▶ Decrease anxiety and depression
- ▶ Improve Quality of Life
- ▶ Increase bone strength
- ▶ Improve endurance for daily activities
- ▶ Improve heart strength
- ▶ Improve muscles strength and endurance
- ▶ Increase life expectancy
- ▶ Lower risk of reoccurrence



The Science...

- ▶ A greater abundance of oxidative enzymes, increased capillary beds, encourage greater oxidative diffusion at the muscle site. Basically, creating more energy, readily to use in order to reduce fatigue.
- ▶ Increase in pulmonary ventilation, pulmonary diffusion and VO2 Max. Basic, increase in respiratory function
- ▶ Resistance training increases size and number of mitochondria, greater capillary density increasing oxygen diffusion. That in turn decreases bowel transit time, decrease stagnant, less exposure to carcinogens
- ▶ Exercise increase muscle mass ratio to fat mass. Muscle loss results in a reduction of metabolic tissue that can lead to weight gain that can contribute to further medical conditions, more pressure on joints and organs.
- ▶ Skeletal muscle accounts for over 75% of glucose use in healthy individuals. Exercise stabilizes blood lipid and blood glucose profiles

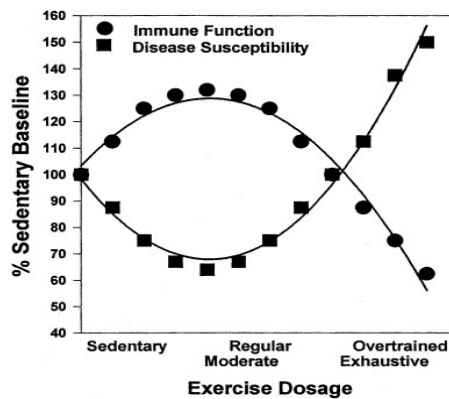
Cancer Recommendations

- ❖ 150 minutes per week of moderate intensity physical activity, or 75 minutes per week of vigorous
- ❖ 2-3 sessions per week of strength, training focusing on **large muscle groups**
- ❖ Stretch each exercise day (USHH,2008)



Immunity

- ▶ Intensity & Duration
- ▶ 30 minutes of aerobic exercise at 75% of HR max, suggesting chronic exercise of moderate intensity is effectively boosting the immune system. The author suggested individual susceptible to infection for the 6 hours post-exercise bout.
- ▶ Avoid during chemo completely
- ▶ Risk of dehydration
- ▶ Lack of fuel
- ▶ Up to a year after

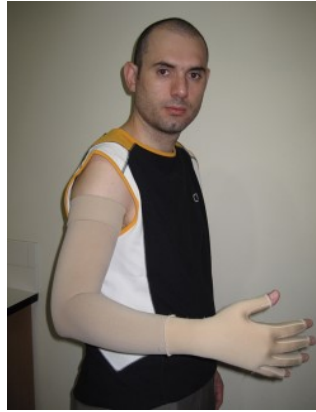


Considerations: Assessments

- ▶ Allow adequate time to heal after surgery, can be up to 8 weeks
- ▶ Clarify what side?
- ▶ Find out when they finish treatment/surgery
- ▶ What side effects?
- ▶ BP Cuff- Don't put on affected side
- ▶ BF%- Personally I would not advise due to psychological impact but offer
- ▶ Grip strength not on affected side
- ▶ Sit n reach- not for bowel/colon (ab pressure)
- ▶ Advise to wear compression sleeve if has lymphedema
- ▶ RPE
- ▶ Recommend all classes, swimming get them to check with their surgeon or clinical nurse that it is safe
- ▶ Swimming: Hickman/central (aorta)
- ▶ Support network (Macmillan booklet)

Exercise Considerations

- ▶ Compression Sleeve
- ▶ Allow comfort break/near facilities
- ▶ Fatigue-don't over exercise
- ▶ Illness (for both person and public)
- ▶ ROM (Don't overstretch???)
- ▶ Self esteem
- ▶ Psychological
- ▶ Bring mouth gel
- ▶ Bruising and Bleeding
- ▶ Nutritional advise-be careful
- ▶ NO Power plate
- ▶ Minimize joint stress
- ▶ Increase time and frequency before intensity
- ▶ Picline (bicep curls)



Common Cancers and guidance

Prostate: Side effects from treatment

Breast: ROM is key! **AVOID** upper body if swelling has arisen

Abdomen & pelvic: cut back on fibre & increase dairy

Bladder: Plenty of fluid

Bowel: Don't increase abdominal pressure

Colon: At early stages, walking programme to reduce complications and reduce infection risk

- ▶ **AVOID** intraabdominal pressure to avoid risk of prolapse (NO sit ups)
- ▶ Intensity should be very low thus not inducing Valsalva/intraabdominal pressure
- ▶ NO isometric, contact sport

Gynaecological: Pelvic floor exercises, walk programme to begin, Pilates and yoga.
▶ Resolve issues before exercising. Don't exercise if swelling has changed in abs, lower limbs or groin areas.

Myeloma: treat like Osteoporosis

All: Functional programme that is base on the individual involving stretching, resistance, cardio and social interaction.