

# The healing power of exercise

## Motion is medicine

Presented

By

Richard Mebane PTA

Licensed Physical Therapist Assistant

Certified Medical Exercise Specialist

(American Council on Exercise)

# Today we will discuss the healing powers of exercise, being physically active, and staying in motion to prolong life and improve quality of life

- Why is exercise and physical activity important to the human body.
- How can exercise help someone being treated for Lupus and how it really makes a difference.
- What are the different types of exercises, their benefits, and which ones should I do.
- Getting started and setting realistic goals.
- Sample strength and flexibility workouts, with aerobic / physical activity recommendations.

# Why is exercise important to the human body?

- The human body was meant to move. From the beginning of mankind we moved (exercised) to secure food, escape from dangerous situations, attract mates, and explore different parts of the world that has allowed us to thrive and progress to where we are today.
- According to the American College of Sports medicine, the U.S Dept of Health, and the Center of Disease Control (CDC), most health benefits occur with at least 150 minutes (2.5 hrs) of low to moderate exercise and / or 75 minutes of high intensity activity per week. This particularly applies to those with chronic health issues and or disabilities. **For those who are not capable or motivated to achieve these amounts of exercise, then any physical activity is better than none.**
- Major benefits of increased physical activity include reducing the risks of many health conditions such as Coronary Artery Disease, Hypertension (High Blood Pressure), Stroke, Diabetes, Asthma, Osteoporosis, Arthritis, Inflammation, Fatigue, and many more.
- Regular physical activity is crucial to improving our quality of life by controlling and managing our weight, decrease the negative effects of life's stresses of life, and slow the progression the aging process.
- An active lifestyle improves a person's overall psychological state. Increased physical activity promotes the release of our "feel-good" hormones (dopamine, serotonin, endorphins, and oxytocin) resulting in increased quality sleep, more energy, and overall improved mood and feeling of well being.

# Why exercise is important while being treated for Lupus

- According to my original Rheumatologist, the late Dr. Calvin Brown of Northwestern Memorial Hospital, Cardiovascular disease, (due to unhealthy lifestyles and medication side effects) is the most common cause of death among Lupus patients.
- Lifestyle improvements like exercising regularly and eating right lead to improved self image and a sense of control of one's health and life.
- An increase in cardiovascular circulation distributes nutrient rich blood throughout the body, improving immune function.
- The release of “feel-good” hormones during increased activity such as endorphins and dopamine have been proven to lead to a decrease in depression, which in turn leads to improved immune system function. Serotonin has been found to improve sleep which is another immunity booster. Oxytocin ( the love hormone) helps us bond with loved ones and can be released through touch, music, or exercise.
- The release of these hormones help to resist fatigue and ease the pain of stiff or sore joints and other body aches.

# What are the different types of exercises and which ones should I be doing

- Strength training (also called resistance training) involves dealing with progressively heavy weights / prolonged periods of time. Examples include lifting weights, body weight exercises (calisthenics), or gardening / yardwork.
- Cardio-respiratory activity (also called aerobic or endurance) involves continuous / rhythmic movement of the body over an extended period of time. Examples include walking, jogging, treadmill, elliptical, stationary bike, or cleaning the house.
- Flexibility exercises involve moving your joints through their normal full ranges of motion. For most, this is just doing simple stretches before, during, and/or after strength or cardio-respiratory exercises. Stretching should be done a little everyday and don't have to be particularly intense because the muscles / joints want to be flexible and mobile by design and nature.
- “Mind / Body” exercises are described as low to moderate intensity activities performed with a meditative or sensory awareness component. Examples include Yoga, Pilates, or Tai Chi.
- Ideally you want to include a combination of all of these activities on a regular basis. Exactly how much depends on your specific needs / goals, which can be for general health / fitness improvement, part of an orthopedic rehab program, or improved sports performance.

# Strength (Resistance) Activities

- Consistent resistance training results in stronger muscles, improved coordination / balance, and increased bone density all of which increases a person's overall physical capacity and ability.
- Without consistent physical activity our muscles steadily diminish and become weaker and bone density decreases increasing risk of fracture. Overall deconditioning has been shown to increase risk of fall and other orthopedic issues such as osteoarthritis.
- As we age, our physical capacity, muscle mass, bone density, and neural control decreases steadily over time. To overcome these processes, resistance training should be a regular component of an active lifestyle.
- Examples of resistance training include free weights (barbell or dumbbells), resistance bands, machine weights, or body weight exercises (calisthenics).
- Most resistance exercises should be done 2 to 3 times per week depending on the specific exercises performed and what body parts are focused on. Body weight and resistance band activities can be done more frequently than machine or free weights.
- Beginning exercisers should be encouraged to perform exercises for all of the muscle groups with light to moderate weight. And then progress to heavier weights focusing on functional movements.
- There are five fundamental functional movements. They are PUSH / PULL / ROTATE / SQUAT / LUNGE

# Cardio-Respiratory (Aerobic) Exercise

- The benefits of cardio-respiratory exercise are a better sense of well being and overall health, improved sleep, and more energy throughout the day. These improvements are thought to be the result of the body releasing “feel-good” hormones like endorphins or dopamine.
- The long-term benefits to aerobic training are an increase of nutrients throughout the body, causing the muscular, cardiovascular, and respiratory systems to function more efficiently.
- The two most common types of cardio-respiratory programs are “steady state” and “interval” exercises. Steady state exercise involves performing an activity at a low to moderate intensity for a prolonged period of time, usually 30 minutes or more. This is the preferred method for those new to exercise, casual exercisers, or those looking to establish a stable aerobic base to progress later. Interval training involves exercising at a much higher intensity for shorter periods of time, usually 20 minutes or less. This method is normally recommended for more advanced exercisers looking to improve speed and power for sports and other high intensity activities.
- The ideal amount of aerobic activity is typically three to five days per week. Each workout should consist of a warm up, conditioning period, and a cool down.

# Flexibility Exercises

- Consistent stretching activities are very effective at relieving pain and preventing injury. Tight and stiff muscles interfere with proper muscle action and blood circulation providing needed nutrients through out the body.
- Excessively tight muscles are a primary source of common musculoskeletal and joint dysfunction conditions such as rotator cuff tears and osteoarthritis often leading to injections and / or surgery.
- Stretching should be performed daily or at least before, during, and / or after continuous activity or prolonged exercise. At least a minimum of 3 to 5 days per week.
- Static and assisted stretching are usually the preferred method and can be a part of the mind / body exercise program.



# “Mind & Body” Exercises

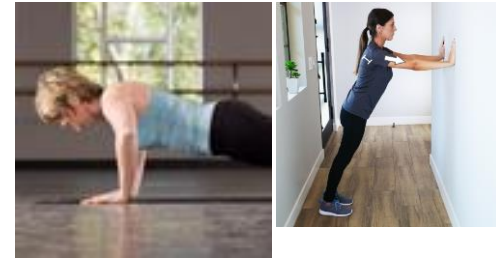
- Types of exercise include yoga, Pilates, tai chi which can be done individually or with a group. Can also be added to more conventional strength and aerobic workouts.
- Can be done as often as desired with little to no chance of over exertion or burnout.
- Ideal for meditation and managing stresses of everyday life and a variety of health concerns.
- Established benefits include controlling stress related disorders, low back pain, decreased balance, hypertension, cardiovascular disease, depression, decreased self confidence, and many other medical conditions.

# Getting started and setting realistic goals

- Assess health risks to determine the safety of planned activity. Risk factors include age, family history, smoking, activity level, obesity, hypertension, cholesterol levels, and diabetes. If two or more risk factors are present, a medical clearance would be highly recommended.
- The next step is to set realistic goals, which is extremely important to achieve initial and continued change of lifestyle, especially related to fitness. Effective goals should be (S.M.A.R.T): **S**pecific, **M**easurable, **A**ttainable, **R**elevant to your individual needs, and be **T**ime bound. A reasonable goal for someone trying to be more active would be to be physically active for 30 minutes a day 5 days per week for 1 month.
- Developing a strong social support network is another critical factor for becoming and staying physically active. The more positive feedback and participation you receive from family, friends, co workers, fellow church members, etc.; the more enjoyable and productive the entire experience will be.
- Be assertive, think positive, and visualize a successful outcome. Identify high risk situations like poor management skills, lack of social support, or a busy schedule to better prepare for these barriers. Understand the 5 stages of change acknowledged by psychology researchers: Pre contemplation, contemplation, preparation, action, and maintenance.
- If you can't seem to get started on your own, REACH OUT and SEEK HELP! DON'T GIVE UP! Make use of the vast resources available through books, the internet, community programs, and the use of fitness trainers.

# Examples of Body Weight Activities

- Push Up (Conditions upper body: Chest, Shoulders, Arms, & Back)



- Bird Dog (Conditions Low Back & Shoulders)



- Planks (Conditions Abdominals & Low Back)



- Stand Squat (Conditions Legs & Low Back)



- Lunge (Conditions Legs & Low Back)



# Sample Stretching Activities

- Hamstring / Quadriceps



- Hip Flexors / Low Back



- Torso



# Sample Stretching Activities (cont)

## Chest / Shoulders

