

# Body Building or Just Good Health?

## Resistance Training Builds Bone, Muscle and Balance



**D**r. Larry Lake is a licensed psychotherapist and the CEO of BayView Healthcare. Lake says “as a local non-profit healthcare provider, we are excited about how

*this FORUM can help share the knowledge of the more than 288 healthcare professionals at BayView and across our continuum of care. In each issue we will address an area of interest to help consumers be even more informed about their health and wellness.”*

*This FORUM focuses on the importance of strength training and weight bearing activities. Normal aging leads to a progressive decrease in muscle strength, muscle mass and flexibility. Resistance training and weight bearing exercises can help preserve and enhance muscle and bone mass, and can reverse age related*

*muscle atrophy. Healthy People (2010) shows that only 15% of adults perform the recommended amount of physical activity.*

*Vivian Virga is a physical therapist for the BayView Rehab Center at the Samantha R. Wilson Care Center. She answers many important questions in this FORUM helping us to better understand the interactions between strength training and weight bearing exercises in keeping us independent and functional as we age. Vivian will also discuss the positive impact such training and exercise have on the progression of diseases such as diabetes, arthritis, osteoporosis and more.*

subjected to an increasing amount of resistance in the form of weight. Muscle strength increases when the body works against gravity. When the weight training is adequate and loads are increased, the muscle fibers tire out, recruit new fibers and then become stronger.

The American College of Sports Medicine now recommends weight training for all people over the age of 50. Even frail elderly people experience significant changes by adding consistent weight training into their lifestyle. Outcomes include improved balance, quickened walking pace, stairs become less of a challenge, improved overall walking ability, increased endurance and strength. Weight training improves your ease in performing day-to-day activities.

**T**he American Family Physician Journal states “regular exercise proved a myriad of health benefits in older adults, including improvements in blood pressure, diabetes, lipid profile, osteoarthritis, osteoporosis, and neurocognitive function. Regular physical activity is also associated with decreased mortality and age-related morbidity”.

There are a number of studies that state Americans are losing strength, range of motion and are becoming less functional at younger ages. Recent statistics published in Health, United States (2007), revealed that 54% of individuals over the age of 65 are physically inactive and only 21% participate in regular physical activity.

As we age, muscles begin to atrophy (deteriorate) and bones

lose their density. Beginning as early as 50 years of age, muscle strength declines by 15% per decade. This occurs to a greater degree in women than men. The Framingham Disability Study (1981) reports that 45% of women older than sixty-five years of age cannot lift 10 pounds. It also states that 65% of women seventy-five years of age and older cannot lift 10 pounds. Bone mass peaks between the ages of 20 to 30 and then bone loss can outpace bone formation. With that in mind, the message is this simple – weight training and weight bearing exercises are key activities in keeping us more independent and functional as we age.

### Benefits of Weight or Strength Training

Weight training is a form of exercise where the body is

### Weight Training Guidelines

- 2 or 3 weight training sessions per week.
- Allow one day of recovery between sessions.
- For each exercise, perform three sets of 8 to 15 repetitions.
- Use a weight heavy enough that by your last repetition you can't do another one without compromising your form.
- You must progressively increase the amount of work your muscles must do
- You can increase the intensity of your workout by:
  - Increasing the weight you use.
  - Increasing the number of repetitions you do.
  - Increasing the speed of your repetitions.
- By moving through the largest possible range of motion, you engage the largest number of muscle fibers.
- Work at a steady pace. Too slow of a pace will give too much rest to your muscles and too fast may cause injury or strain to your muscle, joints or cardiovascular system.
- Rest one minute between sets and remember to keep breathing.
- Do not hold your breath as this can increase your blood pressure.
- Try to exhale with effort when you exert to lift a load.
- Before beginning any exercise program it is important to discuss it with your physician.



## Health & Medicine

**Arthritis** - By strengthening your muscles, tendons and ligaments around your joints, weight lifting/strength training can increase your range of motion, reducing the stress on your joints and can help ease arthritis pain.

**Osteoporosis** - Weight training can help prevent broken bones by improving balance and agility and building bone mass in the spine and hip which is especially important for those diagnosed with osteoporosis.

**Weight Loss** - As you gain muscle mass, you increase your metabolism and burn calories more efficiently which can result in weight loss. The more "toned" your muscles are, the easier it is to control your weight. The National Center for Health Statistics reports "two sessions of weight training a week can reduce overall body fat by about 3 percentage points in just 10 weeks even if you don't cut a single calorie".

**Diabetes** - Another benefit of weight training is glucose control for people with Type 2 diabetes. Weight training helps to improve glycogen consumption, decreases hemoglobin A levels and improves insulin sensitivity.

### Overtraining Symptoms and Pain:

Discontinue exercise and seek medical advice immediately if you experience chest pain, shortness of breath or light-headedness. Stop if you experience muscle pain caused by excessive exercise, improper form or posture. More is not always better! Overtraining can lead to injury and mental fatigue. Over-fatigued muscles should rest 48 hours and strains or tears must be treated as a sports injury.

### WEIGHT-BEARING EXERCISES:

Weight-bearing exercises enhance

bone growth and increase bone density. Bone is a living tissue that reacts to exercise by becoming stronger and denser when you make them work. Work for bones means handling impact – the weight of your body or more resistance while staying upright.

Weight-bearing exercise stimulates the cells to grow new bone and prevent bone loss. Some studies suggest that these exercises can replace current bone loss. The bones gain strength when a force is added and allows the bones to absorb more calcium. Thirty minutes of weight-bearing exercises daily will benefit not only your bones but will improve your heart health, muscle strength, coordination and balance. Weight-bearing exercises can be either high or low impact.

#### High impact exercises include:

- Dancing
- Hiking
- Jogging
- Jumping rope
- Racquet sports
- Step aerobics

#### Low impact exercises include:

- Walking
- Elliptical training machine
- Stair-step machine
- Push ups
- Tai Chi
- Yoga
- Golf
- Every day activities such as gardening, vacuuming and mowing the lawn



Vivian Virga,  
Physical Therapist

**Osteoporosis** - Osteoporosis is a bone thinning disease that can lead to devastating fractures. Osteoporosis is responsible for almost all the hip and spine fractures in the older population. There are a number of reasons that osteoporosis prevention is of special concern for females. Women generally reach peak bone mass at an earlier age than men and peak bone mass tends to be generally lower in women than in men. Pregnancy and breast feeding can lower bone mass and women undergo rapid bone loss after menopause when levels of the bone strengthening hormone estrogen drop dramatically.

The best cure for osteoporosis

is prevention! Weight-bearing exercises are the best exercises to enhance bone growth and to prevent bone loss. As with any exercise program, check with your doctor before starting. If you have osteoporosis, you are at a higher than normal risk for fracture. Avoid high impact or exercises that present a fall risk. There are certain exercises and movements (such as deep back bends) that are contraindicated and must be discussed with your doctor before starting.

Resistance training and weight bearing exercises are recommended for all ages. It can help age related muscle atrophy, enhance muscle and bone mass, assist with weight loss and can have a positive impact on disease processes such as diabetes, blood pressure, osteoarthritis and osteoporosis. Remember to choose exercises that you enjoy and they will help you to stay motivated and on track for healthy living!

For more information on the services offered by BayView Healthcare, please contact Anita Portman, Continuum of Care Coordinator at (904) 806-1035. *ny*



### Health & Wellness Forum

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BayView Healthcare, also known to many as the St. Johns Welfare Federation, is a private not-for-profit comprehensive continuum of healthcare provider founded in 1920. Our superior level of services includes short-term inpatient and outpatient rehabilitation, skilled nursing (Samantha Wilson Care Center), BayView Home Health, and assisted living (Pavilion at BayView and Buckingham Smith) and the Emergency Charitable Assistance Program. Caring Hands – Caring Community is a separate 501(c)3 charitable organization founded in 2004 by our parent organization. It was formed to support the exceptional services and continuum of care provided to people in need of healthcare services and financial assistance.