Building Lean Muscle Mass for Greater Weight Loss

When it comes to weight loss, many people simply attempt to increase the duration of their aerobic exercise to reach their weight goal faster. Mainstream media sources like magazines and TV ads promoting weight loss or fitness devices like the “Fitbit”, all hypothesize that exercise and weight loss have a linear relationship but this is not always the case. Our bodies are often quick to adapt to these changes in aerobic exercise and the rate at which one is losing weight can slowly begin to decrease over time.

One reason this decline is often seen is due to less overall activity outside of the gym as we spend more time to rest and recover from our last workout. Exercise research has also pointed to a possible underlying reason why more cardio alone isn’t the best weight loss plan. A study done in 2012 by Rosenkilde et al. found that participants who burned 600 calories per aerobic exercise session lost less weight over the course of 13 weeks compared to another participant group which burned 300 calories per exercise session. After analyzing the results, the researchers discovered that the subjects who burned more calories per session were eating more over the course of the day to possibly compensate for the extra exercise. So, if more cardio alone is not the answer, what is?

Focusing on increasing your lean muscle mass may be the best way to accomplish your long term weight loss goals in addition to aerobic exercise and following an appropriate nutrition plan. By increasing lean muscle mass and strength through consistent weight training, you can increase your resting metabolism, which will aid in burning more calories whether your sitting at work desk or reading in your favorite chair at home. Increases in lean muscle can also aid in reducing your chance for injury. Along with your weight training routine for lean mass, don’t forget to continue your moderate intensity cardio exercise as it is important for overall heart health and weight management. When combined, weight training to increase lean mass, aerobic exercise for cardiovascular health, and a healthy diet can be a lethal combination for defeating fat mass and helping you accomplish your body weight goals.

-Brendan Kennedy, BS Fitness Specialist

Tips to Make the Most of a Fitness Break—Whether it be Fun or Flu!

Whether you’re burned out from your New Year’s resolution, on vacation, or stuck in bed with a cold, there are a few ways to stay strong during your downtime.

1. **Light Cardio**: Reduce your chance of experiencing deconditioning over your break by remaining active. If you have the common cold a lower level of intensity for exercise is suggested. If you are on vacation then keep your intensity the same as your normal workout back home! By just keeping your cardio activity up a little will help you maintain your gains as compared to just stopping all together during your break!

2. **Resistance Training**: There are plenty of reasons for a break, but if you have a localized injury, say in the wrist, don’t use it as an excuse to stop exercising all together! Cross train! For example, do some body weight exercises such as simple squat to chair, 1 arm bicep curls or standing calf raises, lunges, swim or even an exercise class!

3. **Nourish Your Body**: Exercise can sometimes help control junk food cravings. A diet containing good sources of protein, healthy fats and low glycemic index foods like most fruits are the most desirable during down times. This helps the body avoid weight gain when you’re sick and recovering or on vacation and relaxing more and possibly a bit less active.

- Kyla Cross, BS Fitness Specialist
What Exercise Researchers are Saying Lately...

High Intensity Interval Training (HIIT), described as “non-continuous exercise with varying amounts of intensity” is a popular approach to losing weight, getting in shape, or maintaining a specific fitness level. But is HIIT better than performing the same exercises at the same intensity for the same amount of time, typically referred as “steady-state exercise”.

A study performed by Carl Foster, Ph.D., et al. from the University of Wisconsin, La Crosse Exercise Physiology Program shed some light on this topic.

A total of 55 participants between the ages of 18-28 years old completed an eight-week intervention. To be eligible to participate, the subjects could not have been exercising more than twice per week at low to moderate intensities. After determining aerobic capacity and anaerobic power with blood lactate level measurements subjects were randomly assigned into 1 of 3 groups. Each subject performed a five minute warm-up and cool down along with established protocol as followed:

- the Steady-State group (20 minutes of continuous exercise at 90% of individual’s ventilatory threshold—moderate to vigorous training totaling 20 minutes),
- the Tabata group (20 second exercise with 10 second unloading – very high-intensity interval training totaling 4 minutes on stationary bike), and
- the Meyer group (30 second intervals with 60 second active recovery – moderate-intensity interval training totaling 20 mins).

The results showed a significant increase in all measures including VO2Max, Aerobic Power, Peak Power Output and Mean Power Output, but no significant difference between the groups. Although the Tabata group showed greater developments in all measures, there was no significant increase in the combined exercise capacity between the groups.

A study done by Talisa Emberts, M.S et. al., used the Tabata protocol to investigate if it would make a difference in moderately to very fit individuals age 20 to 47 years old. Emberts analyzed the intensity and calories burned of a Tabata group inspired workout which consisted of various high intensity exercises rather than just high-intensity bouts of cycling.

The results showed that the “subjects averaged 86 percent of HRMax and 74 percent of V•O2max both of which meet or exceed established industry guidelines for improving cardio fitness and modifying body composition”.

To answer the question as to which type of approach to exercise is better is very dependent upon the condition of the individual. Steady state training is very appropriate for a beginning exerciser or an individual who has not exercised in a long time. Interval training or HIIT may be good for an advanced fitness level, working on specific strength, or losing those last 10-15 pounds.

With any mode of exercise, you should find some enjoyment; otherwise there is a greater likelihood of dropout. Regardless of the type of exercise, if the intensity is enough to elicit a training effect, ie: improved strength, and the workload increases over time, improvement can be seen for anyone! For those wanting to try HIIT be sure not to compromise your form with any exercise and seek the advice of a fitness expert. Adequate rest time should also be considered after every exercise session along with hydration and a healthy diet.

- Theresa Kossey, B.A.
  Fitness Specialist
  Personal Trainer, ACE

Healthy Recipe: Raspberry Vanilla Refrigerator Oatmeal

Ingredients:
1/4 cup uncooked old fashioned steel cut oats
1/3 cup milk
1/4 cup low-fat Greek yogurt
1 ½ teaspoons dried chia seeds
1/4 teaspoons vanilla extract
1 tablespoon raspberry jam, preserves, or spread
1/4 to 1/3 cup of raspberries (cut each berry in half), or enough to fill the jar

Nutrition:
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<th>Calories:</th>
<th>Fiber:</th>
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<td>230</td>
<td>8g</td>
<td>51g</td>
<td>4g</td>
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Preparation:
1. In a half pint (1 cup) jar, add oats, milk, yogurt, chia seeds, vanilla, and raspberry jam
2. Put on lid and shake until well combined
3. Remove lid, add raspberries and stir until mixed throughout
4. Return lid to jar and refrigerate overnight or as long as 2-3 days.
5. Eat chilled
March is National Nutrition Month

As most people know, a balanced diet is key for weight control and overall well-being. Did you also know that your nutrition can affect your exercise performance? A lack of calories, carbs, fluids, proteins, vitamins, and minerals in your diet can lead to lethargy during a workout and overall poor performance. According to Medline Plus, the most important parts of your diet is hydration and carbohydrate intake. For hydration, focus on water intake, and occasionally including small amounts of sports drink. The generally accepted daily water intake is 64 oz of water, but that should be adjusted to fit your specific needs. In terms of carbohydrate intake, you should focus on complex carbs with a low glycemic index, found in foods such as whole grains, fruits, sweet potatoes and pasta. These provide energy, as well as fiber, vitamins and minerals, and are absorbed slower, which helps to alleviate hunger. You can also get carbs from foods including soft drinks, candy, and jelly but they are called simple sugars with a high glycemic index, which contain calories, but no provide essential vitamins and minerals that give you the energy to get through your workout. Another important part of your diet to consider is protein intake. The common belief is you need a lot of protein to build muscle, which is a total myth. Yes, it is true that protein helps to build muscle, but there is a limit on protein intake to which it is beneficial and additional protein intake is either excreted in urea, or stored as excess body fat. The recommended protein intake is 0.36g per pound of body weight. When determining a balanced diet, the proportions should be approximately 20-30% fat, 50-60% carbohydrate, and 15% protein. If you are unsure whether you fall in that range, consider meeting with a Registered Dietician at U of M!

Source:
http://www.onthegophysio.co.nz/lsvt
http://www.parkinson.org/understanding
https://www.pmr.med.umich.edu/transitions

April is Parkinson’s Awareness Month

For anyone suffering with Parkinson’s Disease, initiating movement is extremely difficult, and moving around occurs much slower than it used to. Medication is able to counteract these symptoms, but research has shown that supervised exercise has shown favorable improvements in the level of functioning in individuals with Parkinson’s Disease. The LSVT BIG is a therapeutic exercise program, complete with instruction and supervision of a certified clinician/therapist, for people with Parkinson’s. It is based around the principal of neuroplasticity, in that the brain can learn and adapt and form new connections to improve functioning. Research has shown that over the last 15 years, LSVT BIG has improved motor performance, balance, coordination, among others. The research also suggests that the formation of new and restoration of lost connections can outweigh the loss of other connections, allowing for improved functioning.

On a personal note, a member of my family, who was physically active, but was never good about going to the gym, was diagnosed with Parkinson’s Disease 2 years ago. At that time he started going to the gym regularly and attending fitness classes targeting the symptoms associated with Parkinson’s Disease, and he is able to control his symptoms to the point that he doesn’t take any medications. He is living proof of the power of exercise and its ability to better someone’s overall well being.

The LVST program is available at UM PT and OT with a prescription from a physician. For more information on LSVT at U of M contact MedRehab at 734-998-7888.

-Ryan Werme, BS
Fitness Specialist

Featured Program: FUNctional Fitness for Older Adults

The FFOA exercise classes were developed to introduce fundamentals of exercise as well as equipping participants to combat the negative physical and cognitive effects of aging. Some of these effects are:

1. Muscle loss
2. Bone loss & increase frailty
3. Compromised balance & reaction time
4. Decreased muscular endurance & energy
5. Decreased flexibility
6. Memory loss
7. Arthritis

Class participants will learn exercises to improve strength, endurance, coordination, balance, reaction time and more. Along with instructions in class, participants will be able to apply lessons learned at home so they may continue improving their overall health and function.

To learn more about our FFOA classes call us or visit our website:
http://pmr.med.umich.edu/transitions

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-Trainer Tip of the Month
Strength Training - Back to Basics

Crack open any fitness magazine and you’ll come across a “new and improved” form of strength training philosophy, technique, or idea. What many readers don’t understand are some of the basic concepts on strength development and they jump right into a “magazine routine” that might not be safe and/or meet their specific needs or restrictions. To be clear, for muscles to become stronger, you MUST apply enough resistance to create acute muscular fatigue or failure. In other words, that last repetition should feel like it’s the last one you can complete or close to it! Sorry to disappoint those who just want to “go through the motions”. There are different levels of intensity tolerated for each person, but the concept of overload is essential for strength development for all ages. The American College of Medicine (ACSM) recommends 1-3 sets of 10-15 repetitions of a particular exercise to “volitional fatigue”, the point at which you cannot perform another repetition without cheating or using momentum. For more coaching on strength training seek out the help of your Transitions Training Staff!

Britt Michel
Transitions Manager/Exercise Physiologist
The Department of Physical Medicine & Rehabilitation

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Check out our website!
http://pmr.med.umich.edu/transitions

Our medically based exercise programs are specifically designed to meet our clients’ health and fitness goals. We offer a variety of services at our studios including Mat and Reformer Pilates classes and private lessons, BioCored lessons, Yoga Classes, Older Adult exercise and balance classes, Weight Management and Bariatric (pre/post surgery) exercise classes and Personal Training.

Executive Officers of the University of Michigan Health System: Marschall S. Runge, M.D., Ph.D., Executive Vice President for Medical Affairs; James O. Woolliscroft, M.D., Dean, U-M Medical School; T. Anthony Denton, J.D., MHA, Acting Chief Executive Officer, U-M Hospitals and Health Centers; Kathleen Potempa, Ph.D., Dean, School of Nursing.


Member Testimonial: Pat Rubadeau

When I was diagnosed at age forty with Lymphangioleiomyomatosis or LAM, I was in pretty good shape physically. But LAM, a rare disease that affects women almost exclusively, breaks down the structure of the lungs making breathing more and more difficult. The National Institutes of Health, which had begun to study this disease in 1996, observed that women who exercised appeared to do better than women who didn’t. So I continued regular exercise as if my life depended on it—because it did.

Two years ago, I fractured my pelvis and my right elbow in a fall. I was virtually helpless the first few weeks after falling, but the visiting physical therapist helped me regain enough strength to do simple activities like showering and dressing myself. After three months of recuperating at home, a friend suggested I join the Transitions Training Studio.

At Transitions, my strength returned slowly, so slowly that had I not kept an exercise log I would have thought that I hadn’t improved. But within a year I had regained my strength and then some. I was feeling great.

This past December, however, I suffered a devastating bout of pneumonia, and, as if that wasn’t enough, I also developed shingles, heart issues, and chemical imbalances. I truly thought I would die. I spent much of December in the hospital and three weeks in a rehabilitation center/nursing home. Super weak, despite daily therapy at the rehab, I finally went home. Walking room to room left me exhausted, but slowly, each day, I could walk more. Two weeks after leaving the rehab, I came back to Transitions. Surprisingly, I was not as weak as I had been two years earlier, but I was still too weak to function well.

I’m now doing better, and I’ll keep exercising at Transitions as long as I can. Why? Because one of my doctors told me, “If you hadn’t been as strong as you were physically, all of this would have killed you.” If that isn’t a reason to keep exercising, I don’t know what is.

We are so proud of you Pat! Stay strong!

Exercise of the Month: Standing Wall Squat

1. Begin with your back flat against the wall. Your feet should be about shoulder length apart and about 2 feet in front of the wall.
2. Remember to tighten your stomach muscles and keep a neutral spine.
3. Slowly slide down the wall, bending your knees until they reach a 90 degree angle.
4. DO NOT bend your knees past your toes and keep your knee joints above your ankles.
5. Slide back up the wall to the starting position.
6. Repeat for 2-3 sets of 10-15 reps.
7. (BONUS) For an additional challenge, hold a medicine ball in front of you while you complete the exercise.