### Weight Loss through Muscle Building

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The rules for exercise have been changing. Kenneth Cooper's groundbreaking research on the benefits of exercise in the 1960's and 70's turned us as a nation into joggers, runners, and weekend athletic warriors. Although that was better than the sedentary lifestyles we were living before, new research is giving us even better information on the how's and why's of exercise physiology. The facts and ideas for empowered exercise presented here were inspired by the work of Guy Schenker, D.C., the man who developed the Nutri\*Spec metabolic testing, which in turn inspired the M.I.N.E. test we use here at IHC.

## A Whole New Approach

Trying to lose weight is over rated, ineffective and sometimes even dangerous, however being your optimal weight is still a fabulous idea. It's how we go about reaching that optimal weight that needs another look. The new approach to being lean, and even athletic, is to focus on putting on muscle instead of losing weight. Instead of trying to lose 20 pounds, focus on gaining 4 pounds of muscle. To gain one pound of muscle requires nearly 45,000 calories. Four pounds of muscle will burn 200 calories every day even when you don't exercise. 200 calories is about the amount you would burn if you ran 2 miles at top speed, so carrying those extra 4 pounds of muscle is the equivalent of running 2 miles a day, 7 days a week, 52 weeks a year! A high intensity musclebuilding workout regimen can easily demand between 1500 and 3000 extra calories a day - 7 days a week, not just on the days you exercise.

To gain muscle requires intelligent eating and purposeful exercise. Most of us have heard different theories about exercise through the years and have put together a hodge-podge system that seems to work for us - at least mostly - for a while. The trouble is that many of those programs can do actual harm. If you desire a more effective workout than the one you now have, or if you haven't yet put together your own program, the following guidelines will help. Throughout this article we will contrast the benefits of high intensity, short duration exercise with the ineffective and often damaging effects of low intensity, long duration workouts. It is a convincing argument. Read on!

### What you should know:

- Exercise without adequate nutrition accelerates the aging process.
- Insufficient exercise results in weak muscles, weak bones and a weak hormonal system.
- Exercise is absolutely necessary to stimulate the pituitary gland which coordinates hormone function throughout the body.

- Increasing the quality and decreasing the quantity of your workouts is the ideal way to achieve your exercise goals.
- Having excess body fat always involves an inefficient metabolism.
- It takes surprisingly little exercise to maximize cardiovascular fitness, fat loss, strength gain, and metabolic efficiency.
- Over-training, i.e. long-duration, long distance exercise, accelerates the aging process.
- You would have to run as much as 2 to 3 miles or walk as long as an hour before you would burn your first fat calorie above what you would burn at rest.
- Cardio exercise does little to burn body fat, does nothing to inhibit fat cell development, and does not increase muscle cells.
- Long duration exercise makes you store a higher percentage of your calories as fat, making it more difficult to lose weight.

## High intensity, short duration exercise:

- Is the most productive, the most time and energy efficient way to exercise.
- Provides the metabolic stimulus to mobilize and utilize fat reserves from the first moment of effort.
- Will stabilize pulses, blood pressure, body temperature, and cholesterol.

### The Plan

(**NOTE:** If you have any doubts or concerns about doing these exercises, please consult one of the Clinic doctors. The doctors can evaluate your readiness to take on these exercises, and inform you of any modifications that might be necessary for you as an individual. Consider seeing a doctor especially if you have joint problems, arthritis, asthma, heart or circulation difficulties.)

- 1. Begin with a <u>Metabolic Individualized Nutritional Evaluation (M.I.N.E test)</u> to determine your unique dietary needs.
- 2. Begin supplementation to correct any nutritional imbalances and prevent excessive catabolic stress from exercise. Proper nutrition is essential.

#### Then:

- Exercise no more than 5 times per week, but not less than 3
- One to three of those workouts should be high intensity intervals
- One to three of those workouts should be maximum output strength training

(See below for an example of a sample week of exercise.)

### **High Intensity Intervals:**

Choose either running, biking, swimming, cross country skiing or other aerobic device:

- After a brief warm up, take off running (or other chosen exercise) at full speed until you can't run another step. This will only take 30 to 90 seconds.
- In precisely 60 seconds, take your 15 second pulse rate. Make a note of the pulse rate.
- Go immediately into a second top speed run. (Maintain the same intensity so you don't reduce the exercise to a medium intensity, medium duration workout.) Take your 15 second pulse rate. Make a note of it.
- Repeat the cycle until you see that your pulse is clearly not recovering. You will probably need only between 3 to 6 cycles.
- Go home. You're done for the day.

#### As an example:

If your first pulse rate is 114 and your second pulse rate is 124, there is a difference of 10.

If your second pulse rate is 124 and your third pulse rate is 134, there is also a difference of 10.

The third pulse rate is 134 and the fourth pulse rate is 144, there is still a difference of 10.

However, if the fourth pulse rate is 144 and the fifth is 160, there is a difference of 16. You are done for the day.

If the pulse rate is markedly lower than the ongoing pattern (a difference of 2 instead of 10), it is also time to go home.

**Important:** Go at a pace that is max for YOU. A 25 year old will have more endurance and prowess than a 75 year old with joint problems, but the principles are the same. The times and intensity will be different, but the results will be the same. Remember: to check in with a Clinic doctor any time you have concerns.

### **Maximum Output Strength Training**

**NOTE:** Please seek the advice and supervision of a personal trainer to learn the proper form for the strength training exercises. Most gyms have trainers on staff, or we have a referral for a trainer who will come to your home.

#### The exercises:

#### Workout A:

- Leg Press or squats
- Pec/delt press
- Lateral raise

- (Optional) Tricep kick-backs (cable not dumbbell or barbell)
- (Optional) Roman Chair

#### **Workout B:**

- Leg Extensions
- Leg Curl
- Pull downs or chin ups
- Reverse Flies or Bent Over Rowing
- (Optional) Bicep Curl (cable not dumbbell or barbell)

#### The Program

#### Day One - Determine the weight to use

For each of the above exercises, make your best guess as to the maximum weight you can lift in one attempt and try to lift it.

If it is too heavy, lighten up, if it's too easy, add more weight. Attempt another lift.

Repeat to find the weight you can just barely lift one time.

Multiply by 0.7. This is your workout weight for that exercise.

After you have determined the weight limit for each of the exercises - go home. That is all for day one.

## **The Strength-Training Routine:**

Alternating between Workouts A and B above, perform the exercises in the order listed.

Each repetition is done at a rate of 25 degrees per second on the concentric (muscle shortening) contraction, and 70 to 100 degrees per second on the eccentric (muscle lengthening) contraction.

**Important:** Do as many reps as you possibly can, putting out whatever energy and effort you need to get out just one more rep. It is at that point that you have gotten the most benefit from the exercise. Only one set of reps per exercise is required.

**Note:** The number of reps required to reach exhaustion will be different for different exercises.

As the weeks go by you will find that the number of reps required to reach exhaustion for the various exercises will increase. When you have increased your reps by 2, it is time to increase your workout weight for that exercise by about 10 percent.

#### A Week at a Glance:

You will alternate workouts A and B above with High Intensity Intervals so that a sample week may look like this:

- Monday: High Intensity Intervals
- Tuesday: Strength Training Workout A
- Wednesday: High Intensity Intervals
- Thursday: Strength Training Workout B
- Friday: High Intensity Intervals (optional depending on how recovered your body feels.)

**Note:** You can just as easily do 3 Strength Training workouts and 2 High Intensity Intervals in a week's time. **Mix it up for your own amusement!** 

Do not do two days of High Intensity Intervals in a row. Do not do two days of Strength Training Workouts in a row. Give your body time to fully recover and rebuild.

### In Summary:

To be effective for weight loss an exercise must stimulate the body to:

- Pull fat out of storage and burn it for energy
- Crank up the cellular engines to run at optimum efficiency 24 hours a day

Three to five workouts weekly of the High Intensity Intervals and Maximum Output Strength Training is the caloric equivalent to running many miles, seven days a week, and yields exceptional metabolic benefits.

Short bursts of high intensity output will give you the hormonal and other metabolic effects that come from quality exercise, while at the same time building lean body mass, cutting down on fat, and keeping your metabolic engines fired up 24 hours a day.

If you are a competitive athlete and desire recommendations developed specifically for you, or you have other questions about implementing this plan, please call the clinic.