



# “THE MESSAGE”

## Health & Fitness Newsletter

MARCH 2004

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Information contained within this newsletter and any other related information is intended to help educate those afflicted by movement disorders such as Parkinson's, etc. and their caregivers about their conditions, and to allow them to access useful information about movement disorders on the "Information Highway". It is not intended to provide treatment or replace appropriate medical care by a licensed, qualified physician. If you intend to act on any information found, this should only be done after consultation with your physician.

For more information about  
Fit For You contact:  
Joe Green  
CFPT, CSNC, MFBPC  
Fit For You  
Personal Training & Nutrition

[www.phyt4u.com](http://www.phyt4u.com)

Phone: (717) 579-8257

Fax: (717) 545-2595

### WHAT'S NEW WITH FIT FOR YOU?

- Fit For You (Joe Green) Welcomes **Dr. Michael Lupinacci, M.D.** of Physicians of Rehabilitation, Industrial & Spine Medicine, P.C. as a participating doctor referring patients to the services of Fit For You.
- Fit For You (Joe Green) Welcomes **Kelly Straub, MPT Clinical Specialist**, and Supervisor – of Neuroscience Rehab Center, Physical Therapy as a participating health care provider referring patients to the services of Fit For You.
- Fit For You (Joe Green) Welcomes **Dr. Barbara O'Connell, M.D.** of Pennsylvania Neurosurgery & Neuroscience Institute, Inc. as a participating doctor referring patients to the services of Fit For You.
- **Special Thanks!** to Heather Cianci, PT, GCS Physical Therapist and Geriatric Clinical Specialist from the Pennsylvania Hospital's Dan Aaron Parkinson's Rehab Center for her continued educational support and participation as a health care provider referring patients to the services of Fit For You.
- Special Thanks to Dr. Anna Barrett of Hershey Medical Centers Neuroscience Research Department for her referral of patients to the services of Fit For You.
- **FIT FOR YOU Personal Fitness Coaching** features home based clinical exercise programs for those facing the challenges of chronic illnesses such as Parkinson's, Multiple Sclerosis, Stroke, Fibromyalgia, Balance and more. If you know of someone who could benefit from the services of specialty home based clinical exercise program right in the privacy of comforts of their own home, put the contact information of Fit For You (Joe Green) in their hands today.

## Heart Stem Cells Identified

December 29, 2003

(NIH) -- The heart has long been considered an organ that wasn't able to renew itself. But a new study shows that the adult heart may contain stem cells that have the potential to regenerate tissue when the heart is damaged, such as during a heart attack. Scientists now hope to harness these cells to develop new therapies to repair damaged hearts.

Most researchers had assumed that the heart had a relatively stable number of fully developed, specialized heart muscle cells from shortly after birth well into adulthood. But in the past few years, stem cells (cells with the potential to transform into other cells in the body and replenish them) have been found in many adult tissues, including the brain. Recent studies suggested that stem cells may also contribute to a process of cell death and renewal in the heart.

A team of researchers supported by NIH's National Heart, Lung, and Blood Institute (NHLBI) and National Institute on Aging (NIA) took heart muscle from older rats and isolated cells they believed might be stem cells. They were able to grow these cells in the laboratory for well over a year, and could also successfully freeze and thaw them, important characteristics for any cells that might be used as a therapy. When the cells were prompted to transform into heart cells, the cells displayed some of the chemical characteristics of three different types of heart cells, although they seemed to be immature forms of the cells when viewed under the microscope. The researchers next injected the cells into damaged rat hearts to see what they would do. They found that the cultured cells grew into different types of heart cells. Moreover, the cells seemed to hone in on the damaged areas of the rats' hearts. Within 20 days, the damaged areas started to function again, and the rats' overall heart function improved.

These types of cells have been found not only in rats, but also in mice, dogs, pigs and humans. In another recent study, the research team looked at people who died after aortic stenosis (the narrowing or obstruction of the heart's aortic valve) and found that new heart cells were being created by similar cardiac stem cells.

So if these stem cells are already in the heart, why don't they mobilize and repair the heart when it's damaged? That is a question the researchers hope to answer soon. If the regenerative power of these cells could be harnessed, they might form the basis for an effective therapy to treat heart damage.

### RECIPE OF THE MONTH Caribbean Grilled Chicken Thighs

#### MARINADE:

2/3 cup pineapple juice  
2 tablespoons minced onion  
2 tablespoons fresh lime juice (1 to 2 medium limes)  
1 tablespoon curry powder  
1 tablespoon honey  
1/4 teaspoon salt  
1/4 teaspoon pepper  
1/4 teaspoon red hot-pepper sauce  
4 skinless chicken thighs (about 6 oz. each), all visible fat removed  
2 bananas, halved lengthwise and crosswise (8 pieces) – slightly underripe

For marinade, combine all ingredients in a large airtight plastic bag. Rinse thighs and pat dry with paper towels. Add thighs to bag. Seal and refrigerate for 2 to 12 hours, turning occasionally.

Preheat grill (or broiler) to medium. Meanwhile, remove chicken from marinade. Pour marinade into a small saucepan and bring to a boil over high heat. Boil for 5 minutes; set aside.

Grill chicken on covered grill for about 20 minutes, turning occasionally. Brush bananas generously with marinade; place on grill. Grill chicken and bananas for 10 to 15 minutes, or until chicken is tender, turning bananas once. Brush chicken and bananas with marinade before serving.

*Serving Size: 4 – Calories: 275, Protein: 23g, Carbohydrates: 26g, Cholesterol: 79mg, Total Fat: 10g, Saturated: 3g, Polyunsaturated: 2g, Monounsaturated: 4g, Fiber: 2g, Sodium: 228mg*

## Sickness and Exercise – Where to draw the line, working out versus resting.

If your symptoms are located above the neck -- a stuffy or runny nose, sneezing -- then exercise is probably safe. Start slowly, and if you feel better after 10 minutes, continue, if you feel worse, stop. If you have below-the-neck symptoms, for example, muscle aches, hacking cough, fever of 100 degrees or higher, chills, diarrhea, or vomiting, you should avoid exercise. Exercising when you have these symptoms may raise your temperature, dehydrate you, and weaken you further. A sore throat could go either way, and you need to see how your energy and strength level is. Whatever your symptoms are, if you're feeling really weak, it's better not to exercise because when your body is fighting an infection, you could suffer a setback, plus your performance would be greatly diminished and you probably wouldn't be getting very much out of the workout.

You wake up sneezing, coughing, and generally feeling like you've been beat up. The alarm clock sounds and it's time to get going if you're going to workout. Your body begs for mercy, but your mind wonders if a workout will make you feel better. Will it? Well, that depends.

No matter how fit you are, any illness, from a cold to the full-blown-cannot-leave-your-bed case of the flu means that your body and immune system are being stressed. Since exercise also stresses your body, too much (especially when you're feeling less than human) can have dismal effects. Don't be afraid to rest if rest is what you really need.

Rest assured, taking an exercise "sick day" doesn't mean you'll lose the results of all your hard work. "If you're sick for a few days or so, there's very little setback. You will lose some fitness, but just as quickly you'll gain it back," says David Nieman, DrPH, professor of health and exercise science. Try to view your time off as time for your body to repair itself (as well as a chance to do some pleasure reading or just relaxing).

So, if you're feeling a little under the weather, grab your Kleenex and a big glass of orange juice and check out the guidelines below to determine whether you're better off working out or stretching out in bed.

**Symptoms:** stuffy or runny nose, achiness, general cold symptoms

**Exercise verdict:** Exercise but modify your usual routine.

"If you have symptoms in the head such as runny, stuffy nose, then moderate exercise is fine," says Nieman, who is also president of the International Society of Exercise and Immunology. You can go ahead and exercise, but do less than usual. For example, if you run, take a short jog instead.

If you workout with weights try decreasing the weight and/or the number of reps instead of exercising to exhaustion. While regular exercise can actually boost immunity, exercising when you're feeling under the weather won't help you get better any faster. "So, you can exercise moderately when you have a cold, but don't expect exercise to help make a cold disappear faster.

"If you feel something coming on or if you feel a little stuffed up, it might be best to continue exercising, but vary the length and intensity and do a little less than usual. Resist the urge to push through a workout when you're not feeling a hundred percent. You could end up getting sicker.

**Symptoms:** achiness, extreme fatigue, fever, vomiting, diarrhea, severe sore throat, or anything else flu-like

**Exercise verdict:** Don't exercise.

"If you feel like you want to be in bed all day, if you feel like rest and sleep are the best things for you, then you shouldn't exercise.

**Symptoms:** coughing, any illness involving the chest and lungs, such as pneumonia or bronchitis

**Exercise verdict:** Skip it altogether.

"If symptoms are below the neck, in the chest or lungs, then exercise is not a good idea

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**Symptom:** mild sore throat

**Exercise verdict:** Modify your usual routine.

"Exercising with a sore throat, as long as it's not a whole body experience, is all right. Just keep it moderate. If you feel anything in your chest or lungs, you should skip exercising until you feel better.

**Symptom:** headache

**Exercise verdict:** Depending on the type of headache, exercise may help ease the pain.

"Take it easy, but give exercise a try because stress headaches may actually benefit from exercise since it can relax you."

Of course, these are just guidelines. You still need to listen to your own body and consult with your family healthcare provider. Remember, if you do exercise when you're sick, hydration is more important than ever. So make sure to get at least eight glasses of water a day.

### Getting back on track

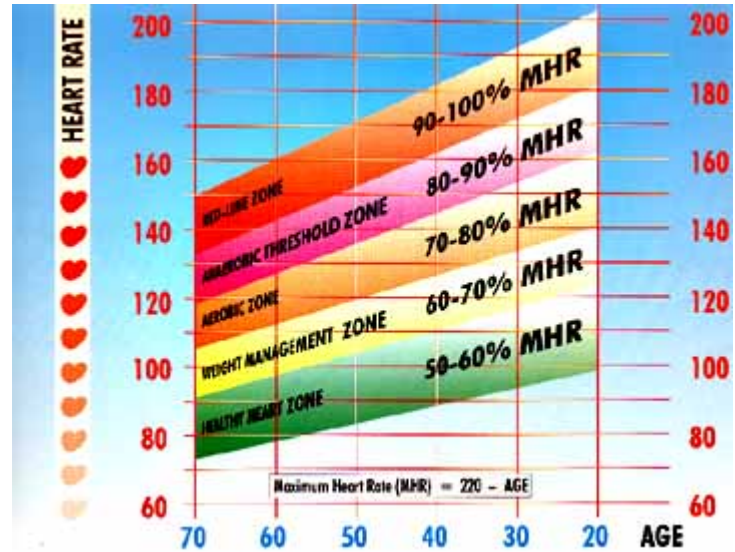
Once your symptoms are completely gone and you're feeling like your active self again, start exercising slowly, but don't expect to be able to do what you could do before. "Cut your intensity way down and your duration in half to ease yourself back into the swing of things. Pushing yourself too hard can slow the recovery process or worse, cause a relapse. When you're feeling better, gradually get back into your routine. Expect one to two weeks to get back to your previous fitness level.

### PEP TALK

*"We must become the change we want to see."*

*- Mahatma Gandhi*

## FITNESS BASICS



### STRETCHING

Increases flexibility and loosens tight muscles before and after exercise.

- Stretch before warm-up and after cool down
- Stretch slowly and gently. Always extend stretches as you exhale.
- Never bounce or stretch to a point of pain.

Hold each stretch 30-60 seconds.

### WARM-UP/COOL-DOWN

Prepares your body for efficient break down of fat before exercise and allows gradual decrease of activity at the end of your exercise.

- Slowly bring heart rate to a level just below your workout Target Zone for 5-10 Minutes.

### FAT BURNING AND WEIGHT REDUCTION

Low intensity, long duration exercises for best results increase the length of time, not intensity.

- Exercise: Maintain heart rate at 55-65% of your max.
- Duration: Build up gradually to 30-60 minutes per workout.

Frequency: At least 3 or 4 times per week.

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## **AEROBIC EXERCISE FOR IMPROVED FITNESS & ENDURANCE**

- Exercise: Maintain heart rate at 65-85%.
- Duration: 20-30 minutes per workout.

Frequency: At least 3 or 4 times per week.

## **BUILDING MUSCLE**

For best results, compliment workouts with aerobic exercise. To increase effectiveness and help prevent muscle strain:

- Rest between sets until heart rate comes down to 65-70%
- Toning - do 1-2 sets, 12-15 Reps.
- Strength - 1-2 Sets, 8-12 Reps.
- Max Bulk - 1-3 Sets, 6-8 Reps.
- Space workouts at least 48 hours apart.

## **HELPFUL TIPS**

- Avoid foods with high fat or sugar before exercise and avoid exercising right after a large meal. Wait at least 2 hours and try to spread out food intake to small portions throughout the day.
- If you are exercising in the mornings, eat a light breakfast and drink fluids (but not coffee).
- If you prefer working out in the evenings, avoid eating one large meal for those days.
- Complex carbohydrate snacks will help increase your energy level and improve endurance. Good sources of complex carbohydrates are soups, vegetables, whole grain breads or cereal, pasta, and starchy vegetables such as potatoes.

Drink fluids throughout your day and before during, and after any exercise that lasts 30 minutes or longer (especially in warm weather). 6-8 glasses of water a day sipped slowly is recommended.

## **RESEARCH & REPORT CORNER**

### **Is Surgery The Answer To A Thinner You?**

**Information you can't afford to "By-Pass"**

The concept of gastrointestinal surgery to control obesity grew out of results of operations for cancer or severe ulcers that removed large portions of the stomach or small intestine. Because patients undergoing these procedures tended to lose weight after surgery, some physicians began to use such operations to treat severe obesity. The first operation that was widely used for severe obesity was the intestinal bypass. This operation, first used 40 years ago, produced weight loss by causing malabsorption. The idea was that patients could eat large amounts of food, which would be poorly digested or passed along too fast for the body to absorb many calories. The problem with this surgery was that it caused a loss of essential nutrients and its side effects were unpredictable and sometimes fatal. The original form of the intestinal bypass operation is no longer used.

Gastrointestinal surgery for obesity, also called bariatric surgery, alters the digestive process. The operations promote weight loss by closing off parts of the stomach to make it smaller. Operations that only reduce stomach size are known as "restrictive operations" because they restrict the amount of food the stomach can hold.

Some operations combine stomach restriction with a partial bypass of the small intestine. These procedures create a direct connection from the stomach to the lower segment of the small intestine, literally bypassing portions of the digestive tract that absorb calories and nutrients. These are known as malabsorptive operations.

There are several types of restrictive and malabsorptive operations. Each one carries its own benefits and risks.

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## Restrictive Operations

Restrictive operations serve only to restrict food intake and do not interfere with the normal digestive process. To perform the surgery, doctors create a small pouch at the top of the stomach where food enters from the esophagus. Initially, the pouch holds about 1 ounce of food and later expands to 2-3 ounces. The lower outlet of the pouch usually has a diameter of only about  $\frac{3}{4}$  inch. This small outlet delays the emptying of food from the pouch and causes a feeling of fullness.

As a result of this surgery, most people lose the ability to eat large amounts of food at one time. After an operation, the person usually can eat only  $\frac{3}{4}$  to 1 cup of food without discomfort or nausea. Also, food has to be well chewed.

Restrictive operations for obesity include adjustable gastric banding (AGB) and vertical banded gastroplasty (VBG).

### ***Adjustable gastric banding.***

In this procedure, a hollow band made of special material is placed around the stomach near its upper end, creating a small pouch and a narrow passage into the larger remainder of the stomach. The band is then inflated with a salt solution. It can be tightened or loosened over time to change the size of the passage by increasing or decreasing the amount of salt solution.

### ***Vertical banded gastroplasty.***

VBG has been the most common restrictive operation for weight control. Both a band and staples are used to create a small stomach pouch.

Although restrictive operations lead to weight loss in almost all patients, they are less successful than malabsorptive operations in achieving substantial, long-term weight loss. About 30 percent of those who undergo VBG achieve normal weight, and about 80 percent achieve some degree of weight loss. Some patients regain weight. Others are unable to adjust their eating habits and fail to lose the desired weight. Successful results depend on the patient's willingness to adopt a long-term plan of healthy eating and regular physical activity.

A common risk of restrictive operations is vomiting, which is caused when the small stomach is overly stretched by food particles that have not been chewed well. Band slippage and saline leakage have been reported after AGB. Risks of VBG include wearing away of the band and breakdown of the staple line. In a small number of cases, stomach juices may leak into the abdomen, requiring an emergency operation. In less than 1 percent of all cases, infection or death from complications may occur.

## Malabsorptive Operations

Malabsorptive operations are the most common gastrointestinal surgeries for weight loss. They restrict both food intake and the amount of calories and nutrients the body absorbs.

### ***Roux-en-Y gastric bypass***

This operation is the most common and successful malabsorptive surgery. First, a small stomach pouch is created to restrict food intake. Next, a Y-shaped section of the small intestine is attached to the pouch to allow food to bypass the lower stomach, the duodenum (the first segment of the small intestine), and the first portion of the jejunum (the second segment of the small intestine). This bypass reduces the amount of calories and nutrients the body absorbs.

### ***Biliopancreatic diversion (BPD).***

In this more complicated malabsorptive operation, portions of the stomach are removed. The small pouch that remains is connected directly to the final segment of the small intestine, completely bypassing the duodenum and the jejunum. Although this procedure successfully promotes weight loss, it is less frequently used than other types of surgery because of the high risk for nutritional deficiencies. A variation of BPD includes a "duodenal switch" which leaves a larger portion of the stomach intact, including the pyloric valve that regulates the release of stomach contents into the small intestine. It also keeps a small part of the duodenum in the digestive pathway.

Malabsorptive operations produce more weight loss than restrictive operations, and are more effective in

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reversing the health problems associated with severe obesity. Patients who have malabsorptive operations generally lose two-thirds of their excess weight within 2 years.

In addition to the risks of restrictive surgeries, malabsorptive operations also carry greater risk for nutritional deficiencies. This is because the procedure causes food to bypass the duodenum and jejunum, where most iron and calcium are absorbed. Menstruating women may develop anemia because not enough vitamin B12 and iron are absorbed. Decreased absorption of calcium may also bring on osteoporosis and metabolic bone disease. Patients are required to take nutritional supplements that usually prevent these deficiencies. Patients who have the biliopancreatic diversion surgery must also take fat-soluble (dissolved by fat) vitamins A, D, E, and K supplements.

RGB and BPD operations may also cause “dumping syndrome.” This means that stomach contents move too rapidly through the small intestine. Symptoms include nausea, weakness, sweating, faintness, and sometimes diarrhea after eating. Because the duodenal switch operation keeps the pyloric valve intact, it may reduce the likelihood of dumping syndrome.

The more extensive the bypass, the greater the risk for complications and nutritional deficiencies. Patients with extensive bypasses of the normal digestive process require close monitoring and life-long use of special foods, supplements, and medications

Surgery to produce weight loss is a serious undertaking. Anyone thinking about surgery should understand what the operation involves. Patients and physicians should carefully consider the following benefits and risks:

### **Benefits**

- Right after surgery, most patients lose weight quickly and continue to lose for 18 to 24 months after the procedure. Although most patients regain 5 to 10 percent of the weight they lost, many maintain a long-term weight loss of about 100 pounds.

- Surgery improves most obesity-related conditions. For example, in one study, blood sugar levels of 83 percent of obese patients with diabetes returned to normal after surgery. Nearly all patients whose blood sugar levels did not return to normal were older or had lived with diabetes for a long time.

### **Risks**

- Ten to 20 percent of patients who have weight-loss surgery require follow-up operations to correct complications. Abdominal hernia was the most common complication requiring follow-up surgery, but laparoscopic techniques seem to have solved this problem. In laparoscopy, the surgeon makes one or more small incisions through which slender surgical instruments are passed. This technique eliminates the need for a large incision and creates less tissue damage. Patients who are super obese (>350 pounds) or have had previous abdominal surgery may not be good candidates for laparoscopy, however. Less common complications include breakdown of the staple line and stretched stomach outlets.
- Some obese patients who have weight-loss surgery develop gallstones. Gallstones are clumps of cholesterol and other matter that form in the gallbladder. During rapid or substantial weight loss, a person’s risk of developing gallstones increases. Taking supplemental bile salts for the first 6 months after surgery can prevent gallstones.
- Nearly 30 percent of patients who have weight-loss surgery develop nutritional deficiencies such as anemia, osteoporosis, and metabolic bone disease. These deficiencies usually can be avoided if vitamin and mineral intakes are high enough.
- Women of childbearing age should avoid pregnancy until their weight becomes stable because rapid weight loss and nutritional deficiencies can harm a developing fetus.

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## Cost

Gastrointestinal surgery costs about \$15,000. Medical insurance coverage varies by state and insurance provider. If you are considering gastrointestinal surgery, contact your regional Medicare or Medicaid office or insurance plan to find out if the procedure is covered.

Gastrointestinal surgery may be the next step for people who remain severely obese after trying nonsurgical approaches, or for people who have an obesity-related disease. Candidates for surgery have:

- A BMI of 40 or more
- A life-threatening obesity-related health problem such as diabetes, severe sleep apnea, or heart disease and a BMI of 35 or more
- Obesity-related physical problems that interfere with employment, walking, or family function.

If you fit the profile for surgery, answers to the following questions may help you decide whether weight-loss surgery is appropriate for you.

### Are you:

- Unlikely to lose weight successfully with nonsurgical measures?
- Well informed about the surgical procedure and the effects of treatment?
- Aware of how your life may change after the operation (adjustment to the side effects of the surgery, including the need to chew well and inability to eat large meals)?
- Aware of the potential for serious complications, dietary restrictions, and occasional failures?
  
- Committed to lifelong medical follow-up?

Remember that there are no guarantees for any method, including surgery, to produce and maintain weight loss. Success is possible only with maximum cooperation and commitment to behavioral change and medical follow-up—and this cooperation and commitment must be carried out for the rest of your life. And in the long run it still comes down to

adopting a new lifestyle, one that involves healthier eating and regular exercise.

Patricia Choban, M.D., Adjunct Professor of Human Nutrition and Food Management, Ohio State University and Walter Pories, M.D., Professor of Surgery and Biochemistry, Brody School of Medicine at East Carolina University also reviewed this fact sheet.

**Joe Only Recommends the Best - To Meet Your Home Fitness Equipment & Cycling Needs...**



2139 Market Street  
Camp Hill, PA 17011  
Phone: 717-737-3461  
Fax: 717-737-2478  
Email: [allen@holmescycling.com](mailto:allen@holmescycling.com)  
Web: <http://holmescycling.com/>