"THE MESSAGE"

Health & Fitness Newsletter

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

www.phyt4u.com

Phone: (717) 579-8257
Fax: (717) 545-2595

WHAT'S NEW WITH FIT FOR YOU?

- **Joe has been selected by the Central PA Chapter of the National Multiple Sclerosis Society as a member of the MS Leadership Class of 2003**.

- The "Wellness Parkinson's Support Group" has now been officially formed and will be comprised of client's that currently work with Joe. The first in-home informal meeting will be held later this month. Special thanks to Jane, a client of Joe's who has been very instrumental in bringing this idea to fruition. Thanks Jane!

- In the near future keep an eye out for Joe's exclusive **website dedicated information on Parkinson's** and much more!

- Personal Fitness Trainers – Must read information is now available, especially for those trainers who work for a gym and desire more out of what they do, more time, more freedom, more money, more personal reward. Joe has written and published a special report for trainers that could change a part-time passion into a full-time dream come true. For more information contact Joe directly!

- **RESERVE YOUR COPY TODAY!** You've been asking and it's in the making. Plans for a series of videos demonstrating all of the exercises, the techniques, angles and variations and much, much more will all be on video and available soon. No more struggling to remember how it should be done and if you're doing the exercise(s) correctly. The videos will detail each muscle group with a wide variety of exercises for in-home exercising. These exercises can be done anywhere, at home, in the gym, on vacation, etc. As a bonus, each video will not only give you both an introductory approach but also an advanced level approach to choose from you're ready. Well worth it for yourself or for a gift especially for those people who always ask "what exactly is it that you do again when your fitness trainer comes to your house."

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WHAT'S NEW WITH FIT FOR YOU CONTINUED...

- **GIFT CERTIFICATES – GIVE THE GIFT OF HEALTH FOR THE HOLIDAYS AND THE NEW YEAR!** – Truly a gift, give someone the gift of improved health and successful weight management all in the convenience of their home with the "**Fit For Life Holiday Package – Gift Certificate!"** Purchase one today or better yet – Purchase 2 Gift Certificates and get ONE FREE, to use as a gift or for yourself!! For more details give Joe a call or send him an email by visiting his website.

PEP TALK

Real success is never easy if it was it wouldn't be nearly as respected.

-Author Unknown-

EXERCISE, NOT DIET, MAY BE BEST DEFENSE AGAINST HEART DISEASE

By Joe Cannon

(Center for the Advancement of Health) -- Despite widespread attention to diet, calorie intake may not be a major factor in causing death by heart disease, according to a 17-year study of almost 9,800 Americans.

Instead, losing excess weight -- or not becoming overweight to begin with -- and exercising may do more to ward off death from heart disease, say Jing Fang, M.D., and colleagues from the Albert Einstein College of Medicine in the Bronx, New York.

"The fact is that those who both exercised more and ate more nevertheless had low cardiovascular mortality," says Fang. Expending energy through physical activity may be the key to cutting the risks of heart disease and living a longer, more healthful life, she says.

The study appears in the American Journal of Preventive Medicine.

The researchers studied data from 9,790 participants in the First National Health and Nutrition Examination Survey, a national study from 1971 to 1975 that was funded by the U.S. government. Fang's group compared reports of physical activity, body mass index and dietary caloric intake to deaths from heart disease through 1992.

They grouped participants by their initial reports of caloric intake (low, middle, high), recreation exercise (least, moderate, most) and body mass index (normal, overweight, obese). Body mass index is a measure of weight in relation to height.

Overweight and obese participants, those who consumed fewer calories, and those who exercised less were also likely to be older, black, have a lower family income, less likely to have graduated high school, and more likely to have higher blood pressure and cholesterol levels than those who ate and exercised more.

During 17 years of follow-up, 1,531 participants died of heart disease. After adjusting for BMI and physical activity, caloric intake was unrelated to heart disease. Those who exercised more and ate more were both leaner and had less than half the cardiovascular disease mortality than did those who exercised less, ate less and were overweight.

"Subjects with the lowest caloric intake, least physical activity, and who were overweight or obese had significantly higher cardiovascular mortality rates than those with high caloric intake, most physical activity, and normal weight," Fang says. The difference in mortality rates was 55 percent.

Those who eat less won't necessarily be thinner, she says, and eating more does not have to translate into obesity. People who were overweight and exercised

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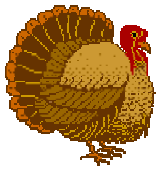
less at the start faced increased cardiovascular mortality, even if they ate less.

"This suggests that heart disease outcome was not determined by a single factor, but rather by a compound of behavioral, socioeconomic, genetic and clinical characteristics," she says.

A focus on increased energy expenditure rather than reduced caloric intake may be the most practical outcome of this study, she says, and may offer the most productive behavioral strategy by which to extend healthy life.

Joseph P. Cannon, MS, CSCS, NSCA-CPT



RESEARCH & REPORT CORNER

BOTULINUM TOXIN

A Review of its Therapeutic Role in Movement Disorders

By D.E.Hobson BSc. M.D. FRCP(C)

The indications for the clinical use of botulinum toxin (BTX) type A (table 1), a toxin that can safely and consistently weaken muscles, continue to grow in number. The toxin's effect at presynaptic neuromuscular junction terminals is to cleave the protein complex (SNAP-25) binding site of acetylcholine containing vesicles, thereby preventing acetylcholine release (1). BTX also blocks the autonomic postganglionic terminals from releasing acetylcholine. Although the latter fact had been confirmed in 1950's the clinical implications are only now being discovered (2).

BTX is available in a crystallized, lyophilized form that is kept frozen in vials containing 100 units (1 unit is the LD 50 in mice). There is significant vial-to-vial variability in clinical potency (range of effective units can be 70-130). Prior to injection, depending on the site to be treated, 1 to 4 milliliters of normal saline without preservative are added to a vial. As the toxin diffuses 1 to 2 centimeters in muscle, several injections per muscle may be required for full benefit to be seen. Depending on the location being injected (e.g. vocal cord) an EMG guided technique can be used. After injection, although some patients will claim instant relief, the clinical effect on muscle strength will begin in 2 to 3 days and cause maximal benefit by 7 to 10 days. The weakness is associated with muscle atrophy. The duration of action ranges from 10 to 20 weeks (usually 3 months). Recovery to normal function occurs as the permanently dysfunctional nerve terminals are replaced as a result of sprouting (3). The treatment is repeated 3 to 4 times per year.

Dr. Allan Scott brought the most powerful toxin in the world (by weight) from the laboratory into the realm of clinical medicine in 1977 to control strabismus (4). At that stage he was already aware of this toxin's potential for use in disorders of excessive muscle contraction including a variety of movement disorders (5).

USE IN MOVEMENT DISORDERS:

Blepharospasm, Hemifacial Spasm:
Botulinum has become the treatment of choice for involuntary facial spasms with response rates of 90% for blepharospasm (6) and hemi facial spasm. The exact doses and sites injected vary from one "injector" to another. Typical side effects include local bruising, ptosis, and dry or irritated eyes. Diplopia is rare. BTX is very successful in controlling obicularis oculi spasms. In those patients with associated lower face involvement, injecting the periorbital region may be enough to stop the lower face movement. If not, cheek muscles are also injected. In some patients though, control over cheek movement can only be achieved with resultant facial droop. If this happens when treating hemi-facial spasm the face can be made symmetric by injecting the opposite side. If satisfactory control of hemi-facial spasm cannot be achieved without disfiguring weakness the patient would be tried on oral medication or referred for surgical decompression of the facial nerve.

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Cervical Dystonia (spasmodic torticollis):
Cervical dystonia was the second type of focal dystonia BTX was approved for. Although injection sites, toxin dilution, doses, and the use of EMG guidance vary considerably between centers, it is clear that this therapy is far superior to that achieved with previously available medication. The patient can, on average, expect 90% improvement in pain, and a 70% improvement in the involuntary movement (7). Pure rotational forms are the most responsive. Anterocollis is difficult to treat. The toxin, if injected into neck flexors, diffuses to adjacent pharyngeal muscles and may create speech and swallowing difficulty.
In general doses between 150 – 300 units are required (1½ – 3 vials). With these doses there is a risk (10% of patients after 5 years) of blocking antibody development. Antibodies render the patient permanently immune to the toxin (8).

Oromandibular Dystonia:
Jaw closure dystonia including bruxism, related dental problems, and associated pain can be controlled with BTX injections into the maseter and temporalis muscles bilaterally. In more severe forms weakening the internal pterygoids will also be required. On average reported improvement is 45% (9). Jaw opening dystonia, particularly with side-to-side deviation, is more difficult to treat (average response 37-44% improvement) (9). The external pterygoid, mylohyoid, geniohyoid and digastric muscles are the main jaw openers. These muscles need to be identified by EMG prior to injection.

Vocal cords:
Stuttering, voice tremor, abductor breathing, and abductor breathing dystonia, have all been shown to respond to BTX (10). By far the most responsive disorder is adductor spasmodic dysphonia. Under EMG guidance small doses of BTX are injected either unilaterally or bilaterally into the vocal cord abductors. Often the patient will experience a "breathy" voice prior to maximal benefit. The duration of benefit tends to last 4-5 months (slightly longer than in the above indications).

Limb dystonias:
The most studied form of limb dystonia is writer's cramp. The main challenge is to suppress the involuntary movement without interfering with normal function. This limits success to "simple" forms with only a few main dystonic muscles involved. Given their complex nature only 25% will respond significantly (11).
Many task-specific, and other limb dystonias have responded to BTX. The pattern of injection must be individualized, and guided by EMG. Painful dystonic spasms in nonfunctional limbs often respond well as subsequent weakness is not problematic. Foot inversion dystonia can be reduced by injection of the tibialis posterior (other agonistic muscles may also need injecting).

Tics:
After demonstrating success for many focal facial dyskinesias, it followed that stereotypic movements of other types should also respond. A remarkable observation was made while treating tics with BTX. The "urge" preceding the tic often disappears. Even relatively small BTX doses may suppress the urge enough to resolve severe retrocollic tics. Unfortunately in the occasional patient the ability to "tic" stops but the urge remains (an obviously unsuccessful result).

Tremor:
Reports of use of BTX in a variety of head and hand tremors exist (see table 1) (12,13). The most responsive type is a side-to-side essential head tremor. Injecting the splenius capitus, and levator scapulae bilaterally result in marked reduction of tremor amplitude. The success in treating arm tremors is often limited by dysfunctional weakness. When the main component of the tremor is wrist flexion/extension weakening the flexor and extensor carpi ulnaris and carpi radialis may provide significant relief.

Parkinson's Disease:
In addition to controlling hyperkinetic movement disorders there are increasing options for those patients with rigid akinetic disorders. Parkinsonian patients with "off" period focal dystonia (e.g. blepharospasm, dystonic foot inversion) are proven indications (14). Non-dystonic painful rigidity may also respond to
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BTX (15). Other potential therapeutic indications for BTX in Parkinson's disease include (see table 1): anismus, severe constipation (16), vocal

stuttering, apraxia of eyelid opening, and gait freezing (17). Most recently BTX has been reported to have potential in treating problematic drooling though it's autonomic effects (18).

Summary:

The therapeutic wonders of this poison have certainly made a major impact within the realm of movement disorders during the "Decade of the Brain". The unfortunate patients whose benefits have been cut short by antibodies to BTX type A await the further development and approval of other BTX serotypes.

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RECIPE OF THE MONTH

Glazed Turkey Breast with Sweet Potato Stuffing

3 large sweet potatoes (about 2 pounds), peeled and cut into 2-inch pieces
1 large orange - grated rind and juice of
2 tablespoons unsalted margarine
1 large yellow onion, chopped
1 medium-size carrot, peeled and chopped
1 medium-size stalk celery, chopped
1/2 cup peeled and chopped parsnip
1 teaspoon dried sage, crumbled
1 fresh 5 lb turkey breast (not prebasted)
nonstick cooking spray

Preheat the oven to 450 degrees F. Place the sweet potatoes in a medium-size saucepan, cover with boiling unsalted water, and cook, covered, for 15 minutes or until tender when pierced with a knife. Drain well and mash. Stir in the grated orange rind.

Meanwhile, melt 1 tablespoon of the margarine in a 10-inch skillet over moderate heat. Add the onion, carrot, celery, and parsnip, and cook for 10 minutes, stirring frequently. Add the sage. Blend the mixture into the mashed sweet potatoes. Let the mixture cool slightly, then spoon it into both cavities of the turkey breast. Secure the neck skin with toothpicks.

Lightly coat a 13"x9"x2" baking pan with the cooking spray. Place the turkey breast in the pan and rub the skin with the remaining margarine. Insert a meat thermometer into the thickest part and roast for 30 minutes. Reduce the oven temperature to 375 degrees F. and roast, basting occasionally with the orange juice, for 45 more minutes or until the thermometer registers 180 degrees F. If the turkey browns too quickly, cover it loosely with aluminum foil.

Remove from the oven and let stand at room temperature for 10 minutes before carving.

Serving Size: 10 – Calories: 323, Total Fat: 7g, Saturated: 2g, Cholesterol: 95mg, Protein: 43g, Carbohydrates: 21g, Sodium: 109 mg, Added Sugar: 0, Fiber: 2g.