

# **NUTRI-SPEC**



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## **THE NUTRI-SPEC LETTER**

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From:  
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Dear Doctor,

Suppose you took a random sample of one hundred total strangers, asking the question, "What would you think about going on a ...

### **MUSCLE BUILDING ...**

exercise program?" The responses would present not only an extreme diversity in feelings toward this subject, but also an amazing number of misconceptions.

"Muscle building? Yuck! Disgusting! Why would I want to build bulging muscles and look like a man?" replies one dainty dumbbell flinger.

"Too much work," a scrawny man with a pot-belly answers. "I'll just stick to running 5 days a week."

"Build muscles?! I want to lose inches, not gain inches! I just started a new exercise program guaranteed to flatten my tummy, reduce my thighs and hips, and tone up my flabby arms!" excitedly gushes a reader of Woman's Day magazine.

"I already do --- and it's sooo cool!" cheers Billy Bicep. "I just ordered a case of a new protein powder. All the guys in the gym are using it, and they're getting great gains!"

Wow! You would not get responses that definitive had you surveyed those same 100 people for their opinion on the current presidential race.

How can people be so diversely and staunchly opinionated about such a simple concept as converting food into lean body mass? How? --- same old story --- ignorance and fear (--- the same basis as the opinions people hold with respect to presidential politics). In this letter, let us shed a little light on the muscle building process itself, as well as its benefits. We'll explain muscle building from the points of view of:

- a) Those who look with repugnance upon muscle building, as they cling to the myth of spot reducing.
- b) Those who covet a muscular physique, and believe that a high protein diet is essential to feed muscle growth.

Consider now your dozens of patients who are either dabbling in exercise, or have intentions of starting an exercise program. They don't particularly like exercise, considering it an uncomfortable nuisance. Why then do they show any interest at all? They have the vague notion that exercise is "good for you," and, more specifically, they want to lose weight.

Little do your patients realize that by far the fastest and easiest way to achieve their exercise goals is by building muscle. So, educate your patients. The next time a woman tells you she wants to lose 20 pounds, and has it all figured out how --- praise her for her extraordinary motivation, but then tell her you are going to save her a tremendous amount of time and energy. Explain to her that her plan of riding her exercise bike 30-60 minutes daily, along with the "toning" exercise routine she clipped out of the women's magazine, probably will not do the job, and if it does, will do so at such a tremendous cost of time and energy that she will eventually give it up and gain her 20 pounds back again.

Tell her she can achieve her 20 pound weight loss in minutes a day instead of an hour a day. (She will begin to listen.) Tell her that she can lose her 20 pounds within a few months, and be 100% certain that it is 20 pounds of fat that she has lost, not just temporary fluid loss, and definitely not loss of lean body mass. (She will become more attentive.) Tell her that after losing the 20 pounds the proper way, it will require even less time and energy to keep it off. (She is now sincerely interested.) Tell her that as she loses her 20 pounds with the proper regimen she will experience the additional benefit that cravings for sugars and starches will almost completely disappear. (She will look at you with eager anticipation of what you have to offer.) Tell her that the only sure way to drop 20 pounds and keep it off is with a high intensity muscle building exercise regimen. (She will look at you with a combination of indignation and disbelief.)

So --- given her reluctance to abandon her belief in exercise mythology you will need to present your plan to her in terms she eagerly embraces.

“How badly do you want to lose 20 pounds?”

“Badly enough that I am willing to work an hour a day to achieve it.”

“Would you trade 20 pounds of fat for 4 pounds of muscle?”

“Uh --- I guess so.”

Go on to explain that that is all you are suggesting. When you say, “a high intensity muscle building program,” you are not proposing that she go for the cover of Muscle Magazine. The 4 pounds of muscle she needs to build is merely enough to achieve the shaping and toning she is looking for, while at the same time assuring the 20 pound fat loss. Explain further that the little bit of benefit that could derive from the woman’s magazine exercise plan would come only to the extent that those exercises build a little bit of muscle.

Next explain to her why that 4 pounds of muscle is so critical to fat loss. Tell her, “Your 4 pounds of new muscle will burn 200 calories a day at rest. Think of it: While you are shopping, those little muscles are burning calories at the rate of 200 a day; while you are sitting at your desk at work, they are burning fat at the rate of 200 calories a day; while you are having lunch with your friends, the muscles that you built in just a few minutes a day are burning 200 calories a day. And, how significant is 200 calories per day? 200 calories is the amount you burn if you run 2 miles as fast as you possibly can. So --- carrying those 4 pounds of muscle is the equivalent of running 2 miles a day, 7 days a week, 52 weeks a year.

“You have a friend that exercises 5 days a week on a treadmill? Ha! ‘you can say,’ I run my 2 miles 7 days a week; I run at top speed; and I never have to leave my desk to do it!”

I cannot make this point strongly enough. Four measly pounds of muscle can have a significant impact on our lives. Eight pounds of muscle can completely turn our lives around.

“Now you’ve gone too far!” cries the dainty dumbbell dancer. “Eight extra pounds would make me look like a hulk!”

We can understand the emotions behind that statement, but let’s look at this logically. Muscle is much more dense than fat, so, a pound

of muscle is much smaller than a pound of fat. Furthermore, you are trading 20+ pounds of fat for your 8 pounds of muscle. To understand how 8 pounds of muscle will give you shape and not size, picture this: buy 8 pounds of roast beef sliced thinly. Then, wrap yourself like a mummy with those roast beef slices. If you put two slices on your gastrocs, quads, gluts, pecs, lats, traps, delts, biceps, and triceps, and one slice everywhere else, you will run out of roast beef before the mummification is complete. In other words, that 8 pounds of muscle will increase your size by only about 1/16 of an inch, while the inches of fat you are trading in would be many times that.

There is yet another benefit to be derived from building your 4 to 8 pounds of muscle. Not only does this muscle burn the caloric equivalent of a 2 to 4 mile run 365 days a year, but the calories required to build the muscle in the first place are far more than you can imagine, and will result in drawing down fat reserves.

How many calories do you think are required to build a pound of muscle? Amazingly, to build a pound of muscle tissue requires over 45,000 calories. How can that be, you ask? After all, a pound of muscle at about 20% protein comes out to be 90 grams of protein. That muscle is also comprised of about 13 grams of lipids, 4 to 5 grams of glycogen, and several millimoles of ATP and creatine phosphate. The rest is water. If you break down that pound of muscle to consume it as calories, it works out to 4 calories per gram of protein and glycogen, plus 9 calories per gram of lipid, plus a few hundred calories for the ATP and creatine phosphate --- so --- we have a total energy value stored in that muscle of 750 calories. "It doesn't add up," you say. "If a pound of muscle can only be catabolized to yield 750 calories, how can it be claimed that nearly 50,000 calories went into building that muscle?" The key is in understanding that anabolism and catabolism are not reversibly equivalent.

Protein anabolism has an almost unbelievably high energy cost. Building a pound of muscle is analogous in many ways to building the Great Pyramids of ancient Egypt. Those pyramids were not carved out of rock that was already there, they were assembled from countless smaller rocks hauled into place and lifted into position by literally millions of man hours of energy output. So it is with building a muscle. Muscle protein is synthesized from the assembling of individual amino acids within each of the muscle cells. Every single peptide bond in every one of the protein molecules requires the expenditure of energy. The energy equivalent of three moles of high energy phosphate bonds is required for every mole of peptide bonds.

Now, consider that muscle proteins consist of peptide chains used to build light myosin, heavy myosin, actin, and collagen. The average molecular weight of these various proteins is about 200,000, yielding about 2000 peptide bonds per molecule. Since each of those peptide bonds requires degradation of 3 phosphate bonds, and each high energy phosphate bond of ATP or GTP yields about 8000 calories per mole, we can estimate the energy cost of making one mole of protein at about  $3 \times 8000 \times 2000 = 48,000,000$  calories per mole of protein. This works out to be about 220 calories per gram of protein. Now, multiplying this 220 calories per gram times the 90 grams of protein in a pound of muscle we come up with something close to 20,000 calories of ATP and GTP to synthesize the protein in one pound of muscle.

However, the reality of the situation is a little more complex. The efficiency of energy transfer in the production of ATP from glucose is only about 44%. This means that to supply the muscle building process with the extra 20,000 calories of ATP and GTP, you must consume a total of more than 45,000 extra food calories. When we add in the calories stored in the lipids and glycogen and ATP and creatine phosphate of the muscle, plus the calories to synthesize those substances, we get a grand total of approximately 47,000 calories.

Do you begin to see how exciting the prospect of building just 4 to 8 pounds of muscle can be for your typical male or female patient who wants to lose 20 pounds? Not only have we established that once that muscle is built it is the equivalent of running 2 to 4 miles daily, even while you are sitting at your desk, but now we see that the period of time it takes to build that muscle can be a period of extraordinary fat loss.

Just look at the numbers. Suppose it takes an entire month to build one pound of muscle. That means 47,000 calories need to be channeled into protein synthesis during that month. 47,000 divided by 30 days, plus the calories burned during the exercise that stimulates that muscle building process, gives us about 1600 extra calories per day above and beyond what the individual needs to maintain an active lifestyle. Where is that extra 1600 calories per day going to come from? If your patient keeps his caloric intake at what it was before he began exercising, that 1600 calories must come from burning fat reserves. 1600 calories divided by 9 calories per gram of fat equals nearly 180 grams of fat that can potentially be burned every day while on a strength training exercise regimen that builds nothing more than one pound of muscle per month.

180 grams of fat is well over a third of a pound. So, your patients are easily looking at 2 pounds of pure fat loss per week (that is not counting the fluid loss that also accompanies proper diet and exercise). Look at the numbers another way. That 1600 extra calories lost each day from a

mild strength training regimen that builds nothing more than a pound of muscle a month, is equivalent to the calories consumed in running 16 miles per day! To make this an honest comparison, we must admit that while running a mile burns a hundred calories, running a mile also does rev up the metabolic engines somewhat, so that additional calories are burned over the hours following the run. But let us just make a conservative estimate that running 5 miles a day, 7 days a week would burn the same number of calories as a simple strength training routine done 3 times per week. [Furthermore, the running workout leaves your patient tired, hungry, and craving sugar, while the strength training routine leaves your patient exhilarated and free of any food cravings.]

Making the case for muscle building over low intensity, long duration exercise even more dramatic is that building 2 pounds of muscle per month is realistically within the reach of almost everyone who is just beginning a serious exercise program. So --- double all the numbers above --- 3200 calories of fat sucked out of your gut and thighs per day by high intensity, short duration strength training. That means 4 pounds of adipose dissolved away each week.

**A HIGH INTENSITY STRENGTH TRAINING REGIMEN,  
REQUIRING ONLY 3 WORKOUTS PER WEEK,  
IS THE EQUIVALENT OF RUNNING 10 MILES A DAY,  
7 DAYS A WEEK!**

Wow!

Put away the dainty dumbbells! Junk the jogging! Start your patients on a high intensity weekly regimen consisting of 2 or 3 strength training workouts and 1 or 2 interval workouts. And ...

**MINIMIZE THE CATABOLIC STRESS WITH YOUR  
DIPHASIC NUTRITION PLAN.**

Celebrate with your patients the most amazing metamorphoses!

P.S.: Note the essentiality of supplementing your patients with your Diphasic Nutrition Plan. Nothing protects against the catabolic stress of exercise like the co-enzyme Q-10, the lipoic acid, the carnosine, the tocotrienols, and all the other adaptogens in your NUTRI-SPEC supplements. All your exercising patients must be put on the DNP as soon as possible, and begin the Oxy A+/Formula EW balancing procedure within 3 weeks.