

This was on msn today:

#### MYTH #1

Lifting incredibly slowly builds incredibly big muscles. Lifting super slowly produces superlong workouts—and that's it. University of Alabama researchers recently studied two groups of lifters doing a 29-minute workout. One group performed exercises using a 5-second up phase and a 10-second down phase, the other a more traditional approach of 1 second up and 1 second down. The faster group burned 71 percent more calories and lifted 250 percent more weight than the superslow lifters.

The real expert says: "The best increases in strength are achieved by doing the up phase as rapidly as possible," says Gary Hunter, Ph.D., C.S.C.S., the lead study author. "Lower the weight more slowly and under control." There's greater potential for growth during the lowering phase, and when you lower with control, there's less chance of injury.

#### MYTH #2

If you eat more protein, you'll build more muscle. To a point, sure. But put down the shake for a sec. Protein promotes the muscle-building process, called protein synthesis, "but you don't need exorbitant amounts to do this," says John Ivy, Ph.D., coauthor of Nutrient Timing. If you're working out hard, consuming more than 0.9 to 1.25 grams of protein per pound of body weight is a waste. Excess protein breaks down into amino acids and nitrogen, which are either excreted or converted into carbohydrates and stored.

The real expert says: More important is when you consume protein, and that you have the right balance of carbohydrates with it. Have a postworkout shake of three parts carbohydrates and one part protein. Eat a meal several hours later, and then reverse that ratio in your snack after another few hours, says Ivy. "This will keep protein synthesis going by maintaining high amino acid concentrations in the blood."

#### MYTH #3

Leg extensions are safer for your knees than squats. And cotton swabs are dangerous when you push them too far into your ears. It's a matter of knowing what you're doing. A recent study in *Medicine & Science in Sports & Exercise* found that "open-chain" exercises—those in which a single joint is activated, such as the leg extension—are potentially more dangerous than closed-chain moves—those that engage multiple joints, such as the squat and the leg press. The study found that leg extensions activate your quadriceps muscles slightly independently of each other, and just a 5-millisecond difference in activation causes uneven compression between the patella (kneecap) and thighbone, says Anki Stensdotter, the lead study author.

The real expert says: "The knee joint is controlled by the quadriceps and the hamstrings. Balanced muscle activity keeps the patella in place and appears to be more easily attained

in closed-chain exercises," says Stensdotter. To squat safely, hold your back as upright as possible and lower your body until your thighs are parallel to the floor (or at least as far as you can go without discomfort in your knees). Try front squats if you find yourself leaning forward. Although it's a more advanced move, the weight rests on the fronts of your shoulders, helping to keep your back upright, Stensdotter says.

#### MYTH #4

Never exercise a sore muscle. Before you skip that workout, determine how sore you really are. "If your muscle is sore to the touch or the soreness limits your range of motion, it's best that you give the muscle at least another day of rest," says Alan Mikesky, Ph.D., director of the human performance and biomechanics laboratory at Indiana University-Purdue University at Indianapolis. In less severe instances, an "active rest" involving light aerobic activity and stretching, and even light lifting, can help alleviate some of the soreness. "Light activity stimulates bloodflow through the muscles, which removes waste products to help in the repair process," says David Docherty, Ph.D., a professor of exercise science at the University of Victoria in Canada.

The real expert says: If you're not sore to the touch and you have your full range of motion, go to the gym. Start with 10 minutes of cycling, then exercise the achy muscle by performing no more than three sets of 10 to 15 repetitions using a weight that's no heavier than 30 percent of your one-rep maximum, says Docherty.

#### MYTH #5

Stretching prevents injuries. Maybe if you're a figure skater. Researchers at the Centers for Disease Control and Prevention reviewed more than 350 studies and articles examining the relationship between stretching and injuries and concluded that stretching during a warmup has little effect on injury prevention. "Stretching increases flexibility, but most injuries occur within the normal range of motion," says Julie Gilchrist, M.D., one of the study's researchers. "Stretching and warming up have just gone together for decades. It's simply what's done, and it hasn't been approached through rigorous science."

The real expert says: Warming up is what prevents injury, by slowly increasing your bloodflow and giving your muscles a chance to prepare for the upcoming activity. To this end, Dr. Gilchrist suggests a thorough warmup, as well as conditioning for your particular sport. Of course, flexibility is a good thing. If you need to increase yours so it's in the normal range (touching your toes without bending your knees, for instance), do your stretching when your muscles are already warm.

#### MYTH #6

You need a Swiss ball to build a stronger chest and shoulders. Don't abandon your trusty bench for exercises like the chest press and shoulder press if your goal is strength and size. "The reason people are using the ball and getting gains is because they're weak as kittens to begin with," says Craig Ballantyne, C.S.C.S. You have to reduce the weight in

order to press on a Swiss ball, and this means you get less out of the exercise, he says.

The real expert says: A Swiss ball is great for variety, but center your chest and shoulder routines on exercises that are performed on a stable surface, Ballantyne says. Then use the ball to work your abs.

#### MYTH #7

Always work out with free weights. Sometimes machines can build muscle better—for instance, when you need to isolate specific muscles after an injury, or when you're too inexperienced to perform a free-weight exercise. If you can't complete a pullup, you won't build your back muscles. So do lat pulldowns to develop strength in this range of motion, says Greg Haff, Ph.D., director of the strength research laboratory at Midwestern State University in Wichita Falls, Texas.

The real expert says: "Initially, novice athletes will see benefits with either machines or free weights, but as you become more trained, free weights should make up the major portion of your training program," says Haff. Free-weight exercises mimic athletic moves and generally activate more muscle mass. If you're a seasoned lifter, free weights are your best tools to build strength or burn fat.