

Exercise vs Recreation

By: Ken Hutchins

Perhaps the most destructive as well as the most misunderstood concept in fitness today among researchers, the commercial health facilities, and the general public alike is the confusion of exercise and recreation.

We accept that both exercise and recreation are important in the overall scheme of fitness, and they overlap to a great degree. But to reap maximum benefits of both or either they must first be well-defined and then be segregated in practice.

Exercise, in a nutshell, is a process whereby the body performs work of a demanding nature. The key word here is "demanding." If an activity is not demanding, then it does not qualify as exercise. If muscular loading is not meaningful to render momentary muscular failure within 1-3 minutes then the activity is not demanding.

Through exercise we are sending an ultimatum to the human body: "Your protective margins are inadequate. Adapt, enhance, improve, grow, increase,...or you will not survive." This is perceived as a threat by the body, although it can be affected safely through high intensity exercise.

Through exercise we hope to see a continuous improvement in these six factors of physical fitness. If we do not see the improvement, then exercise is either piecemeal or non-existent. First and foremost, we hope to increase muscle size, strength, and endurance. We mention these together because, in a matter of speaking, they are one-in-the-same.

And if we can assume the body to be logical then bone strengthening should result from muscular strengthening. Perhaps cardiovascular fitness is then desired. Realize that the only efficient route to working the vascular system is to find the best method to strengthen the muscles. The vascular system exists primarily to service the muscles. Improved muscular strength should strongly correlate with improved vascular efficiency.

The fourth factor is enhanced flexibility. Note that I am careful not to say "increased flexibility." Increased flexibility is contraindicated for many people. And improved flexibility may indeed mean less flexibility in some cases.

The next factor is a contribution to body leanness. Many people exercise with the mistaken belief that exercise burns a significant number of extra calories. One pound of human fat can support the energy demands of running 35-45 miles, probably more. This would require the average man to run for 6-8 hours. He would burn the calories he could easily ingest in as many minutes. If one exercises only to burn extra calories his time is not worth much.



Many charts and computer programs in aerobic equipment suggest that hundreds of calories are burned as a result of their respective activities. These references fail to distinguish between the number of calories expended during the activity AND the EXTRA calories expended as a result of the activity. Realize that to assess this you must first subtract of the calories you would have burned as a result of your typical daily routine without the respective activity.

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RPFitness Staff Spotlight!



Shanna Greathouse, CPT

Shanna has been in the health and fitness industry since 2004. She has a Bachelors degree in Pre-Physical Therapy and Exercise Science with a Biology minor from Baldwin-Wallace College. She is an expert in pilates, having done it for over ten years. She also was a nationally ranked synchronized swimmer who now

has a level 3 coaching certification obtained by participation in a conference at the Colorado Springs Olympic Training Center. She most recently completed an 8 month internship at the NASA Glenn Research Center as a Fitness Specialist. She began working at RPFitness in January of 2010. Prior to RPFitness she trained at Personalized Wellness Center and Bally's.



RPFitness Product Spotlight

Breakthrough dietary supplement re-programs your body to burn fat. Now, you can achieve the lean, muscular look you desire - without unwanted side effects.

No more jitters. No more heart palpitations. Safely cut hard to reach fat.

Lean Out increases the utilization of stored fats for energy, sparing glycogen and amino acids. In essence, Lean Out shifts your fuel source utilization toward fats, leaving your amino acids and glycogen free to build muscle. If you want to improve your Muscle-to-Fat Ratio, Lean Out supplementation is a must.

Take thermogenics to the next level. Thermogenics stimulate the central nervous system and cause an increase in body temperature resulting in more calories burned. Lean Out makes sure that the right fuel is burned. Your stored fat!

Therapeutic strength for proven results:

- L-Carnitine (600 mg): Maximizes the retention of muscle tissue while dieting. Helps convert stored fat into energy and keeps blood sugar levels stable.
- Methionine (1000 mg): Speeds fat and cholesterol utilization, mobilizes fat from the liver to be released and used as energy.
- Choline (1000 mg): A special emulsifying nutrient that helps break down cholesterol and prevents it from sticking to artery walls. Works with Inositol to utilize fats.
- Inositol (1000 mg): Aids in fat transportation, metabolism, and redistribution of fat in the body.
- Chromium (200 mcg): Aids sugar metabolism, improves blood lipid profile, helps fat burning and muscle gains. Moderates insulin release
- CoQ 10 (10 mg): An important energy cycle catalyst, helps convert fats and sugar to energy in the cell. Protects the heart.
- Betaine HCl (100 mg) B-12 (100 mcg) and Biotin (450 mcg): Important co factors in the conversion of fats to energy.



One-Of-A-Kind Benefits:

- Convert stored fat into energy - Burn more fat - Hold more Muscle! Anti-Catabolic Effect: Protects your lean muscle tissue - improves fat metabolism.
- No Stimulants!!! Burn fat day and night.
- Benefit your cardio-vascular system and blood profile by using cholesterol and lipids for energy.
- Process carbohydrates better (improve insulin sensitivity and glucose utilization).

Summary: Lean Out mobilizes fat from storage (also helping to prevent fat from sticking to artery walls) and promotes your cells to burn it for energy. It also acts as a 'tune up' for the cell's mitochondria (where all energy is made) helping to prevent mitochondrial burnout, a major cause of metabolic aging.

Omelet Roll

Ingredient List :

- 6 eggs
- 1 cup milk
- _ cup flour (all-purpose)
- 1 cup low-fat shredded cheese (Cheddar or Mozzarella)
- Salt and pepper to taste

Directions :

Preheat oven to 450 F. Coat a 9x13" baking pan with non-stick cooking spray. Combine all ingredients except for the cheese into a blender and blend until smooth. Pour mixture into pan, sprinkle with cheese, and bake for 20 minutes. Carefully remove from pan by rolling up omelet mixture and placing on a serving plate. Slice into 6 slices and serve.

- Servings : 6
- Nutrition Facts
- Calories 209
- Protein grams 14
- Carb grams 11
- Fat grams 12
- Fiber grams 1



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Phys Ed: Does Stretching Before Running Prevent Injuries?

By Gretchen Reynolds

Should you stretch before a run? That question, which has prompted countless academic studies, debates and inter-running-partner squabbles, is now at the heart of a notable new study published in August on the Web site of USA Track and Field, the sport's national governing body. The study, one of the largest of its kind, involved almost 1,400 runners, from age 13 to past 60, who were assigned



Angela Jimenez/Getty Images

randomly to two groups. The first group did not stretch before their runs, while otherwise maintaining their normal workout routine: the same mileage, warm-up (minus any stretching) and so on. The second group stretched, having received photographs and specific instructions for a series of simple, traditional poses, like leaning over and touching

toes, that focused on the calf, hamstring and quadriceps muscles. The volunteers were told to hold each stretch for 20 seconds, a technique known as static stretching. The entire routine required three to five minutes and was to be completed immediately before a run. The volunteers followed their assigned regimens for three months. Predictably, since running, as a sport, has a high injury rate, quite a few became injured during the three months. About 16 percent of the group that didn't stretch were hobbled badly enough to miss training for at least three days (the researchers' definition of a running injury), while about 16 percent of the group that did stretch were laid up for the same amount of time. The percentages, in other words, were virtually identical. Static stretching had proved to be a wash in terms of protecting against injury. It "neither prevented nor induced injury when compared with not stretching before running,"

the study's authors concluded, raising the obvious corollary, so why in the world do so many of us still stretch?

Stretching is, of course, a contentious issue in sports. The bulk of the available science strongly suggests that static stretching before a workout not only does not prevent overuse injuries but also may actually hinder athletic performance. "There is a very important neurological effect of stretching," said Ross Tucker, a physiologist in South Africa and co-author of the Web site *The Science of Sport*. "There is a reflex that prevents the muscle from being stretched too much," which is activated by static stretching, inducing the muscle to become, in effect, tighter in self-protection. Past studies have found that athletes' vertical jump is lower after a bout of static stretching than with no stretching at all. They can't generate as much power. Meanwhile, other studies have found, like the new track and field association report, that static stretching seems to have little benefit in terms of injury prevention, particularly against the overuse injuries common in running. "The findings of this present study are totally in line with the existing literature," said Malachy McHugh, the director of research at the Nicholas Institute of Sports Medicine and Athletic Trauma and the lead author of a comprehensive new review of decades' worth of stretching research published in April in the *Scandinavian Journal of Medicine and Science in Sports*.

But many people remain fiercely attached to their stretching routines. "It was really hard to recruit runners" who, used to stretching, would agree to be randomly assigned to the nonstretching group, said Alan Roth, a former board member of USA Track and Field and coordinator of the study. Once they understood that they might be required to not stretch for three months, they declined to participate. It took the researchers more than two years to coax enough runners to join and complete the study, generating enough data for meaningful results.

And the results are "meaningful," according to Dr. Dan Pereles, an orthopedic surgeon in the Washington area who originated and led the study. "I had gone into this thinking that stretching would prevent injuries. I was fairly sure of it. But that's not what we found." Instead, static stretching provided no particular benefit. On the other hand, it didn't cause harm, either. *(continued on pg. 4)*

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If we surveyed the infinite variety of activities that might be recreational to somebody, they would fall somewhere on an imaginary continuum. At one end are those activities that impart little or no exercise effect; and at the opposite end are those more-athletic activities that possess a more dramatic exercise effect, though that effect from recreational activities is always marginal and incomplete.

Exercises may be a reason for performing some of them, but in all cases exercise takes a remote back seat to hundreds of psychological and sociological priorities. Just because an activity elevates your heart rate or elevates your blood pressure or fatigues you or induces labored breathing or makes you sore or makes you sweat, do not assume that you have meaningfully productive and worthwhile exercise. You can have all of these exercise effects without qualifying for exercise. Exercise effect does not assume effective exercise. The essence of exercise assumes a purpose of physical improvement. If the activity does not promote a physical improvement --- primarily correlated to increased muscular strength ---- then is not exercise.

RPFitness - News & Notes

By Gretchen Reynolds

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Most of fat-loss- emphasis depends on caloric control. Exercise remains essential, however, for the purpose of minimally maintaining and hopefully increasing muscle size and strength. Muscle is the secondary determinant ---- only after your bones ---- of your shape (figure). And only by strength training do you impose discriminate weight loss. Without emphasis on muscular strength, you lose weight but indiscriminately. You lose more than fat ---- your muscles, even vital organ tissue as well. Other activities often construed as exercise do not impose the desired discriminate weight loss.

The last factor, increased resistance to injury, is a bonus. It should follow from the first five factors. It should go without saying that these factors should lead to safer movement in any activity. Recreation, on the other hand is a different matter altogether. It is fun, pastime activities, a diversion from daily routine. And recreation is very important to our mental health.

One anomalous finding of the USA Track and Field study was that runners who were used to stretching and were assigned to the nonstretching group became injured at a disproportionately high rate. Almost 23 percent of them wound up hurting themselves during the three months. But no experts associated with the study or who have read the results believe that this finding intimates that stretching had been keeping them uninjured in the past. More likely, Dr. McHugh said, they fell victim to a training error, which, he explained, "in reality can mean any abrupt change in training patterns. Your body adapts to its routine, and if that routine is monotonously habitual as with many runners, it doesn't take much of a change to cause an injury."

So is the primary takeaway of the USA Track and Field study that, whatever you're doing now in terms of stretching or not stretching, don't stop? Possibly, but most physiologists, taking a broader view of the available science, would probably say no. "In all our involvement with elite athletes now, we don't do this kind of static stretching anymore," Dr. Tucker said. Instead, the best science suggests that an ideal preworkout routine "consists of a very easy warm-up, followed by a gradual increase in intensity and then dynamic stretching," he said. Dynamic stretching, or exercises that increase your joints' range of motion via constant movement, does not seem to invoke the inhibitory reflex of static stretching, Dr. Tucker said. When "you stretch through movement, you involve the brain much more, teaching proprioception and control, as well as improving flexibility."

In practice, dynamic stretching would mean that, instead of leaning over and touching your toes or pushing against a wall to stretch your calves before running, you might raise your leg before you in a marching motion, and then swing it back, in a well-controlled arc, suggested Phil Wharton, a neuromuscular therapist and founder, with his father, Jim, of the Wharton Performance clinic in New York City. Or lift your leg to the side and scissor it in front of you to warm up the hip joint.

But make any such alterations to your routine gradually, with circumspection. If there's one lesson from the USA Track and Field study, said Dr. Pereles, it is that "sudden changes are probably not a good idea."

Editors' Note: An unedited version of this article was inadvertently published earlier.

News & Notes

Good luck to all of those who are running in the **Akron Marathon!**

Good luck to RPFitness' Team Members -

John Fiume, Kristy Kenna, JJ Fyffe, Amanda Jesko, Lizzie Jesko and Kerri Conti

4 more weekly fitness classes are being added in October!

Log onto www.rpfit.com to see the upcoming fitness schedule. The men's showers have been renovated!

