

Lemont Park District
**CORE Fitness &
 Aquatic Complex**
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CORE Matters - The CORE's Members-Only Newsletter

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Why We Need to Question Calorie Burn?

Researchers have long suspected there is more to measuring exercise effectiveness than just counting calories. A new study aims to identify the other crucial factors at play. Exercise scientist Dr. Nigel Harris explains... The science of exercise and nutrition can be confusing, but calories are something everyone gets. Calories are well known, they're easy to understand, they're on almost every food packet and programmed into all the latest gym equipment and fitness trackers. It's a nice easy metric that we can all relate to. The value of measuring calorie burn is not in dispute, it's more about what you miss when you focus only on the calorie total. Chances are some types of exercise will have a more potent effect. And it's this potency which is being missed by just measuring how many calories you actually burn.

We know that often the calories burned during resistance training can seem disappointingly low, yet we are aware that many transformative effects come from resistance training. There must be more to it, and that's why more research was required.

The theory was that, a resistance training program might have a very similar calorie equivalent to other types of exercise, like cycling, yet other harder to measure

variables, such as in the blood, might give us an indication that it has a more potent effect. We are interested in hormones with certain types of exercises because we see acute hormone levels.

Goodness knows it's complicated, but human growth hormone is one key target because we know that it's associated with really positive things such as fat burning. Because of the name everyone tends to think that producing human growth hormone means it's all about growing muscle. Well, it might also have some muscle building effect, but if you get an acute, high elevation of human growth hormone, it's a good indicator that you are then starting to burn more fat. Blood lactate, which indicates anaerobic energy use, is also important. When lactate shoots up beyond a baseline level we know that you've hooked into your anaerobic energy pathways.

And there are other markers that aren't strictly hormones, such as inflammatory cytokines. If these are present chronically in high levels it's not a good thing. But the amazing paradox is, when we get acute elevations of them, like we do straight after exercise, the effect is really positive

and chronic inflammation is reduced.

The thing is, all these different blood markers tend to come as a package, they work together, so it is interesting to measure more than just one of them. We know that when we present the body with a sufficient stimulus – such as the resistance training demands – these blood markers ramp up and downstream they cause good things to happen. When we see them go up temporarily it's a really good indicator that longer term they might be doing good things too.

We went into it with the hypothesis that resistance training would probably have a more potent physiological effect than the equivalent time and calorie expenditure of steady-state cardiovascular exercise. And that was what we observed for the most part. The intention is not to disprove one type of exercise. It is simply to say, look, if you're spending 50 minutes in the gym and thinking that you're just burning X amount of calories, you need to consider what else is happening beyond the calorie burn.

The Lemont Park District
CORE
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A Healthy Recipe!

Creamy Lemon Chicken Parmesan

Ingredients: 1/3 cup flour, 2 large eggs slightly beaten, 3/4 cup whole wheat panko bread crumbs, 1/2 cup Parmesan cheese, 1 tsp. Italian seasoning, 1 tsp. garlic powder, 4-4oz chicken breasts, 3 tbsp. extra virgin olive oil, 2 minced garlic cloves, 1 cup low sodium chicken broth, 1/4 cup lemon juice, 1/4 tsp salt, 1/2 cup half and half, 1/4 chopped fresh parsley

Directions:

Preheat oven to 400°F. Place flour in a shallow dish. Place beaten eggs in another shallow dish. Combine panko, 1/4 cup Parmesan, Italian seasoning and garlic powder in a third shallow dish. Working with one at a time, coat each cutlet in flour, shaking off the excess. Transfer to the egg mixture and turn to coat. Transfer to the panko mixture and turn to coat. Reserve 1 tablespoon of the flour (it will be cooked later) in a small bowl. Discard any remaining flour, egg and panko mixture. Heat 1 tbsp. oil in a large skillet over medium-high heat. Add 2 cutlets and cook, flipping once, until golden, 1 to 2 minutes per side. Transfer to a large baking sheet. Reduce heat to medium and add another 1 tablespoon oil to the pan. Add the remaining two cutlets and cook, flipping once, until golden on both sides, 1 to 2 minutes per side. Transfer to the baking sheet. Bake the cutlets until cooked throughout, about 10 minutes. Meanwhile, wipe out the pan. Add the remaining 1 tbsp. oil and heat over medium-high heat. Add garlic and cook, stirring, until fragrant, about 30 seconds. Add broth, lemon juice and salt to the pan. Bring to a boil. Whisk half-and-half into the reserved 1 tbsp. flour. Add to the broth mixture and cook, stirring frequently, until reduced by about half and thickened enough to coat the back of a spoon, 8 to 10 minutes. Remove from heat. Transfer cutlets to platter, drizzle with sauce and top with cheese and parsley.



Serving size: 1 cutlet 1/4 cup sauce

Per serving: 378 calories; 21 g fat(6 g sat); 1 g fiber; 15 g carbohydrates; 31 g protein; 30 mcg folate; 130 mg cholesterol; 2 g sugars; 0 g added sugars; 604 IU vitamin A; 12 mg vitamin C; 146 mg calcium; 2 mg iron; 466 mg sodium; 387 mg potassium

5 Antioxidant-Rich Foods You Should be Eating

Many of us take the bait at the word "antioxidant," buying health and beauty products without knowing exactly how these mysterious compounds actually benefit us. Let's clear that up: "Antioxidants act like little bodyguards to protect our cells from damage that can lead to premature aging and disease," explains Cynthia Sass, *Health's* contributing nutrition editor. They neutralize harmful free radicals, molecules that play a role in cancer, Alzheimer's, heart disease, and more. Though there are many antioxidant dietary supplements on the market, health experts typically recommend getting them the old fashioned way: through your diet. In fact, Sass says you should be eating antioxidant-rich foods multiple times a day.

Luckily, increasing your daily antioxidant intake is pretty simple; they're found in many of your favorite fruits, nuts, veggies, and even sweets! Wondering where to find the most antioxidants? We combed through a database of more than 3,100 foods, drinks, herbs, and spices (originally compiled and published in *Nutrition Journal* in 2010) to find the top 10 antioxidant-rich foods (per 100 grams) that you need in your diet.

1. Blackberries - polyphenols; the ones in these dark purple berries have been linked to slower decline of cognitive and motor skills with aging. Blackberries also get antioxidant star-power from vitamin C.
2. Pecans - Just a handful of these nuts a day can help lower cholesterol. Pecans are bursting with the mineral manganese, which boasts age-defying antioxidant powers to help keep skin firm.
3. Cranberries-an help reduce inflammation, raise "good" HDL cholesterol, and support the immune system. They contain a unique form of antioxidant, called proanthocyanidins or PACs, that keep E. coli and other bacteria from sticking to the bladder walls.

4. Walnuts - solid source of protein, fiber, and manganese, they are also loaded with heart-healthy unsaturated fats, like all nuts. But compared to other varieties, walnuts are particularly rich in alpha-linolenic acid, a type of omega-3 fatty acid found mostly in plants.
5. Dark Chocolate - gets its famed health benefits from antioxidants called flavonols that can help lower blood pressure and reduce diabetes risk.



CORE "Focus on Fitness" Features

Need a change of pace from your normal routine? Try a new class or new piece of equipment in The CORE's Fitness Center! Each month we showcase one of our Fitness Classes and a piece of equipment we encourage members to try.

CORE-Fit Feature Class

Step Class

Utilizing an adjustable step, this class will bring your cardiovascular workout to new heights. All fitness levels are welcome. One hour long class that includes warm-up, cool-down.

Monday's at 8:00 p.m.

CORE Feature Equipment

Rowing Machine

One of the rowing machine's claims to fame is it's fantastic for working out your whole body.. Your upper and lower body are required to complete a full rowing stroke. This is a good and bad thing depending on how you look at it. It's a *good thing* because you'll be getting a solid workout that's guaranteed to get you sweating. It's a *bad thing* because unlike an elliptical, you can't cheat! Meaning, on an elliptical you can let go of the handles to give your arms a rest but still "keep going". On a rowing machine, you must use your entire body to complete a full stroke every time! A rowing machine is one of the few machines on the market that truly works out your entire body.

It is recommended...If you are under doctor supervision that you discuss your exercise capabilities and limitations with your physician.