

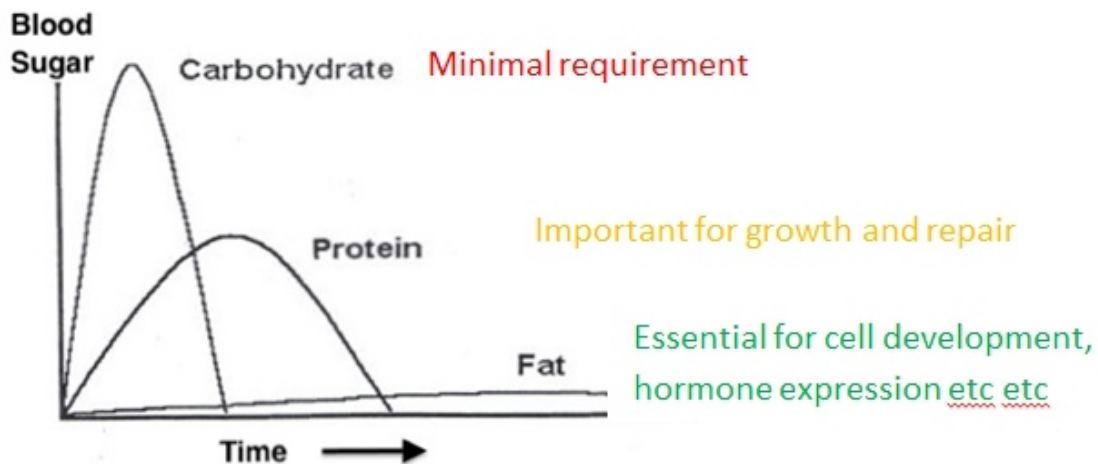
Getting Lean - a manifesto

Key Points:

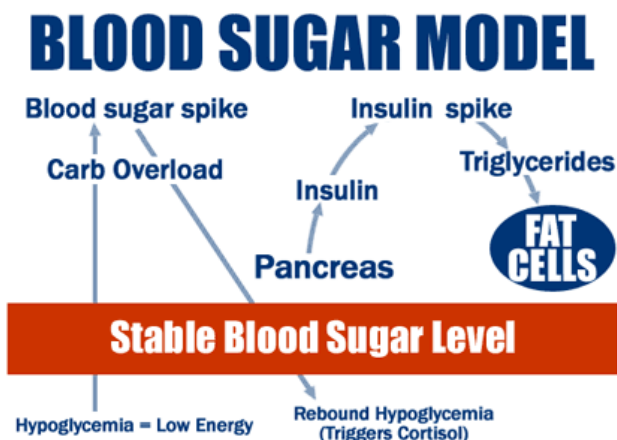
Success will mainly come from what you eat. Maintaining level blood sugar that does not spike or induce insulin production. The best way to do this is avoiding sugars and refined carbohydrates. This also includes artificial sweeteners/diet drinks etc.

Here are three illustrations that will help frame the why:

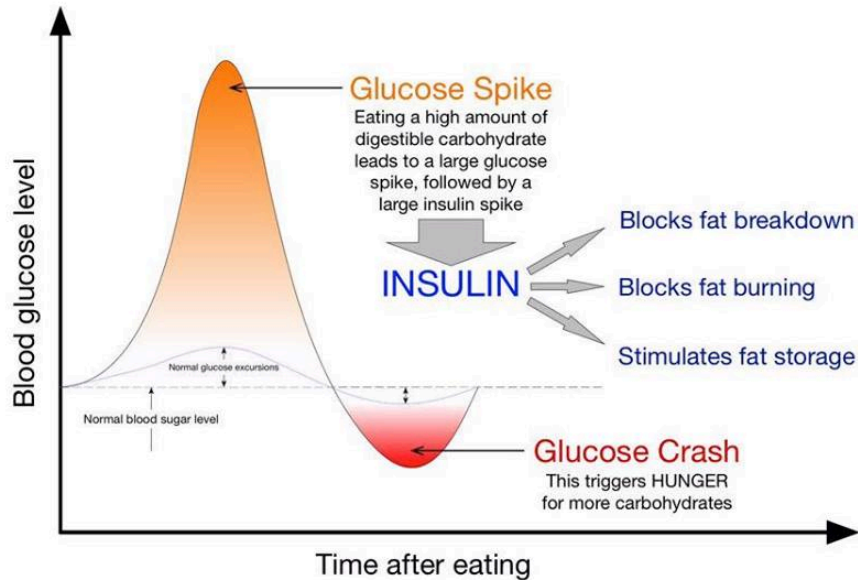
How the human body metabolized the 3-macro nutrients as related to available energy over time:



Below is how this relates to how we gain body fat (stored excess energy)- the metabolic studies show that insulin spikes at relatively low levels-if you repeatedly spike insulin the resulting insulin sensitivity amplifies the insulin spike with lower amounts of ingested sugar/carbohydrates, even normal amounts. New research is estimating that 80% of Americans are chronically in the spiking mode, this coincides with the statistic that 77% of Americans are obese or over-fat. It's about chemistry-not calories. If you spike insulin your body will turn off fat metabolism and light up fat storage-period, and it doesn't matter how much you exercise.



Eating non-fibrous (digestible) carbohydrates traps you in a remorseless cycle of glucose dependence and hunger



- Counting calories is ineffective, as they are not metabolically equal & do not cause the same insulin response. However counting carb grams can be very effective for getting lean. **I recommend staying under 100 grams per day for weight loss. This is not a “low-carb” range but a normal carb range.** Technically a low-carb diet is 25 grams or less-AKA ketogenic diet. If you really want to accelerate body fat loss you can shoot for some days below or around 50 grams of carbs. This may feel uncomfortable at first; make sure to listen to your bodies needs for energy, especially if you are exercising frequently.
 - A good tool is a simple carb counter app. **Daily Carb-Carbohydrate app** is free. The goal is to understand the approximate carb grams in foods you like to eat, not to get too analytical about the food. Eating should be fun.
 - **Get most of your carbs from veggies-eat them in all meals,** combine with a good fat, as you need fat to utilize the vitamins and minerals in veggies.
 - Eat yams, sweet potatoes, and white potatoes for starch. A good technique is to cook them, then let them cool completely. This converts around 30% of the starch into “resistive” starch that cannot be digested. This form of starch is also a pro-biotic food for intestinal

bacteria. Great meal idea: sweet potato + guacamole+butter+ground beef+Franks hot sauce

- Eat fermented foods for healthy gut bacteria; this helps with immune function and insulin regulation. Also helps keep you lean. Pickles, kimchee, apple cider vinegar.

- **Add more fat to your diet! This is a critical part of getting lean**, contrary to the incorrect dietary guidelines of the last 40 years. Fat is an essential nutrient. Approximately 25-30% of the calories or energy in a gram of fat or protein are used to convert the food itself in to usable material, meaning it increases your metabolism and promotes lean mass. Fat is also digested very slowly so it is very satisfying/satiating (as shown in chart above). In a recent study done, 230 calories of walnuts was shown to have net zero calories (with lots of nutrient value) because of the increase metabolic effect, longer satiation and increased fecal production. Plus fat makes food taste better!

Good fats include:

- **Nuts of all kinds**
- **Olives**
- **Avocado-eat one a day**
- **Coconut-oil, unsweetened flakes etc.**
- **Good quality meats, fatty fish**
- **Butter and ghee -preferably from cows that eat grass (Kerry Gold is a good brand)**
- **Good quality oils-coconut, avocado, olive, sesame, palm**
- **Eggs-a good serving is 2-4**

Exercise is part of the equation. Exercise is less about “burning calories”, and more about tuning the systems that use the energy from food, and improve insulin sensitivity systemically (essentially all the cells in your body, the musculature being the largest user of energy, followed by the brain). Plus it’s arguably the best thing you can do for your health. I’m going to provide several ideas on how to use exercise most effectively to achieve a lean body, without sabotaging your goals. Too much exercise can often “shut-off” the bodies desire to get lean.

- **Move lots. Don’t sit for more that 50 minutes at a time without getting up and walking for 30-60 seconds. Take walks, hike, do yoga etc. Lots of easy movement. This is the foundation of healthy activity**
- **Use Interval Training correctly. Often intervals are not patterned after the desired effect for health or lean body mass, they are often patterned after sports performance with a specific purpose. A proper segment for the WORK portion of an interval is less**

than 30 seconds, and the recovery can vary greatly. Please see below for a great template for intervals that can be done with any exercise. The goal of an interval is to work a large number of muscles as hard as you can without oxygen to force the body to utilize glycogen and release stored body fat for recovery of glycogen and ready energy.

- An interval done properly will yield 300-700% more body fat reduction in 4-20 minutes than 60-90 minutes of steady running, cycling etc. (as these activities primarily rely on blood sugar for energy-so it makes you hungry)
- Properly done will improve cardiovascular fitness, health & power by 200-500% as compared to steady “cardio” type exercise.
- Short intervals will prepare you to actually complete longer “events” like 10K, ½ marathon, and even marathon/endurance events, with less time, and less chance of injury.
- Slows aging at a cellular level, has even been shown in studies to improve skin elasticity.
- Less time demanding-can be more fun
- Can be done on any types of equipment, body weight, weights, spin bikes etc.
- “Burns” body fat for 36-72 hours post exercise via Excess Post Exercise Oxygen Consumption (EPOC).

This is critical for being lean-get plenty of rest, sleep & recovery. If you work too much your body will turn off the release of fat. Body Fat is a resource for survival; exercise is stress. Over exercise is associated with plateau in weight loss.

Guidelines:

- Sleep between 6-9 hours if possible
- Only do intervals 3-4 times a week max. 2-3 if fine.
- Take an “easy” day between hard workouts
- Take at least 1-2 days off a week-they can be active recovery like yoga, hiking, walking etc.

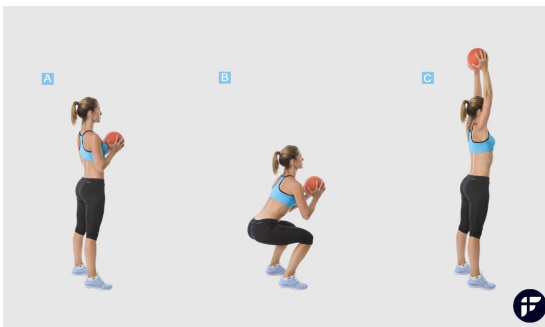
Interval Ratios

WORK	RECOVERY	# of Intervals
30 seconds	30 seconds	8-12

30 seconds	90 seconds	8
10 seconds	60 seconds	8-12
15 seconds	90 seconds	8-12
15 seconds	10seconds	8
20 seconds	60 seconds	8-12
20 seconds	90 seconds	8

The above timing ratios can be use with any type of exercise. Swimming, biking, running, weight training etc. They key is to work hard during the “work” phase, and go very easy for the “recovery” phase. Best practice is to involve many muscles, or compound movements that involve many joints like burpees, or Thrusters (a dynamic squat with a light weight combined with a overhead press of weight).

THRUSTER



BURPEE



To enhance the benefit of these types of exercises for body fat loss you can add an additional 5-30 minutes of easy activity at the end. This will help metabolize free fatty acids (body fat) that is released

Bonus Activity:

If possible, once a week do a “fasted” low intensity activity.

Example:

Wake up on a Saturday, do not eat any food, drink water and or coffee. Go for a long hike in the foothills (60-120 minutes). This will yield significant body fat metabolism. The goal is to deplete stored "sugar" energy (glycogen I muscles and liver) and force the body to release stored body fat for energy. Works like a charm.