



## **Show Notes**

### **Cj Sends Word Ep. 3 Part 1**

### **Dr Ragnar's 5 Keys To Optimum Nutrition**

#### **IIFYM**

The basic premise of IIFYM is that you can lose fat (and build muscle) by creating a calorie deficit and maintaining adequate protein, fat, and carb intake, regardless of where those macros and calories come from. Many advocates will focus on calorie counting, stating the laws of conservation of energy (or first law of thermodynamics), because “a calorie is a calorie”. However, this assumes the body is a closed, impenetrable box (which it isn't), and ignores the second law of thermodynamics, which takes efficiency (metabolism) into account: <http://www.ncbi.nlm.nih.gov/pubmed/17663761>

For instance, we can increase efficiency (reduce metabolism) by cutting calorie intake. We can also decrease efficiency (increase metabolism) by increasing protein intake:

<http://jama.jamanetwork.com/article.aspx?articleid=1103993>

However, for those wanting to build muscle, it's important to point out that you probably don't need as much protein as you think you do (1.5g/kg/day) is more than enough

(<http://www.ncbi.nlm.nih.gov/pubmed/3356636>), and the more experienced a lifter you are, the more efficient your body becomes at building muscle, and the less extra protein you need (<http://www.ncbi.nlm.nih.gov/pubmed/10940342>).

In healthy individuals, cutting calories may provide better weight loss than dramatically changing macros (cutting carbs, which works better in those who are obese or type 2 diabetic):

<http://www.ncbi.nlm.nih.gov/pubmed/16306558>

This suggests that IIFYM may work for younger, healthier, individuals, as it often does. However, more and more IIFYM proponents are now saying that the food source is also important in IIFYM, in order to get some essential nutrients and vitamins from food. Depending on the biases of who is doing the calculating, scores of nutrient density will differ, but whole foods (meat, fish vegetables, beans etc) will always beat pizza and ice cream: <http://ajcn.nutrition.org/content/81/2/341.full>  
<http://www.mensjournal.com/health-fitness/nutrition/joel-fuhrmans-micronutrient-diet-20130403>

Eating a whole food diet based around vegetables, fat, and protein (whilst reducing carb and grain intake) also appear to increase satiety, and improve fat loss:

<http://www.ncbi.nlm.nih.gov/pubmed/21118562>

#### **Ketogenic diets**

Ketogenic diets can be very good for fat loss, especially in people with insulin resistance (type 2 diabetes), and much better than a low calorie or low fat diet. For instance this study:

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2633336/>

In gymnasts, a ketogenic diet produced significant fat loss, with no loss of muscle or strength:  
<http://www.ncbi.nlm.nih.gov/pubmed/22835211>

A similar diet also improved sprint time, and reduced oxidative stress in young Taekwondo athletes:  
<http://www.ncbi.nlm.nih.gov/pubmed/25426472>  
<http://www.ncbi.nlm.nih.gov/pubmed/25610820>

We mentioned two people who are very vocal about the ability to gain muscle on a ketogenic diet, which was previously thought to be almost impossible:

Luis Villasenor: <http://www.facebook.com/ketogains>

Menno Henselmans: <http://bayesianbodybuilding.com/sample-page/>

The Bayesian Bodybuilding website that Menno runs is a huge wealth of information. For instance, try starting with his short but compelling article on why workout nutrition is a scam:

<http://bayesianbodybuilding.com/workout-nutrition-is-a-scam/>

### **Intermittent Fasting**

The best evidence for intermittent fasting for weight loss is an alternate-day protocol:

<http://www.ncbi.nlm.nih.gov/pubmed/15640462>

This can increase fat burning and insulin sensitivity, and people do not over-eat to compensate for the fasting day, which reduces overall calorie intake:

<http://www.ncbi.nlm.nih.gov/pubmed/12461679>

IF increases lifespan in a number of animal models, and one reason is probably the “cleaning-up” of broken cells and mitochondria, via autophagy: <http://www.ncbi.nlm.nih.gov/pubmed/24949965>

There is no evidence that occasionally fasting will reduce strength or muscle gains, and it is probably beneficial for overall health, for the reasons described above and in the podcast. However, as with IIFYM, adding chronic stress (poor sleep, over-dieting etc) to IF (which can also be interpreted by the body as stress), may cause dysregulated cortisol (stress hormone) to interfere with normal leptin and insulin signaling, resulting in weight gain: <http://www.ncbi.nlm.nih.gov/pubmed/25285198>

<http://www.ncbi.nlm.nih.gov/pubmed/10882542>

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### **Dr. Ragnar**

Website: [www.drragnar.com](http://www.drragnar.com)

Facebook: [www.facebook.com/drragnar](http://www.facebook.com/drragnar)

Twitter: [www.twitter.com/DrRagnar](http://www.twitter.com/DrRagnar)