

Healthy Diet, Healthy Living, Healthy Weight

Curious Cat Science and Engineering Blog

Living and eating healthily is tricky but not entirely confusing. The whole area of eating healthy food and what is a healthy weight is one where the scientific inquiry process and the complexity of scientific research on what is healthy for us is clear. Scientists study various issues and learn things but creating simple rules has proven difficult. Different studies seem to show benefits of contradictory advice, advice once seen as wise is now seen as wrong...

This is an area I am far from knowledgeable about. Still I try to pay some attention as [I like being healthy](#) [1]. Being sick is the quickest way to appreciate how great it is to be healthy. From various things I have skimmed it seems there is more evidence from several studies about [how difficult it is to lose weight](#) [2]. Our bodies seem to work against our efforts.

And this, it seems to me, makes the [problem of increasing childhood and teen obesity](#) [3] even more important to deal with as soon as issues arise.

It seems to me the most important thing to take from this, is the importance of maintaining a healthy weight: since you can't just easily make up for a bad year of weight gain. I am not sure why I haven't seen this note in most of what I have read - I suspect it is our reluctance to make value judgements about what is healthy. The problem I see with that is, the best advice we have is confusing enough without people with more knowledge being reluctant to state their best advice given the current knowledge. That doesn't mean the suggestions are right, but at least they are educated guesses.

I try to eat relatively healthily. Which for me means taking steps to increase the amount of vegetables I eat (especially greens and some fiber) and decrease the amount of sweets and heavily processed food I eat (I still eat way too much heavily processed food). And I try to exercise as it seems to have many benefits including helping make up for some weaknesses in your diet (like eating too many calories and too many "empty calories). In my opinion (which on this topic may well not be worth much) eating a bit more stuff that really isn't so good for you and [exercising more is an easier tradeoff](#) [4] than trying to eat perfectly and do the minimum amount of exercise needed to stay healthy.

I also eat yogurt - I like it and the beneficial benefits of some bacteria seems likely. I heard recently something that surprised me which is that the beneficial bacteria remain for close to 2 weeks. I figured they would be gone in a couple days. I only heard that from one source (I can't remember now but some seemingly knowledgeable source - scientist researching the area), so it might not be accurate but it was interesting.

Here is an example of one of these health studies. They find that a low protein diet

resulted in a loss of “lean weight” (muscle...) and more fat than a comparable diet with more protein. The same weight with a higher percentage of fat is not a good thing for human health. Thus the message is that a lower protein diet has this risk that must be considered (and therefore higher protein diets may well be wise). Of course things get much more complicated than that when we actually try to live by a diet.

[Effect of Dietary Protein Content on Weight Gain, Energy Expenditure, and Body Composition During Overeating](#) [5]

After consuming a weight-stabilizing diet for 13 to 25 days, participants were randomized to diets containing 5% of energy from protein (low protein), 15% (normal protein), or 25% (high protein), which they were overfed during the last 8 weeks of their 10- to 12-week stay in the inpatient metabolic unit. Compared with energy intake during the weight stabilization period, the protein diets provided approximately 40% more energy intake, which corresponds to 954 kcal/d (95% CI, 884-1022 kcal/d).

...

Overeating produced significantly less weight gain in the low protein diet group (3.16 kg; 95% CI, 1.88-4.44 kg) compared with the normal protein diet group (6.05 kg; 95% CI, 4.84-7.26 kg) or the high protein diet group (6.51 kg; 95% CI, 5.23-7.79 kg) ($P = .002$). Body fat increased similarly in all 3 protein diet groups and represented 50% to more than 90% of the excess stored calories. Resting energy expenditure, total energy expenditure, and body protein did not increase during overfeeding with the low protein diet. In contrast, resting energy expenditure (normal protein diet: 160 kcal/d [95% CI, 102-218 kcal/d]; high protein diet: 227 kcal/d [95% CI, 165-289 kcal/d]) and body protein (lean body mass) (normal protein diet: 2.87 kg [95% CI, 2.11-3.62 kg]; high protein diet: 3.18 kg [95% CI, 2.37-3.98 kg]) increased significantly with the normal and high protein diets.

Conclusions Among persons living in a controlled setting, calories alone account for the increase in fat; protein affected energy expenditure and storage of lean body mass, but not body fat storage.

So if I understand the abstract (the paper is released in a closed science [anti-scientific method, scientific literacy] format unfortunately) calories affect the increase in fat gain and protein affects energy expenditure and lean body mass gains. This is another of the benefits of exercise, as I understand it: you will burn calories while working and the muscle mass you build actually burns more calories at rest than your fat stores. So you not only get a benefit while exercising you get a benefit while doing nothing.

Related: [\\$500 Million to Reduce Childhood Obesity in USA \(Robert Wood Johnson Foundation, 2007\)](#) [6] - [Study Shows Weight Loss From Calorie Reduction Not Low Fat or Low Carb \(2009\)](#) [7] - [Food Rules: An Eaters Manual](#) [8]

Things like exactly what is a healthy weight I think are debatable. And for different people the answer is different. But there is a strong correlation above a certain

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weight (especially when much of it is fat) that health risks increase. And exactly how much exercise is needed is not an answered question. But it is pretty clear there are significant health benefits to more exercise (even very simple things like walking) that most of those in the rich world (USA, Germany, Canada, England...) get. And it makes perfect evolutionary sense to me that we would have issues based on the rapid decline in exercise from what we evolved to expect (so when the evidence points to issues in this area I am very quick to accept the conclusions as likely useful information).

If what you want to do is find an excuse to not follow the best advice we have for healthy living the areas of uncertainty give you lots of room to hide. But that is not going to give you the best chance to be healthy. So if you want to be healthy there are sensible steps you can talk and taking care not to get too overweight, exercise sensibly and increase the percentage of vegetables in your total food intake (than you probably have now - I would be surprised if 5% of the Curious Cat Science and Engineering Blog readers have a good percentage of vegetables to total food intake) are steps almost certain to help.

[SOURCE](#) [9]

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<http://www.ecnmag.com/news/2012/01/healthy-diet-healthy-living-healthy-weight>

Links:

[1] <http://johnhunter.com/>

[2] <http://www.nytimes.com/2012/01/01/magazine/tara-parker-pope-fat-trap.html>

[3] <http://engineering.curiouscatblog.net/2009/02/25/study-finds-obesity-as-teen-as-deadly-as-smoking/>

[4] <http://engineering.curiouscatblog.net/2008/09/10/active-amish-avoid-obesity/>

[5] <http://jama.ama-assn.org/content/307/1/47.short>

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