The Christmas binge season is creeping up on us, and as ever it will be quickly followed the annual tradition of starving oneself as a penance for your syns (I know it's sins, I just borrowed a slumming world term). Metabolism is the basis of both my work and research, and it never ceases to amaze me how misunderstood the topic is.

I thought we'd look over an old article from the Daily Mirror. Not exactly PubMed but it is where most people will go for “expert opinion” once New Years Eve is in their hazy past. The article by Tanith Carey was titled “How many calories do you REALLY need to eat every day? We put six women to the test.” (1) In the article they want you to consider why some women can eat anything and not gain weight, whilst others gain weight just by looking at a piece of cake. Now that simply isn’t true, everyone has the potential to gain weight, our ability to survive thus far is most likely due to our ability to down-regulate our metabolism and store energy in order to survive periods of famine. (2, 3)

The article goes on to mention the dreaded NHS guidelines that the average female needs 2,000 calories a day. The problem is how we define average female. Scientifically we know that we are individuals, and to use the term “average” is beyond useless, indeed, to follow some dictated policy shows an utter disregard for your individuality. With the scientific tools we have at our disposal we no longer need to conform ourselves to the system, we can define our own systems.

The article does touch on the number of calories "we can eat" varying from woman to woman. They then went on to measure oxygen inhalation and carbon dioxide exhalation to enable the calculation of resting metabolism in six individuals. Dr Naufahu stated “As we get older, our metabolism tends to slow down, so unless we keep up our muscle mass with exercise, those extra calories get stored as fat, which is why so many middle-aged women battle with their weight.” Personally it leaves me astonished that no mention is made of food sustaining the metabolism, I've completed enough study over the years to conclude that you'll struggle to maintain or increase muscle mass without adequate food. As you'll see, metabolism seems to suffer most at the hands of the lifelong dieter.

One of those tested was a personal drainer called Jo who was 53 at time of publication, and needed 1,600 calories despite eating 1,942. Her various admissions;

“'For most of my life I've yo-yo dieted….in my teens, I lost the weight through dangerous crash dieting. But then I married and gained more pounds with each of my pregnancies until I went up to 15st....'”

“I started exercising and eating no more than 1,200 calories a day. It took 22 months for me to lose five stone....”

“Now I'm happy with my body and keep my figure trim with exercise and eating healthily during the week – fruit, protein and salad but indulging at the weekends. I am particularly partial to red wine......”
“The weight still comes off much more slowly than it used to in my younger days.”

This really sums up the metabolic adaption created by dieting or making incorrect assumptions about what your body needs in terms of its energy requirements.

Further into the article Dr Naufahu’s makes a childish error when she states that “To lose a pound of fat, you need a calorie deficit of 3,500-kcal each week.” She then states that Miss Average needs to cut down by 400 to 500 kcals a day. Yet the belief that a 3,500-kcal deficit will result in one pound of weight loss (about 0.45 kg) is misguided if not corrupt. It continues to be cited in “over 35 000 weight loss educational websites” plus copious amounts of academic textbooks, scientific articles and so called experts in diet and nutrition. (4) Even the British Dietetics Association pushes the totally unreferenced 3500-kcal rule. (5) Even if it was factual it fails to account for the metabolic adaption caused by dieting. To put it simply, the greater the degree of energy restriction to encounter, the more efficient you become as energy output is slowed to protect you. (6)

Then we meet Nicola who is 54 and eats 1,800 calories despite her RMR being 1,497, interestingly she claims to.

“eat more than half what I used to in my 30s and find it harder and harder to keep it off, especially since I turned 50.”

“I had a hysterectomy at 42 and have been on HRT ever since. I think that keeps me heavier because it makes me suffer water retention.”

“It’s very frustrating because I don’t eat a lot. I start the day with an omelette and have lots of fish and salads – with the odd cereal bar thrown in as a treat.”

So we can see the daily recommendation based on the “average woman” are pretty much worthless, and that random dieting seems to have often detrimental effects on the Resting Metabolic Rate (RMR). The next stage up from this guesswork would be predictive equations such as Mifflin-St Jeor, (7) which I used during my MSc dissertation due to the costs involved in utilising more accurate methods across a large study group.

Their can be no doubt that predictive formula provides a greater degree of individual understanding when developing and evaluating a nutrition plan, yet predictive equations may effect long term outcome due errors in accuracy.(8, 9) Oshima et al, (10) concluded that indirect calorimetry was an important tool for nutritional therapy of patients, so it would seem logical to conclude that those looking to lose weight (often for health reasons) should utilise the best possible tools available to enable both long term success and evade future health problems.

That studies such as Fothergill et al, (11) describe poor weight-loss maintenance at 6 year follow up, coupled with RMR suppression, indicates the importance of knowing individual RMR in order to maintain health and longevity whilst attempting to attain weight-loss goals. (12) Whilst costs may seem prohibitive it must be noted that during a study funded by Weight-Watchers, 5 year weight-loss maintenance was reported as 16.2 percent. Whilst this seems to make it plausible it must be considered that by the studies own admission the participants were made up of only the most successful members, and is no indication of actual success rates amongst all members. It is also worth pointing out that the study was looking at “success” measured in terms of members who managed to maintain 5 percent of their weight-loss over 1, 2 and 5 year periods. Ask yourself would you really be happy being one of the 16.2 percent in an elite group that after 5 years had managed to maintain only 5 percent of your weight-loss? Thought not.

So, at the cheapest rate for online access you’d be paying £122.68 for a year, right through to £325 a year to attend group meeting. (13) Cheap enough to risk it for those unaware of their chance of “success” and a great business model for repeat customers tricked into thinking their outcome was due to poor willpower.

So how would I tackle the issue of weight loss?

Firstly you need to know your own energy requirements, not those of Miss Average.

Option 1. Select a formula, work out your RMR and add on your activity to give you a better estimation of your needs.

Option 2. Book in for an RMR test and gain a more accurate picture of your needs.

After completing option 2 I would then suggest (or I do it for you if you visit me) that you complete option 1 to see how your actual RMR compares against what standardised formula suggests you need.

Next you need to consider the fact that after most RMR tests are completed the individual is then subjected to the 3,500 calorie deficit rule. We already know this isn’t backed up by evidence, and cannot work long-term due to metabolic adaption. So my suggestion would be to eat the amount your body needs and begin to restore your youthful metabolism. If you are supplying the correct amount of energy you will benefit from not needing extreme willpower, and over time you’ll see the RMR begin to raise as the metabolism adapts in response to the consistent supply of energy.

Any questions, leave a comment.

References:

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Comments

Help needed for diet research
18/1/2014

I am currently looking for participants who would be willing to take part in my University dissertation project, which is going to look at the relationships between different calorie targets, reasons for dieting, calorie intake, weight loss, health beliefs and adherence to diet. More information will be sent to you if you express an interest in being a participant but the study will essentially involve completing a few short questionnaires and recording your diet on myfitnesspal.com (following your own self-determined diet).

If you are interested in taking part in this study it would be greatly appreciated. If so, please contact me via email (B.Craig1@unimail.derby.ac.uk) and I will send you more information, which you can review before deciding whether you wish to continue any further.

Comments

Eating like Daisy
30/5/2013
I'm back, it's been a while since my last post, but the book is nearing completion. A big factor in writing it has been the birth of my baby daughter Daisy, she is the reason I reevaluated my dietary knowledge. I wanted to make sure she was healthy, learned to enjoy food and wasn't constrained by a life long fear of food, or desire to limit her intake. I also wanted to be sure that my wife ate food, both to feed Daisy and nourish herself. To be honest, I became appalled at the current view of dietary intake from the general public, the media and so called 'health' specialists.

To aid in my book writing I asked some of you to lend me your diet data so that I may use it in my book (a winner will be selected shortly and a new completion using myfitnesspal will be announced). I wanted to include some data from my own diet, whilst I don't think it is hugely important (i.e I don't want anyone reading into it and just copying what I eat), it is a question that I get asked a lot.

As usual the simple act of collecting some data left me with more than I expected, so the book has expanded even more. For my data collection some of you asked to submit your myfitnesspal data which helped a lot. I've also picked up some followers who seem to be doing the total opposite which has helped back up my ideas even more.

I've been given me the data of someone who aims to eat 1200 kcal a day. Now the obvious thing here is that after a set period of strong willpower, they would crash and burn. And crash and burn they did, with a lofty figure of 4000+ kcal. In my logical brain it seems obvious that this was the only possible conclusion...a starved body needs to survive and, unless you cultivate an eating
disorder as suggested in the picture above, your brain will win and you will eat and survive. Our body should be applauded for overcoming such hostile treatment, even the storage of fat is a fascinating insight into our body ensuring it supplies to cope with the poor treatment it gets when malnourished.

Anyway, after many weeks of watching, I have relented and proffered some advice. I figured they followed me so maybe they maybe won't mind me interfering. This led me to wondering how much Daisy eats in an average day, which is what can be seen in the picture at the top. At 1345 kcal she is consuming more than my adult follower attempts to consume, and much more than those on lighter life, herbalife, and various other low calorie diets which is scary.

Having a rough look around google it seems anywhere between 900 kcal and 1300 kcal is normal for a 1 year old. We honestly aren't counting other than today out of curiosity. Daisy has her normal daily meals and snacks which we increase if she asks for more food. There are many formulas for caloric intake, but as most of you know my long term favourite is;

To achieve their BMR, a sedentary individual should consume 25 calories per kilo of bodyweight per day. To maintain bodyweight, an inactive man of 75 kilo would need to eat:

75 kilos x 25 calories = 1,875 calories a day

If we imagine that Daisy were 10 kg (not weighed her for ages) then we could say that an inactive (like that will happen) Daisy would need 250 kcals a day, which is absurd. If we times that by 1.9 (a formula used for the very active) then the 75 kg man would now need 3562.5 kcals a day and Daisy would need 475 kcal.

I know most 75 kg men are nowhere near as active as Daisy but its a good way to look at it. Typically I coped best at 3600 kcal when I am moderately active, I maintain pulse, temp, am pain free, and suffer less from emotion issues (stress, anger, anxiety, depression etc). I'm currently on a 2800 kcal experiment and I'm struggling to maintain my temp, pulse and everything aches. So, 3600 kcal works best for me when I'm at best moderately active, but what does that mean for my calorie intake if I were to match Daisy's output.

If we work Daisy's figures into the original formula then we get something really interesting.

1345 kcal / 1.9 = 707.89 kcal RMR (resting metabolic rate)
707.89 kcal / 10 kg bodyweight = 70.78 kcals per kg of bodyweight.

So if we round this up to 70 kcals and place it in the original formula for the 75 kg man;

75 kg x 70 kcal = 5250 kcal and then times this by 1.9 to match Daisy's activity we get 9975 kcals per day.

Whilst this may seem like massive figure, bear in mind that when I tracked my output at a recent extreme competition I did I used over 13,000 kcal in a day.

As before when I wrote about eating 6000 calories a day, I'm not suggesting that you do eat this much. A damaged metabolism needs time to repair and its probably much more sensible to work slowly rather than freak yourself out with huge amounts. So, take it with a pinch of salt (maybe a pinch of sugar as well), especially the maths as its late at night and I'll be back to check it tomorrow. The intention is to make you think about how much you really need to eat and why.

Are you cold?
Are you hungry?
Are you constantly avoiding food or feeling guilty when you give in to survival?

Daisy is always warm, has a good pulse, is never fatigued other than when its bed time or food time, and has no worries about food or her weight. At what point did all these things change for you? Maybe when you gave up your baby diet!!

Apologies for the lack of blog posts, the book will be done shortly and I'll be back to normal ranting about diets, in the meantime thanks for all your kind comments and keep in touch.

Comments

Eat the Cake
28/2/2013
It's my birthday today and for most people celebration time means feasting on so called "bad" food. However, as its that special time of the year they put aside any feelings of guilt and allow themselves a treat.

Actually this tends to happen all year round as people crave the cake, battle with feelings about the cake, give in and eat the cake, wish they hadn't even met the cake, deny knowing the cake, and so the cycle continues. Cake is a love hate relationship!!

I've written extensively in the past about cake cravings, from Ancel Key's work on human starvation to my observations of the amount of cupcake companies popping up in our starved world.

Now before we go any further lets clear something up, I'm often viewed as;

"the food police"

Whilst I'm often the health detective that is tracking down issues in the diet and lifestyle of those who consult with me, I'm far from the diet nazi that people assume. Their is only one crime in my book and that is starvation!!

As you will of read previously, starvation leads to a whole host of complaints but the one that causes people the most upset is cravings. Most of the people I've consulted with are happy to deal with most of their low calorie symptoms (emotional issues, hair-loss, etc etc) but they hate the lack of willpower and the fact that they give in to cravings.
Do I eat cake? Rarely, and then it's always a "healthier" version that's homemade. But there's a reason why I simply do not desire shop bought cakes.

I eat a lot of good food. Cravings are our bodies response to restriction. According to Levin Pelchat, (2009)

"It may be the way in which foods are consumed (e.g. alternating access and restriction) rather than their sensory properties that leads to an addictive eating pattern."

In other words, our avoidance of food in general may be the thing that leads us to crave the food we wish we could avoid.

So, I have nothing against cake and if that was all I had then I'd eat it. Equally if I was starving I'd eat it and I'd feel no guilt about it.
If however I'm well fed, not only on good food but also enough food. Then I'm unlikely to want either much cake or indeed any at all. No willpower involved, just a fulfilled appetite.

Anyway, thanks for the many birthday messages, if your craving cake just eat it. Then tomorrow when you wake up think about eating enough all day so that cravings don't appear.

References

Levin Pelchat, (2009) “It may be the way in which foods are consumed (e.g. alternating access and restriction) rather than their sensory properties that leads to an addictive eating pattern.”

Comments

Hitler realises low calorie isn’t good for you!

2/2/2013

If you want to loose your health, follow the Auschwitz diet, exercise more and eat less. Chances are, if your having PT, training at a gym, going running, are a member of a slimming club, doing no carbs before marbs, or any of the other crazy diet and exercise regimes out there, your probably already on it. It won't kill you as quickly as it did them, mainly due to your PT or diet club leader not having as much control over you as the Third Reich (some PT's I've see have come close though, have you seen biggest looser in which that woman shouts as much as possible to cover up her lack of knowledge).

The report states:

“Whereas according to the standards of the Physiological Committee of the Section of Hygiene of the League of Nations a hardworking man ought to receive in 24 hours about 4,800 calories and an average working man more than 3,600 calories, the prisoners at Auschwitz were getting at most from 1302 up to 1744 calories for 24 hours! 1744 calories daily represent a little less than the basic conversion of food into energy of a grown man, or in other words a little less than the amount needed by a man resting in a lying position, covered and motionless. A man who works, nourished in such a way is burning up his own tissues in order to cover the amount of energy expended. This inevitably results in the wasting away of his organism in a manner dangerous to life. The diet of the prisoners working very hard outside the camp possessed such a caloric value. The prisoners who were working in the camp and whose work was also undoubtedly hard were getting at most 1302 calories for 24 hours, which was much below the amount necessary for the preservation of life when lying in bed. The above given data explains in full why the prisoners of the Auschwitz concentration camp were dying in masses after a short period of time, and only those who had the chance of getting stolen food, or were getting parcels of food from their families at home, could preserve their life. All the other prisoners were doomed to destruction”.

What shocks me the most is the 1744 kcals mentioned in the report is that its remarkably close to the 1800 kcals suggested for me during a module on nutrition at University. Its also remarkably close to the figures I often hear being suggested for weight loss amongst diet and exercise groups.

Sumo Diet

5/9/2012
My last post the No Diet Diet talking about how to eat yourself slim caused a fevered conversation on various online forums, some good, some bad as usual. Not since the days of Weird Diets - Concentration Calories and Masturbation have I seen such hysteria around a topic. The bad comments centered around various diet club forums keen to dispel the idea that low calorie might not actually work. Well the evidence doesn't lie, low calorie can only work short term (i.e very intermittently) in those with undamaged metabolisms, judging by the fact that you're reading this, one would assume that is not you! The other thing low calorie works for is bringing repeat trade back to diet clubs with the "oh I'm so weak willed, it's all my fault" attitude I've heard too often from dieters. It's not your fault, you being conned...

Ted Walther made a valid comment of FaceBook asking if the No Diet Diet is how Sumo Wrestlers get gihuge (yes that does say gihuge, it's my mum's made up word, a combination of gigantic and huge that she genuinely thinks exists).

To get that big a sumo wrestlers diet and lifestyle is critical but despite what people think it's not just eating lots that creates the results, it's how you do it and the other things you do as well. It is achieved via vigorous training, eating and sleeping strategies rather than just a mass indulgence in food.

So, what do they do? Unlike my suggestions they try to consume as much as possible whilst damaging the metabolism as much as possible (they want to slow everything down so they can store).

**The largest meal is eaten prior to sleeping**

Sumo wrestler's consume 20,000 calories a day, which they split into two supersize meals of 10,000 calories. Remember I found it oh so hard to manage 6000 and it sent me hyper (both hyper thyroid and hyper active as I just couldn't stop moving). By sleeping after a meal of 10,000 calories a sumo wrestlers body is able to process them slowly and is unable to burn off the energy via movement, heat and all the other things associated with a high metabolism.

**They skip breakfast (like many of you no doubt)**

Dr. Wayne Callaway, an obesity specialist at George Washington University confirms that skipping breakfast both triggers overeating later in the day and also causes a drop in metabolism. Remember I said the body needs a consistent supply of energy not large gaps.

**The drink beer with meals**

The good old empty calorie, masses of calories that not only add up the total but also spike hunger (yeah that's why they often offer you a free drink in restaurants while you wait for your table. If they're cheapskates they'll do the same trick using bread). Not only do they have no nutritional value yet provide a mass of energy (which the sumo will attempt to store by sleeping), it also depletes body minerals (particularly calcium) meaning that hunger is yet again spiked as they body scavenges for the missing minerals. When you eat a food your body expects the minerals to be there, if they aren't then it sends a message asking for more food. This is how food processors get people consuming lots of junk. Drop a few minerals out and watch them chow down. The same applies to artificial sweeteners, the body registers sweetness but can't find anything so sends a message for more. Genius if your selling processed food, not so good if you're attempting to cultivate a healthy body. One food company even brags about this in their tag line..."once you pop you can't stop".

**They exercise in the morning before eating.**

Yeah yeah, I've heard it all before, "exercising on an empty stomach burns fat". How idiotic does that sound? You take an unhealthy
body that has a lowered metabolism to protect itself from the uncertainty it faces with regard to food intake. Suddenly you decide that jogging before breakfast is a good idea, and you think that your body will release those precious fat stores that its been keeping ready for when you do something this stupid. Wrong wrong wrong!! Exercise does increase metabolism, but and its a big butt, without the energy required to do this movement it will lower your metabolic rate in the long term. This is because your body tries to conserve as much fuel as possible by rationing what's available. Make sense?

Nap time after lunch

Now I'd happily have a nap after lunch like little Daisy my daughter does, but if I managed to eat 10,000 calories in one meal I'd hope that my healthy metabolism would be fired up and have me hyper active trying to burn of what it didn't need. Sumo wrestlers reportedly sleep for four hours post lunchtime.

How do they consume 20,000 calories a day?

Chanko-nabe is a Japanese stew and contains large quantities of protein sources such as chicken, fish and tofu. Interestingly I've had a Paleo dieter recently who started of well on his diet initially but in the two years following as his metabolism started slowing he became a mini sumo, not good considering he was a PT. Protein in excess has an effect of slowing the metabolism (especially muscle meats). However theirs no doubt it takes dedication to eat this much food. 6000 was a lot for me and the effects weren't great but I doubt even I could manage 20,000. We don't need 20,000 a day and our bodies would struggle to process it all, but equally we need more than 1800 or whatever is recommended by the low calorie club. What you need is exactly or slightly more than your requires.

Hopefully this little post may make it more clearer if your current lifestyle has aspects of sumo training in it. Do you skip breakfast, drink empty calories, exercise when you're clearly not ready for it or even eat your largest meal just before bedtime.

Comments

The DIE-t series - Dr Lulu Hunt Peters (1873–1930), The Calorie Queen

Dr. Lulu Hunt Peters lived in California and became a M.D. in 1909. As a child she apparently suffered problems with her weight, but was told she would outgrow it. As an adult she reached 100kg, and was quoted as saying that she should refund the

"comfortable salary received as superintendent of a hospital, for I know I was only sixty five per cent efficient, for efficiency decreases in direct proportion as excess weight increases."

She wrote her calorie book based upon the calorie as the answer to all our problems, and recommended that,

"hereafter you are going to eat calories of food. Instead of saying one slice of bread, or a piece of pie, you will say 100 calories of bread, 350 calories of pie."

This certainly worked, it's something we've all heard, you may even of uttered the words yourself. Their are masses of people desperate to know how much they consume and all so they can eat less. I'll admit I do count frequently, but I like to do it the opposite way, in order to ensure I get enough each day, thus enabling my body to function optimally. Indeed, while my wife was pregnant with Daisy, we both worked hard to ensure that she received enough energy for the both of them.

Hunt Peters seemed to have a real problem with weight, probably caused by her own issues, stating:

"How anyone can want to be anything but thin is beyond my intelligence… if there is anything comparable to the joy of taking in your clothes I have not experienced it."
Dieting to Peters meant total self control, very much like it does today with the dieters suffering a lifelong attempt to semi-starve in a twisted attempt to stay thin, (yep thin not lean) by avoiding appropriate amounts of energy. To Lulu being overweight was a sign of moral weakness, and she declared: “that for every pang of hunger we feel we can have a double joy” and often fined people who hadn't lost weight. Today its more likely that you'll be rewarded with a sticker or similar when you reach specific starvation goals. Is this behaviour adaption safe? Based on my research, no!

Peter's is largely responsible for our obsession with cutting back on calories, but she is also held accountable for creating feelings of guilt amongst those who simply cannot SURVIVE on meager amounts of food/energy. She encouraged us to feel shame in being overweight, and to be overjoyed when we managed to ignore hunger. And sadly for a lot of people that contact me, they feel that shame and they hold the false belief that feeling hungry is something to be proud of.

Eat up people.

Comments

Alcohol Addiction and Hypoglycemia
11/11/2011

Over the years I've worked with a lot of people with alcohol addiction. The most important one (in my opinion anyway), was myself. I was teetotal from 1976 right through to about 1999, and then I had a few years go awol as the demon drink took over. Then a few years later I became a health freak and stopped instantly once again. Nothing beats Asperger's for an ability to start or stop something, as soon as I became obsessed with health their was no way I'd continue drinking and I swapped it for a wine gum habit instead.

Over the past few years I've begun correlting a great deal of data on temperature and pulse rate (courstesy of Dr. Broda Barnes and "The Great Raymundo", Dr. Ray Peat), what struck me from the data I collected was that the more someone engaged in a ridiculous diet, the more the temperature dropped. The worst case I saw last year was a vegetarian who'd litterally backed herself into a corner and had given herself a full-on eating disorder from worrying so much about "health" foods. She was like a block of ice with a pulse to match anything from the living dead.

Eating such little food caused her pancreas to malfunction because her liver was no longer able to work properly. The systematic flow of glycogen just wasn't available for the pancreas to do its job of producing insulin, alcohol, and thyroxin. Yes that's right folks, as well as producing insulin (the obvious one), and thyroxin (for the thyroid - is it any wonder these dieters hit plateaus), it also manufactures booze!!!

When insulin production is irregular to say the least, we suffer lowered brain function because of oxygen deficiency (ever had a foggy head). As some of you know, this is one of the many things I'm testing you (if your my client) for, glucose spillage into the urine indicates a problem.

If your not getting enough thyroxin production, this coupled with a low sugar levels would lead to an inability to absorb potassium from the food, and weight gain begins to occur.

We know (or I do anyway) that when the alcohol production is increased, temperature is increased and we become warm pretty much all of the time. I had a funny moment earlier this year when one of my favorite clients (**** I'll add his name if he doesn't mind) told me that his his wife had passed comment that he always used to be warm. I'd long suspected that my client was undernourished and I had all the evidence I needed for him to start repairing his liver and pancreas (which he is doing an excellent job of as we speak). Equally when our alcohol level goes down, our heat goes down and people tend to feel cold all of the time. Just by using a few simple tests I can guess what they are feeling like and what organs aren't functioning optimally. Women tend to eat calorie controlled meals more than mean do, and they also seem to suffer with the greater prevalence to cold than men.
So Dr. Watson, I conclude that those who engage in low calorie diets (remember most diets end up as low calorie when people run out of things to eat), tend to suffer from hypoglycemia, and hypoglycemics don’t make enough alcohol, thus they often crave it.

If you’re trying to kick the habit, make sure you get adequate glucose and check your temperature. If you get the metabolism working effectively the urge to drink often disappears and you can return to social drinking for pleasure rather than because you can’t stop yourself.

Don’t let yourself get hungry, if your blood sugars drop you’ll crave alcohol. If you’re making frequent bathroom trips to pee or you’ve noticed a temperature drop (check previous posts for how to record it) get yourself a piece of fruit or some other glucose containing food/drink asap.

For more thorough investigations contact me using the contact page.

For most of human history food was scarce, so the body adapted. The brain oversees everything that goes on both inside our body and externally. To protect us from starvation it goes to great lengths to preserve body fat for survival purposes. Nowadays food is abundant for most of us which is a new problem that some theorize leaves us as a victim of a lack of self-control.

It seems simple though to assume that our brains protective nature gets called into play due to a lack of consistency. Yes we do overeat from time to time, but we also under-eat. As I’ve said time and time again, persistence and consistency is key to weight-loss.
Treat your body right, teach it that food is abundant and you won't have a problem. Switch from under-eating to overeating and your brain will simply telling your brain that it no longer has to survive in very uncertain times.

When it comes to nutrition, quantity is equally important as quality. Just make sure your figures add up!

NY Times Article: Study Shows Why It’s Hard to Keep Weight Off

Study Shows Why It’s Hard to Keep Weight Off

By GINA KOLATA Published: October 26, 2011

For years, studies of obesity have found that soon after fat people lost weight, their metabolism slowed and they experienced hormonal changes that increased their appetites. Scientists hypothesized that these biological changes could explain why most obese dieters quickly gained back much of what they had so painfully lost.

But now a group of Australian researchers have taken those investigations a step further to see if the changes persist over a longer time frame. They recruited healthy people who were either overweight or obese and put them on a highly restricted diet that led them to lose at least 10 percent of their body weight. They then kept them on a diet to maintain that weight loss. A year later, the researchers found that the participants’ metabolism and hormone levels had not returned to the levels before the study started.

The study, being published Thursday in The New England Journal of Medicine, is small and far from perfect, but confirms their convictions about why it is so hard to lose weight and keep it off, say obesity researchers who were not involved the study.

They cautioned that the study had only 50 subjects, and 16 of them quit or did not lose the required 10 percent of body weight. And while the hormones studied have a logical connection with weight gain, the researchers did not show that the hormones were causing the subjects to gain back their weight.

Nonetheless, said Dr. Rudolph Leibel, an obesity researcher at Columbia, while it is no surprise that hormone levels changed shortly after the participants lost weight, “what is impressive is that these changes don’t go away.”

Dr. Stephen Bloom, an obesity researcher at Hammersmith Hospital in London, said the study needed to be repeated under more rigorous conditions, but added, “It is showing something I believe in deeply — it is very hard to lose weight.” And the reason, he said, is that “your hormones work against you.”

In the study, Joseph Proietto and his colleagues at the University of Melbourne recruited people who weighed an average of 209 pounds. At the start of the study, his team measured the participants’ hormone levels and assessed their hunger and appetites after they ate a boiled egg, toast, margarine, orange juice and crackers for breakfast. The dieters then spent 10 weeks on a very low calorie regimen of 500 to 550 calories a day intended to makes them lose 10 percent of their body weight. In fact, their weight loss averaged 14 percent, or 29 pounds. As expected, their hormone levels changed in a way that increased their appetites, and indeed they were hungrier than when they started the study.

They were then given diets intended to maintain their weight loss. A year after the subjects had lost the weight, the researchers repeated their measurements. The subjects were gaining the weight back despite the maintenance diet — on average, gaining back half of what they had lost — and the hormone levels offered a possible explanation.

One hormone, leptin, which tells the brain how much body fat is present, fell by two-thirds immediately after the subjects lost weight. When leptin falls, appetite increases and metabolism slows. A year after the weight loss diet, leptin levels were still one-third lower than they were at the start of the study, and leptin levels increased as subjects regained their weight.

Other hormones that stimulate hunger, in particular ghrelin, whose levels increased, and peptide YY, whose levels decreased, were also changed a year later in a way that made the subjects’ appetites stronger than at the start of the study.

The results show, once again, Dr. Leibel said, that losing weight “is not a neutral event,” and that it is no accident that more than 90 percent of people who lose a lot of weight gain it back. “You are putting your body into a circumstance it will resist,” he said. “You are, in a sense, more metabolically normal when you are at a higher body weight.”

A solution might be to restore hormones to normal levels by giving drugs after dieters lose weight. But it is also possible, said Dr. Jules Hirsch of Rockefeller University, that researchers just do not know enough about obesity to prescribe solutions.

One thing is clear, he said: “A vast effort to persuade the public to change its habits just hasn’t prevented or cured obesity.”

“We need more knowledge,” Dr. Hirsch said. “Condemning the public for their uncontrollable hedonism and the food industry for its inequities just doesn’t seem to be turning the tide.”
Over the course of the next 8 years I've faithfully followed the Metabolic Typing plan, consuming only whole foods and keeping my food intake as simple as possible. Whether this was just psychological conditioning from all the study I had done, or whether it was genuine will never be 100% proven (although it is something I intend to study as part of my MSc hopefully). The Metabolic Typing questionnaire is seemed obvious that I didn't tolerate carbohydrates too well. I became a fast oxidizer, which meant I was hungry. You'd be surprised at how common this misconception is, people really do believe that in order to loose weight you need to feel hungry. I used to skip breakfast and go as long as I could feeling hungry. I honestly believed that in order to loose weight I needed to feel hungry. You'd be surprised at how common this misconception is, people really do believe that in order to be fit and healthy you have to miss out on enjoyment. Did it work? Hell no, it screwed my metabolism up and left me so hungry that I'd binge in the evening. This led to guilt at over eating, for so a period I'd be sick to get rid of it all (purge is another word I frequently hear). Luckily sense kicked in as I didn't want to rot my already poor teeth. During this time I drank quite heavily which I thought was due to depression, when in fact the depression was actually made worse due to starvation (I've written posts on the links between starvation and depression). I also suffered pain in my right shoulder and my right upper trapezius was often tight and tender which is significant in my current research.

As you travel along the path to health their are many junctions at which you can deviate, its my job to ensure you stay on the right track. In fact my first job in many cases is to turn you round and make sure your heading in the right direction. I've consulted with no end of people who have put in genuine effort at eating low calorie, but are sadly going in the wrong direction to have any true effect. Over the years I've been down the many junctions of health, hopefully you can learn from my experiences with them and save yourself the trouble of that extra milage. Trust me when I say that I have far better willpower than you probably do, as such I've tried every diet or plan to the letter, for a substantial enough period of time to be able to categorically know if they work or not.

Skipping meals - BPTT (Before Personal Trainer Training)
I used to skip breakfast and go as long as I could feeling hungry. I honestly believed that in order to loose weight I needed to feel hungry. You'd be surprised at how common this misconception is, people really do believe that in order to be fit and healthy you have to miss out on enjoyment. Did it work? Hell no, it screwed my metabolism up and left me so hungry that I'd binge in the evening. This led to guilt at over eating, for so a period I'd be sick to get rid of it all (purge is another word I frequently hear). Luckily sense kicked in as I didn't want to rot my already poor teeth. During this time I drank quite heavily which I thought was due to depression, when in fact the depression was actually made worse due to starvation (I've written posts on the links between starvation and depression). I also suffered pain in my right shoulder and my right upper trapezius was often tight and tender which is significant in my current research.

Training hard - BPTT
Around the millennium I went exercise crazy, I'd never been in a gym before and I got myself addicted to training everyday. The benefits of my asperger's syndrome are that once I get in a routine I'm happy with it. So I thought nothing of training 4 hours a day, everyday for 395 days. What did I get? I lost 4lbs in the whole time and all I got was the standard "muscle weighs more than fat" from the gym staff. Great quote but fat wobbles so it was clearly fat and not muscle. It was around this time that I first decided to book a personal trainer, who told me that he would "train me harder and longer than ever", and that I would "feel the burn." I had the one session with him but rather unsurprisingly he couldn't work me harder than I was already doing.

Counting Calories - APTT (After Personal Trainer Training)
I learned one thing from my studies, that it was a repetitive nature that mattered in weightloss. Perfect for someone with asperger's syndrome whose never happier than when following a routine. The take home message from my time at Loughborough University was that it wasn't how much you ate, it was that you ate the same all the time. So its possible to loose weight eating 400 calories a day with lighter life, but the main problem comes from the fact that you simply can't keep it up. The more sensible (but frightening) option is to feed yourself the exact number of calories that you need per day based upon weight/height/activity level. I had a great deal of success with this both for myself and for clients. As usual I went to the extreme and set out to prove that I wouldn't get fat eating 6000 calories a day, everyday for a year. The exact opposite happened and I ended up weighing 10 stones. I got sick to death of people telling me I was too skinny and that I needed to eat more. I never really got the look I desired though and frequently suffered the nagging ache in my right shoulder yet again.

Metabolic Typing - PPTTNSWAPS (Post Personal Trainer Training, Now Studying Weston A Price Style)
There is no doubt about it, Price is a legend in the health world. Sadly that doesn't mean he's always right. When I happened upon Metabolic Typing via the Weston A. Price groups it offered an answer to many questions I had regarding nutrition. I was constantly hungry, well you would be with a metabolic rate as high as I had made mine go (6000 cals a day yet I weighed 10 stone). So filling in the Metabolic Typing questionnaire is seemed obvious that I didn't tolerate carbohydrates too well. I became a fast oxidizer, whether this was just psychological conditioning from all the study I had done, or whether it was genuine will never be 100% provable (although it is something I intend to study as part of my MSc hopefully).
carbohydrate intake pretty low. It didn't take me long to stop using the full program (online test with healthexcel) for clients as I found it wasn't really providing any real benefit to them. Considering my previous diet in which I consumed 6000 calories, it was definitely a healthy swap. To get that many calories in I had to consume a hell of a lot of bread so anything was going to be an improvement initially. However it did become limiting in the amounts of calories I could consume as their just wasn't a great deal left that I could eat.

As time went on, like so many diets and programs before it I found that metabolic typing just didn't match up to the promises (don't forget my 100% adherence to it). For the past 3 years I've began to talk clients out of it, and those I have found it useful for have only been for a short period before I moved them onto better methods. For a long time I've wondered about where to go next and what to study. About 6 months ago my wife and I discussed starting a family, and with that came the horror that I couldn't be standing at any children's parties they attended in the future. We also wanted to nourish Jen as well as possible to ensure she had all the energy reserves both her and the baby would need.

It deeply worries me that the state of our food is simply disgusting and that the recommendations for diet and health are based upon profit for business. I had many debates with myself about whether I could really bring a child into a world that eats junk and attempts to vaccinate against diseases that wouldn't be a problem if we really understood health. I started my current study on the basis of needing to find a way to relax my tight grasp on what my child will eat. I was worried that I'd have to stand guard at any children's parties they attended in the future. We also wanted to nourish Jen as well as possible to ensure she had all the energy reserves both her and the baby would need.

Orthorexics tend to dwell on upcoming menus. "Today I will eat steamed broccoli, while tomorrow I will boil Swiss chard. The day after that I think I'll make brown rice with adzuki beans." If you get a thrill of pleasure from contemplating a healthy menu the day after tomorrow, something is wrong with your focus. Orthorexic's tend to be “obsessed” with eating healthy, real, organic grass fed foods, they never or rarely eat out because they know the food won't be good enough. That pretty much does describe me. Does my desire to eat quality foods mean I'm mentally unwell? I've stated before that I don't think theirs anything wrong with selecting mineral dense foods, however we have to consider both the quantity consumed and our ability to digest. Is your diet becoming that restricted that you simply lack enough food to function well? Or if for example your eating only raw foods, can you be sure your able to digest them adequately. Both ways would lead to a lack of available energy.

I naturally wanted to know more so I took the quiz in Dr. Bratman's book;

1) **Do you spend more than 3 hours a day thinking about food? (For four hours give yourself two points.)**

The time measurement includes cooking, shopping, reading about your diet, discussing (or evangelizing) it with friends, and joining Internet chat groups on the subject. Three hours a day is too much time to think about healthy food. Life is meant for love, joy, passion, and accomplishment. Absorption with righteous food seldom produces any of these things.

2) **Do you plan tomorrow’s food today?**

Orthorexics tend to dwell on upcoming menus. “Today I will eat steamed broccoli, while tomorrow I will boil Swiss chard. The day after that I think I’ll make brown rice with adzuki beans.” If you get a thrill of pleasure from contemplating a healthy menu the day after tomorrow, something is wrong with your focus.

3) **Do you care more about the virtue of what you eat than the pleasure you receive from eating it?**

It’s one thing to love to eat, but for an orthrexic it isn’t the food itself; it’s the idea of the food. You can pump yourself up so giddily with pride that you don’t even taste it going down.

4) **Have you found that as the quality of your diet has increased, the quality of your life has correspondingly diminished?**

The problem with orthorexia is that healthy food doesn’t feed your soul. If you spend too much energy on what you put into your mouth, pretty soon the meaning will drain out of the rest of your life.

5) **Do you keep getting stricter with yourself?**

Like other addictions, orthorexia tends to escalate, demanding increasing vigilance as time passes. The diet of yesterday isn’t pure enough for tomorrow. Over time the rules governing healthy eating get more rigid. And if you are an orthrexic, you get a grim pleasure from this.

6) **Do you sacrifice experiences you once enjoyed to eat the food you believe is right?**

Because of it’s confused scale of values, orthorexia leads to a crazy allocation of interest. Have you fallen into this trap? Will you turn down an invitation to eat at a friend’s house because the food there isn’t healthy enough for you? Do you find that obsessive thoughts of healthy food occupy your mind while you watch your child perform in a play at school?

7) **Do you feel an increased sense of self-esteem when you are eating healthy food? Do you look down on others who don’t?**
One of the seductive aspects of orthorexia is that it allows one to feel superior to other people. After all, healthy eating is everywhere extolled. Orthorexia seems to be right up there with good work habits and a clean life. In this, orthorexia has an aspect that can make it harder to shake than other eating disorders: While anorexics and bulimics feel ashamed of their habits, orthorexics strut with pride. “Look at those degenerates,” the mind says of everyone else, “hopelessly addicted to junk.”

Do you feel guilt or self-loathing when you stray from your diet?

If you are an orthorexic, you feel guilt and shame when you eat foods that don’t fit the anointed diet. Your sense of self-esteem is so linked to what you eat that tasting a morsel of forbidden food feels like a sin. The only way to regain self-respect is to recommit yourself to ever stricter eating, to despise yourself when you stray from the path of food righteousness.

There are times in life when it’s worthwhile being ashamed. When I’ve lost my temper at a child, betrayed a secret, insulted a friend behind his back, I’ve committed an actual error worthy of actual guilt. But eating pizza is fairly low on the scale of moral lapses. No one on her deathbed looks back and says, “I’m filled with regret that I ate too much ice cream and not enough kale.”

9) Does your diet socially isolate you?

Once you’ve reached a certain point, the rigidity demanded by orthorexia makes it truly difficult for you to eat anywhere but home. Most restaurants don’t serve the right foods, and even when they do, you won’t trust that it’s been prepared correctly. Even your friends inexplicably fail to cater to your personal preferences.

A common strategy is to bring your own food in separate containers and chew it slowly, looking virtuous and soulful while everyone else gulps down garbage. Or, like a solitary alcoholic, you can decline the invitation and dine in the loneliness and comfort of your own home.

10) When eating the way you are supposed to, do you feel a peaceful sense of total control?

Life is complicated, unpredictable, and often scary. It is not always possible to control your life, but you can control what you eat. A heavy-handed domination over what goes onto your fork or spoon can create the comfortable illusion that your life is no longer in danger of veering from the plan.

Well I answered yes to pretty much all of them, whilst I don’t agree with all the comments it is at least food for thought. :-)

It’s not hard to get yourself in real mess with diets, just check your local bookstore and you’ll see its a hot topic with lots of answers to the same question. While I don’t think eating healthy is a mental disorder (I truly do believe we should try to source the most mineral dense foods that we can) I do think there’s a problem with people being overly consumed by food obsession. I’ve written previously about calorie intake and the damage it does to ones metabolism.

Healthorexia is probably a more appropriate title, as the more obsessed we become with our diets the more it wrecks our health. Worrying about diet without any scientific evidence (a paper questionnaire is not evidence, its just your psychological conditioning mapped out before you), is leading to a lack of energy in our reserves, this in turn leads to the many problems associated with low energy (see the previous post above).

For example, my recent foray into specific testing of various system’s has led me to understand the link between an excess of protein in the body which can’t be metabolised and causes hardening of the connective tissues. Hence my recent tendon issue which has now resolved itself 2 months quicker than expected due to my new improved health. This shows me exactly what I need to do in order to regain my health...no guess work involved. My wife is also amazed by the return of my eyebrows, previously lost to a damaged thyroid due to my life on low carbs.

I’m still obsessed with health (I always will be) I’m just now more sure of what I’m doing rather than having faith in others theories. My child will be free to live a normal life, eating foods that kids eat, but hopefully through my new found evidence of what health actually is, they’ll be able to maintain a healthy happiness relationship with food their whole life.

And what of the right shoulder pain? Well, as one of my first nagging pains its apt that this has the greatest significance in my new direction. I’m not going to explain why or what caused it as its far too complicated and individual. I just want to say that this was my bodies first signal to me that I’d taken a wrong turn. Its taken me a long time to understand the directions but I’m finally on the right path.

If you want me to become your personal sat nav, just get in touch.

Comments

Low Calorie Causes Stupidity

10/9/2011

Found this earlier on a diet and exercise forum and I just had to repost it for you all. Its absolute junk and sums up the attitude of most people when it comes to diet. It was an anonymous post (unsurprisingly) but my suspicions are that its by Mr Weight Watcher or Slim Mingworld, or the devil herself Rosmary Connelly

*Whichever diet program you choose, you just need to remember it's really all a numbers game. That's all it is. The bottom line is this: Most people burn about 2000-2400 calories per day just doing nothing (sitting, breathing, sleeping). If you are active or work out you probably burn closer to 3000 calories per day. Soooooo, if you only eat 1000 calories per day, you have a calorie deficit of about 2000 calories per day which would be about 14000 calories per week. For one pound of weight loss it takes 3500 calories. So 14000 calories divided by 3500 is 4 pounds of weight loss per week. If you work out or get more exercise it would probably be closer
So there you have it, along the lines of advice given out by most nutritionists, this individual is advocating 1000 calories a day, despite admitting a few lines earlier that most people use around 2000-3000 a day depending upon activity levels. While I personally think 2000-3000 is bit low for most, I'm sickened to see that they even go on to further suggest that you could widen the gap between what you need, and what you get by exercising more.

Regular readers will be well aware of how insane this is, however head over to my previous posts about calories to refresh your memory about why cutting the calories frequently isn't the answer.

It is all in the number, sadly just not these numbers.

Comments

Is Fearne Cotton a Feeder?
3/8/2011

1800 calories, 2000 calories, 1600 calories. Their are a lot of figures banded about as "healthy" amounts to survive on in order to loose weight. For most people that I consult with any of those figures would class as a binge day.

It seems that we live in an age of chronic dieting yet its doing nothing for us. Time after time I see people who want to, (or need to for health reasons) lose weight. Frequently they are consuming a 1000 calories or less and have been doing so for a considerable amount of time. Most initially come to me to either be exercised, expecting a boot camp or some sort of encouragement to force them into exercise. I often see people who are labeled "lazy" that are simply too weak, fatigued and malnourished to exercise. My initial comments that they should avoid exercise (why try and build a house without the foundations) are often difficult for people to comprehend. After a lifetime of being told by PT's and class instructors that the only way to stimulate the metabolism is to move, it can seem a little alien to be told to conserve energy and then top up energy reserves (re-generate, re-nourish etc).

One of the best things I ever studied was the effects of starvation on the body. It makes me smile but then I'm a health obsessed aspie that sees patterns a lot.

While working this morning I heard that Greg James from Radio 1 had accused Fearne Cotton of being a feeder. It appears that she bakes cakes to give to others, yet doesn't eat them herself. Its a phenomenon that I've covered in a previous post about low calorie lifestyles.

To sum up my previous post, Ancel Keys, of the University of Minnesota, ran starvation studies to learn how people react to starvation and to assess the best way to recover from it. The subjects were required to walk 22 miles a week. All their food was prepared in a dormitory kitchen, and their average daily calories during the semistarvation period was about 1800 calories a day. They ate approximately 3200 calories daily before the study and were all of normal weight.

The subjects described many symptoms which we attribute to other things:

Lethargy, irritability, anxiety, dizziness, cold intolerance (they requested heavy blankets even in the summer), muscle soreness, hair loss, reduced coordination and edema amongst other symptoms. Their libido disappeared and more importantly they became obsessed with food, many collected cookbooks and recipes and took great pleasure in baking for others. One man collected around 100 cookbooks yet had no previous interest in cooking or baking. Some even became chef's after they left the experiment.I often have clients in fits of rapture when I mention the obsessions with baking for others and they confess to "loving making cakes for others to eat, but they never try them." I've often noticed that Scott Mills laughs at Sara Cox on Radio 1 for her constant food talk on her shows. He even goes as far as using it for comedy features and games on his shows. Fern Cotton and Chris Moyles both discuss food a lot, many wouldn't consider Chris Moyles under nourished but I do. In recent years he's been overtrained by a PT and has begun under eating, the result, he's now a proficient chef and talks about nothing but food. Same goes for Fern, it makes the show twice as interesting to me and my clients who recognize the symptoms of a hungry seed eating DJ.

Does any of this sound familiar?

Food obsession/disorders

- Increased interest and preoccupation with food (talking, preparing, making meals last longer using a variety of methods such as sucking food). This includes baking etc for others and getting enjoyment from seeing others consume food.

- Heightened craving for food. Is it any wonder when we starve ourselves.

Comments
• Became possessive about food.

• Increased gum chewing, smoking, drinking of coffee and tea, and nail biting which also links in well with increased cortisol secretion.

• Purchased useless items and/or hoarded money. Clothes, foods, shoes, handbags, I see it all.

• Some escaped and binged with feelings of guilt (some followed by vomiting).

Radio 1 Greg James Show about Fern the Feeder (only available for a week)

The DIE-t Series, War Time Rationing

22/7/2011

January 1940 saw the UK tighten its belt and enter rationing.

Every week housewives would queue with their ration books at the shops they had registered with, so they could buy an allowances of groceries.

Lord Woolton, a department store boss was brought into government as minister of food, in order to implement the rationing.

During World War I people were very aware that some were doing very well out of the conflict, whilst others struggled (war profiteering is alive and well today). So, during World War II rationing attempted to create a more equal system, although I'm sure those with riches and power didn’t really suffer much hardship.

As you can see many of the foods we restrict nowadays were the foods that we ate more of back in 1945, yet we didn’t have the obesity and disease rates that we currently suffer.

What would surprise most, is that according to the government’s National Food Survey, the amount of calories each person consumes a day has steadily declined since the rationing era. Yet we are constantly bombarded with advice to cut our calories from government policy, the media and naturally those with a vested interest in selling lower calorie lifestyles.

In 1942 we ate 2,269 kcal yet by 2000 the figure had dropped to 1,750 kcal. Yes thats right, we now eat less, yet are fatter and unhealthier than ever. Like I’ve said countless times cutting back on calories is not the way to a healthy existence.

Despite this, Dr David Haslam, chairman of the National Obesity Forum still thinks that overeating after the end of rationing in the 1950s and our current plentiful food supply is responsible for obesity.

"We have a situation where food is available everywhere, open round the clock - cheaper, poor quality, bigger portions - a situation where food is ubiquitous. It is the first time really in history where food is limitless."

Food might be abundant, but I would suggest that it is the cycles of binging followed by guilty dieting, foods that lack nutrition and the ever increasing prominence of polyunsaturated fatty acids in our food that plays a bigger factor in our current obesity crisis.

Haslam states; "We haven’t developed an instinct that tells us when not to eat. Our strongest instincts tell us to eat."

However, he is wrong. We do have this instinct, it’s called Leptin. It just won’t respond if we indulge in a low calorie existence. If we don’t eat enough how can we receive a signal to tell us to stop eating? Sure I hear you muttering about people consuming McDonalds mega meals, but these highly processed foods consisting of soy derivatives, corn syrups, laced with unsaturated oils, along with semi starvation/binge cycles may cause a situation in which the body becomes malnourished. So would it not seem obvious that the body would continue to signal us to eat? You’re starving your body of nutrients.

Should we bring back rationing?
The Calorie was defined in the 1800's as the energy needed to heat 1kg water by exactly 1°C.

In the 1880's, Wilbur Atwater used a 'bomb calorimeter' to calculate the change in heat in a closed container in order to measure the energy contained in different foods. The theory was, if you eat fewer calories than your body burned up, you would lose weight.

This formed the basis of the western world's obsession with cutting calories. We do know that cutting back does cause weight-loss, but that it is unhealthy (see my previous post). The theory does work, but sadly it's not as simple as it sounds. The trouble is, when you cut your calorie below the amount you actually need your metabolism slows down so you burn up less energy. Makes sense doesn't it, you eat less than you need, so your body goes into a conservation or starve mode. Now that specifically isn't a problem, well it isn't if you know what signs of metabolic damage to look out for. If one wants to work on a deficit it makes sense that at first sign of metabolic damage (cold hands and feet, lowered libido, fertility problems, hypoglycaemia, hormonal issues etc) you would cease the diet and repair your metabolism. It isn't the diet that always causes the problem, but the amount of time someone tries to engage in it or the high percentage deficit they attempt. Its the biggest thing I struggle with in my work, it seems so simple yet people really do always fall back into the "must burn more calories and eat less" mantra. The mechanism is there to help us survive starvation so we can't beat the system.

My research shows that 1800 calories is technically semi starvation. Remember this figure and lower is often mentioned as healthy by diet clubs and I frequently consult with people eating far lower. In the year 2000, leaders of rich and poor countries set a target to end extreme poverty worldwide by 2015 by means of eight Millennium Development Goals.

The first goal is: Eradicate extreme poverty and hunger.

The benchmark for hunger is an average intake of 2,100 kilocalories a day which is slightly higher than the recommended allowance for women in the UK. Absolute madness yet they go on to state that, "people who have less than this suffer symptoms of malnutrition, including impaired ability to learn or work, and reduced resistance to disease. So hunger is a cause as well as a consequence of poverty." Even the Scientific Advisory Committee on Nutrition think that our calorie recommendations are low, yet we continue to aim for a low calorie lifestyle.

The DIE-t Series ~ William Banting (1797–1878), The First Low Carb Diet
William Banting was originally an undertaker who retired in 1862, weighing 92kg at just 163cm tall. Given his career it was quiet appropriate that he became involved in diet's. Allegedly he was unable to bend over to tie his own shoes, suffered knee pain and had to tackle stairs backwards. He wore a truss to hold in place an umbilical rupture that he had suffered. Mirroring today's modern efforts in gyms under the guidance of 'personal drainers' Zumba classes and Park Runs, Banting was unsuccessful at losing weight by rowing on the Thames and horseback riding. To this day it baffles me that people still sign up to gyms in the hope that pounding out the miles will beat the bulge.

Banting consulted William Harvey (an ear surgeon) due to deafness, and Harvey diagnosed that Banting's deafness was due to fat deposits in the eustachian tubes. He prescribed a weight-loss diet based upon Dr Claude Bernard's Diabetes diet, which cut out bread, butter, milk, sugar, beer and potatoes.

Harvey believed the diet would reduce corpulence as well diabetes. And to some degree it worked for Banting, who reportedly lost 46lb in under a year and regained the ability to descend stairs normally. He also gave up wearing his truss and his sight and hearing improved. How factual that is we'll never know, what we also won't find out is the long term issues he suffered due to the diet, or how long he maintained his loss for prior to his death in 1878.

Banting was eager to share his success with others, and did so by publishing the short pamphlet, 'A Letter On Corpulence' [1] in 1863. Banting described obesity in much the same way that is viewed socially to this very day.

"Of all the parasites that affect humanity…I do not know of, nor can I imagine, any more distressing than that of obesity."

In the pamphlet he describes the distress he suffered due to the,

"...sneers and taunts that obese people suffer in public spaces."

So it seems that like modern diet's, Banting's was simply attempting to escape the social stigma attached to obesity and conform to social expectations as well as regain his health.

As I've discussed previously that diabetes is more to do with the inhibition of glucose via the randle cycle, due to excess of fats, particularly polyunsaturated fatty acids.

"More important than the physiological vacuity of a simple glycemic measurement was the ideology within which the whole issue developed, namely, the idea that diabetes (conceived as chronic hyperglycemia) is caused by eating too much sugar, i.e., chronic hyperglycemia the illness is caused by the recurrent hyperglycemia of sugar gluttony. The experiments of Bernardo Houssay (1947 Nobel laureate) in the 1940s, in which sugar and coconut oil protected against diabetes, followed by Randle's demonstration of the antagonism between fats and glucose assimilation, and the growing recognition that polyunsaturated fatty acids cause insulin resistance and damage the pancreas, have made it clear that the dietetic obsession with sugar in relation to diabetes has been a dangerous diversion that has retarded the understanding of degenerative metabolic diseases."[2]

Breads, other grain products tend to be more problematic than actual sugars (fruits, simple sugars etc) yet despite this they continue to be promoted over sugars. It is no wonder Banting was successful, (depending on how you measure success) I have seen many people who have had great 'results' initially from cutting out potato, sugar, fruits etc (as I did myself in the paleo years). Only to suffer serious side effects as time passes and health declines. They also tend to realise that the weight loss was water and muscle, and the disastrous effect it has upon thyroid health, blood sugar regulation and immune function, to name but a few, just wasn't worth the quick 'fix' on the scales. We can learn a lot from these early pioneers, and I think Banting is a good example. He was passionate about his belief, wanted to help society and spread the word. Unluckily, he had no background in science so was not to know the damage his work would cause in the future. The money the pamphlet raised was donated to charity, which isn't the case for those that continue to profit of his work.

References;

1. A letter on corpulence
What Would Billy Say?

Whilst I wouldn't prescribed a diet like Harvey or Dr Claude Bernard's Diabetes diet, it would probably be beneficial to limit bread and beer like Banting. And based upon the work of Houssay, Randle, and Peat. it would be wise to limit polyunsaturated fatty acids. I'd suggest his benefits came purely from a lowered calorie intake, and that the maintenance of butter, milk, sugar, and potatoes in the diet would be somewhat protective for the metabolism.

Self Esteem and Weight Management

Weight management is seldom tailored for specific need of individuals and the accompanying health objectives that come with a healthy diet and lifestyle need to be justified. We always hear that eating well can help us live longer and avoid diseased states. Practitioners attempt to work closely with patients to achieve set goals in the faint hope that psychological and physiological health will be improved. Sadly patients are all to often focuses on weight-loss and nothing else. Rather than spouting generic health claims and warnings, I think it's time for us test our clients fully, explain individual health issues and explain that weight management is a byproduct of attaining true health. Throw out the low calorie, low fat, low carb diets that act as quick fixes that fail to live up to the long term needs of an individual. Diets that work initially yet backfire and destroy health and self esteem are of no use to the public. They trick individuals into thinking the diet worked and that they just need to apply themselves more successfully.

Given the right tools and the correct education, individuals who are prepared to get involved for the long haul will find a future that doesn't need long term starvation. When you understand the correct physiology of YOUR body and how to appropriately feed it, you are no longer trapped in a world of restrictions.

Obese yet eating healthier and exercising more than ever.

Todays Sun (yes the one that got hacked today, but I assure you this story is geniune), has a story titled Weight Britain ~ Half are 'fat' but we eat healthy and exercise more too.

Apparently us BRITS have stepped up our fight against the flab, “a new health map of the UK reveals. It shows nearly HALF the population are overweight or obese.”

I'm not quite sure how nearly HALF the population being overweight or obese equated to us being more healthy.

The report states that most families say they eat four healthy meals of meat and veg cooked from scratch each week and that around two-thirds visit the gym at least once every seven days.

Survey ... click to see full results Source: BIOGLAN

47 per cent of us are allegedly overweight yet were eating fewer takeaways and healthier meals.

Yet more evidence that the useless 'health' advice pushed upon the nation is utterly useless. Gym memberships are at an all time high yet we still suffer increasing waistlines. We're (not me though) eating lower calorie and lower fat than at anytime in our history. We obsess over slow releasing complex carbohydrates, ensure we get enough fiber and select cereals that are fortified with vitamins and minerals, yet we still suffer increasing waistlines and disease.

Time for a revolution I think.
I've had the pleasure to work with some professional tennis players over the years, and I also got to see our former UK number one training. Sadly it was as unimpressive as you'd expect. As a sport it's an injury prone game but the diet and training of many leaves a lot to be desired.

It's been suggested that the collapse of Azeranka in the above video is due to copying Novak Djokovic. The world number 1 and Wimbledon champion has hit the headlines recently for going gluten free. This means he's staying away from processed carbohydrates such as pasta and bread.

It's been suggested that Azeranka was also eating low carb (this may also mean lower glycemic carbs which isn't a great idea for anyone, especially an athlete). Azeranka herself attributes it to a concussion she sustained in a training fall. Despite this I thought it's a great time to point out that going gluten free doesn't mean avoiding carbohydrates.

In the world of fitness we're often told the benefits of slow releasing carbohydrates, which to most people means wholegrain. If you're avoiding gluten (and I do recommend it), then wholegrain breads, pastas and the typical foods recommended to weekend warriors and professionals alike are out of the question.

I've blogged in the past about low carb, low calorie, and low GI. It's not big and it's not clever. You can avoid gluten while still eating a great diet with enough energy to power you through your day, no matter what it entails.

Thanks to the Fitness Centre in Derby for the heads-up on the video.

Comments

Low Fat Diet = Danger
11/7/2011

All from Milly & Pip has excelled yet again by bringing this article to my attention. For years I've warned against the dangers of Low Fat Diets. You do need to be careful with the types of fat you consume, making sure to avoid poly unsaturated fats whilst consuming natural fats such as butter, animal fat (from healthy grass fed animals), coconut oil etc. Fat is essential in our diets and the myth that fat makes us fat is sadly perpetuated by dietitians, nutritionists, PT’s and the media. While this article seems good, I have no doubt that it will be followed by a similar article soon warning of the dangers of consuming fats.

There is a link to the actual article at the bottom of the post, and my comments are in red.

MILLIONS of Britons are putting themselves at risk of heart disease and cancer with obsessive diets.

Doctors warned last night that continued calorie counting was a health time-bomb. Click the link to see my previous posts on the dangers of low calorie.

Cutting out nutrient-rich foods in a misguided attempt to lose weight could have "alarming" long-term consequences.

And with an estimated 12million Britons currently on diets it could prove devastating for the nation's health, placing massive burdens on the NHS. It has long been known that an unhealthy diet can lead to a host of deadly conditions such as heart disease, diabetes,
Alzheimer’s and cancer. But a low-fat diet that lacks vital vitamins and minerals can also lead to long-term problems. A report found that many Britons have a dangerous attitude to food, being concerned mainly with cutting their intake of fat and calories rather than thinking about what they need to eat to stay healthy.

We must not forget who it was that originally told us to avoid fat and cut down on our calorie intake.

Experts are now calling on people to “re-learn” what good nutrition tastes like in a bid to stave off health problems for future generations.

These so called experts are basically asking us to forget what they originally taught us.

Dietician Dr Frankie Phillips, said: “It would seem that despite all the recent education campaigns on healthy eating, the reality is our daily diets are still out of balance nutritionally at times, resulting in deficiencies in certain areas for some people.

‘Whether this is because we are obsessed with counting calories, are struggling to afford to eat healthily or lack the time to think about what we are eating, if we continue in this way, it will seriously impact on our health both in the short term and in the future.”

Yes we are a nation obsessed with diets that are out of balance, this is solely because the information used to educate these dietitians such as the food pyramid, low fat, 2000-2500 calories and the glycemic index were severely flawed. They taught us to try diets that avoid common sense, and when they failed (which they did), they looked on baffled, whilst people tried more extreme versions in a desperate attempt to be healthy and loose weight.

The Seven Seas Nutrition Aware report – developed by nutrition experts and the Future Foundation think-tank – reveals that the modern obsession with dieting and weight loss is taking priority over healthy eating.

Nearly four in 10 people do not eat fruit and vegetables every day and only 26 per cent of Britons look for specific nutrients in their food.

More than a fifth of us claim to have started a diet at least once a month in the past year.

Some 23 per cent admit they buy their evening meal based on its low calorie count alone, irrelevant of whether it is nutritionally balanced.

For years these people have been taught that low calories is all that matters, is it any wonder that people are confused? At the other extreme, those who binge on sweets and junk food are also a cause for concern. The survey of 2,000 people found that nearly two-thirds eat sweets and chocolates once a week, with a third admitting they have them at least three or four times a week.

More than half admit they regularly buy foods they know are not good for them, with 38 per cent lured by price offers.

Its a fact that when your semi starving through low calorie, low fats foods your body will crave sugar in an attempt to survive. The more you cut back on essential energy (remember most people recommend that you eat less than you need), the more your body will signal that you need to eat.

Dr Phillips, who contributed to the report, said: “While appropriate calorie and fat consumption is important, too much focus on this could be detrimental to adequate vitamin and mineral intake, which could lead to health issues in the future.”

The recommended daily calorie count is 2,000 for women and 2,500 for men. Yet again ludicrous recommendations, check out my previous post on calories.

Young people are most at risk of poor nutrition, sparking fears for their long-term health. Only a quarter of 16-24 year olds eat fruit or vegetables daily, compared with nearly three-quarters of over-65s.

Nutritionist Emma Derbyshire, of Manchester Metropolitan University who also contributed to the report, said: “It would seem that we are still struggling to grasp the concept of ‘good nutrition’ and the reason why we eat food in the first place. Though it is important to acknowledge calorie intake it must not come at the expense of eating a balanced and varied diet, low in saturated fat but also rich in vitamins, minerals and essential fatty acids.

“Often processed, low-calorie food can contain high levels of sugar and additives and so may not be as healthy as people think. Its good that they seem to be changing their opinions but is it any wonder that as a nation we struggle to adapt to the ever changing message that they put out. Keep it simple, eat what your designed to eat.

Source: Daily Express
I see an increasing amount of type 2 diabetics and I always have done since I first showed in 2003 that I understood how to work with it rather than against it. Frequently they come to me having cut out sugar and following the rather ridiculous diets such as low carb, using sweeteners (my own gran was diabetic and got cancer after being told sweeteners were her saviour), and the notorious glycemic index (GI), which I mentioned previously here. I pick on GI so much because its the one people think is the most trustworthy because its "scientific".

GI is a ranking of foods based on their overall effect on blood glucose levels. Slowly absorbed foods have a low GI rating, whilst foods that are more quickly absorbed will have a higher rating. Its a Daily Express and Daily Mail favorite, how do I know? Well my Mum buys the Express and frequently saves me articles she thinks I'll like, I personally think she brings the ones that will have me banging my head against the wall.

The GI view on diabetes kind of misses the point though, our bodies are a tad more complicated than GI takes into account. We have many hormones to regulate our blood sugar and its important to take that into account. Assuming that your blood sugar is out of balance because you ate some sugar and you aren't producing insulin is a one sided view of it. Most people receive a glucose tolerance test and from this it is deduced that your diabetic.

Insulin is responsible for blood sugar going down and cortisol (yes the very same cortisol I'm always banging on about folks) does the opposite and sends blood sugar up. So the two work as opposites to function exactly as we need them to. Carbohydrates (Glucose in particular), raises insulin and lowers cortisol. Yep thats it folk nasty old sugar has some gooooood effects. Lets clarify that, insulin takes blood sugar down and glucose causes insulin to work. Cortisol raises blood sugar and is lowered by glucose. So how can sugar be the cause of diabetes? An how can low carb, low GI etc be the answer that we need? Clearly diabetes is a bigger story than some would have us believe.

Cortisol has the effect of raising blood sugar levels due to it being one of our stress hormones, and in times of stress we need to mobilize sugar. If glycogen stores are low (such as on a low GI, low carb or just plain low calorie diet) we get that sugar from the breakdown of our own tissue. Remember it could be an emergency response so your body happily sacrifices some tissue to aide survival.

So cortisol and adrenalin (along with a few other things for another post) are the more likely candidates for blood sugar problems. When glycogen stores are depleted, often the end result is catabolism in which tissue protein is broken down to provide amino acids, which in turn provides us with fat and sugar for use as energy. Not our bodies optimal way of sourcing energy, but if we insist on using less carbohydrates or slower releasing sugars then we have to have a mechanism of surviving.

The simple fact is we are designed to function with sugar, its our bodies preferred energy source. Any attempt to slow down sugar absorption is simply attempting to cut corners and not look at the actual problems occurring in individuals diagnosed with "debatable diabetes."

Ray Peat has a fantastic quote in one of his articles, 'The degenerative diseases that are associated with hyperglycemia and commonly called diabetes, are only indirectly related to insulin, and as an approach to understanding or treating diabetes, the “glycemic index” of foods is useless. Physiologically, it has no constructive use, and very little meaning.'

As Peat points out, 'glucagon, cortisol, adrenalin, growth hormone and thyroid tend to increase the blood sugar, but it is common to interpret
hyperglycemia as "diabetes," without measuring any of these factors. People are regularly diagnosed with diabetes and told they aren't producing insulin without their insulin function ever being tested. Maybe you one of them? Time to start asking your diabetic nurse some questions I think.

Avoiding carbohydrates, eating slow releasing carbohydrates or low GI often causes low blood sugar (don't forget low blood sugar is just as bad), which causes the above mentioned release of adrenalin and cortisol to raise blood sugar back up. If the liver has no glycogen left then it becomes cortisol job to break down tissue to produce energy. So, via trying to avoid giving the body what it wants (i.e its proper energy source) adrenaline, and cortisol (plus something else which is for another post) cause insulin resistance.

As Peat points out 'In the 1970s, dietitians began talking about the value of including "complex carbohydrates" in the diet. Many dietitians (all but one of the Registered Dietitians that I knew of) claimed that starches were more slowly absorbed than sugars, and so should be less disruptive to the blood sugar and insulin levels. People were told to eat whole grains and legumes, and to avoid fruit juices'.

It's still going on today, from university courses (remember why I dropped out of an MSc in Dietetics before they even got the chance to brainwash me).

David Jenkins (1981), proved starch to be 'higher glycemic' than sucrose as did Houssay (1947 Nobel laureate). Yet both are largely ignored in favor of pharmaceutical and diet industry profit. The nurses, nutritionists, PT's and doctors you see aren't lying to you. Its just what they've been taught to tell you. At most they're guilty of believing everything they got taught. Its quite similar to the way religious beliefs continue...someone tells you their beliefs and you just follow their word.

I've stated it so many times before so its nice to see someone as academic as Peat agreeing that; 'Eating "complex carbohydrates," rather than sugars, is a reasonable way to promote obesity. Eating starch, by increasing insulin and lowering the blood sugar, stimulates the appetite, causing a person to eat more, so the effect on fat production becomes much larger than when equal amounts of sugar and starch are eaten. The obesity itself then becomes an additional physiological factor; the fat cells create something analogous to an inflammatory state.
There isn't anything wrong with a high carbohydrate diet, and even a high starch diet isn't necessarily incompatible with good health, but when better foods are available they should be used instead of starches. For example, fruits have many advantages over grains, besides the difference between sugar and starch. Bread and pasta consumption are strongly associated with the occurrence of diabetes, fruit consumption has a strong inverse association.

Yet more evidence to avoid grain like the plague. The most interesting facts that Peat point out though are the facts that when the pituitary gland (the master endocrine gland) and the pancreas are removed, that the resulting lack of insulin doesn't cause hyperglycemia. An increase in cortisol helps to maintain normal blood sugar. It appears that when the thymus gland is damaged by stress, cortisol or the dreaded polyunsaturated fatty acids (pufas), the thymus cells have greater sensitivity to cortisol. Sugar on the other hand has the opposite effect and protects the thymus from cortisol. Pufas are rife in society nowadays, from vegetable oils, seed oils, many vegetables, through to the grain recommended on typical GI plan.

Polyunsaturated fatty acids activate stress hormones, and if its used sugar contols the damage. Take a typical so called “healthy” meal, chicken breast cooked wish a little sunflower oil, wholegrain pasta and a plate full of vegetables and you have yourself a mass of pufa with no sugar to counteract the damage. You can swap this meal for any of the typical “healthy” meals I see suggested by many health professionals who've done nothing more complicated than tell what they were taught to tell you.

I'm not suggesting you all go out and start ingesting tate and lyle like its going out of fashion. In the first instance eradicate as much pufa as possible, start with the really bad stuff like vegetable oils, grain oils and cut out as much (if not all) grain from your diet. Then as your ready to progress, start looking through other sources of them.

Equally don't focus your efforts on low GI or low carb. Your cells need the correct energy so don't try and give them sources which release slowly and also increase your susceptibility to insulin resistance.

Understanding that sugar isn't the enemy is a big step for most so don't take any rash steps that your not yet happy with. Begin by looking at if low GI or whatever bizarre diet your on is actually working for you or anyone.

Comments

More Low Calorie Advice
15/6/2011

In my recent post on Concentration Camp Calorie Counting I discussed how

"the prisoners at Auschwitz were getting at most between 1302 and 1744 calories for 24 hours. 1744 calories daily represent a little less than the basic conversion of food into energy of a grown man, or in other words a little less than the amount needed by a man resting in a lying position, covered and motionless. A man who works, nourished in such a way is burning up his own tissues in order to cover the amount of energy expended. This inevitably results in the wasting away of his organism in a manner dangerous to life."
I also discussed earlier today how to get fat while paying your personal trainer which is worth a read if you have been battling to lose weight for many years. I just found a good example of diet advice going wrong on a UK gym's website, in which they sort of don't do too bad a job...but then go on to screw it all up. I won't point out the obvious, if you've read my two previous posts you'll understand.

I inputted my age, height, weight and sex, (I selected the online sex change button a few times to see if it made a difference and ladies it's worth considering a sex change to get a little more ration allowance). I selected an activity of 'lightly active' as I'm kinda injured at the moment, but crutch walking is pretty tough going. It recommended that I consume 2270 kcals a day to remain at my current weight. I personally think this is a bit low, and if you've read my previous posts I'm sure you'll agree.

They state that, "The key to effectively managing your weight is all about balance: calories in versus calories out." which I've discussed in the past to be an absolutely useless statement that is always taken out of context. Let's look at what it means, "managing your weight is all about balance: calories in versus calories out." I completely agree that in order to manage our weight our metabolism need to balance the books and ensure that what goes out, must equal what goes out.

So despite getting that bit pretty spot on they then go on to suggest that, "if you want to lose weight by burning off excess body fat, you should aim to eat 500 fewer calories less than your daily caloric needs". That is a serious deprivation which leads to semi-starvation as discussed in the posts I've mentioned. It also puts me at 1770 kcals a day, which once again isn't far of the Concentration Camps Diets. I've been down as low as 1800 kcals before and the symptoms, (depression, anxiety, skin problems, learning difficulties etc) aren't pleasant. You're right there are millions amongst us, surviving on low calorie diets, and many also surviving on very low calorie diets. However, when you look at the symptoms and the basic physiology of the human body, that is all they are doing...surviving and not living a life.

Comments

Set Point
11/6/2011

Further to the last post about cutting calories and trying to trick our body I thought that the set point deserved a quick mention. We're often told that 3,500 kcals is all it takes to gain one pound of fat. So for an average month consuming just 112 calories (roughly a Cadbury Curly Wurly or a not even two teaspoons of peanut butter) a day would see us gain just a pound of fat per month. That doesn't seem a great deal does it. It seems quite fragile that such a slight alteration in our daily requirements will see our body fat stores soaring.
As mentioned previously we have a system of hormone & brain interactions that work out the stresses we're under and relay the message to the brain. Our set point is calculated based upon the amount of stress we are under, remember stress isn't just having a hard time at work, its being dehydrated, malnourished, over exercising, blah blah blah. Our set point is there to ensure we always have adequate reserves to fall back on to deal with the stresses we're under.

If your set point works well and your leptin is giving the appropriate response (i.e your not in starvation) then when you accidentally eat more than you need, your body will receive a message telling it so, and also burn off the unwanted energy. So, how do you alter this set point? Quite simply you tell it there a no longer any stressors and you always give it the energy it requires to avoid going into starvation. Simple really, but I'm guessing your brain hurts a little so I will cover it in greater detail in another post soon.

**Does cutting your calories down work?**

11/6/2011

"Will You Starve That They Be Better Fed?" was the slogan that biologist Ancel Keys used on a leaflet distributed to objectors of the war in 1944. Keys research intentions were to investigate what it would take to re-feed semi-starved Europeans that were left starved by the hostilities. What he actually gave us was a piece of research that should lead to the collapse of the diet industry. Sadly it goes largely ignored, and to this day people still get conned by the low calorie cult. The volunteers starved on our behalf, yet we continually fail to learn from the hardship theyendured.

For years I've studied metabolism and when I worked at Virgin Active Gym I went against the grain and tried with all my might to educate the members that low calorie was not the answer. People frequently displayed seriously low resting metabolic rates (kcal/kg/24 hrs), showing serious symptoms of dysfunction. From low calorie to low carb, glycemic index and the atkins, and even metabolic typing (which I sadly used during my time with the CHEK institute). No matter what the diet calorie restriction was always a factor, often unintentionally. Even when I took people from these weird and wonderful diets to try and educate them about listening to their hunger, they still continued to restrict. It amazed me quite how indoctrinated the nation is when it comes to energy intake.

At Virgin I took part in my notorious anti-diet diet, consuming 6000 kcals a day to prove that I wouldn't put on weight as long as I maintained consistency. (i.e regular meals at regular times plus regular intake). I also put a client (my boss) on a high calorie (by normal standards) diet and watched as everything I wanted to happen unfolded right before my eyes. I performed many so-called over-feeding experiments on myself to avoid ethical issues and due to wanting to see the results first hand. I ended up seriously "underweight" at around 10 st (I'm now 11 1/2 st). After the year experiment (I always did a year for my experiments), my point was proved and I fully expected clients to listen to reason having watched me go through a year of "over-feeding" by normal standards. Like the 1944 experiment, my hard work went largely unnoticed in a gym obsessed with reducing food consumption and upping energy expenditure to maintain a negative balance. The few clients that understood the logic and trusted me are still lean and healthy to this day.

Thirty six men were selected who were all conscientious objectors to the war. They were intelligent, psychologically stable and physically healthy. Interestingly they were my weight and height (5'10" and 75 kg prior to my own experiments), and for the first three months of the study the men received 3200 kcals a day to standardize their intakes. After this initial period intakes dropped to 1800 kcals per day, a figure not uncommon in many diet and fitness circles. Frequently people consider this amount to be high. Just last week we saw recommendations to cut an calories by 15-20% (no mention was made of the safe starting point, and I have recently also had an email from a woman whose lighterlife "consultant" took her as low 250 kcals a day. So whilst Key's considered this low, most would not dare consume so much, let alone call it a diet.

At the same time they were expected to walk 22 miles each week (they could split this up over days and make use of treadmills or outdoors walking), and also ensure that they expended 3009 kcals, which again isn't something uncommon in todays gym obsessed world, I only have to look out of my window during the day to catch of jogging. Obviously, as you can see from the picture above, they became skeletal from the effect of this 'enforced' lifestyle. You do see some people that have the insane willpower to do this but they are never well, luckily for most of us, we can't get to the extremes that the Minnesota Starvation Experiment (MSE) did. For a start, they were kept under strict lab conditions, yet we are surrounded by an abundance of food, is it any wonder we crack and can't stick to the lifestyle that weightwatchers want us to? Due to the absence of a lab environment diet groups tend to impliment behaviour modifications to attempt to get us to comply and avoid compensatory behaviours.

When being starved they began to see many of the symptoms that are typical today in our energy restricted world. Libedo was at an all time low, which is something Max Kampelman (one of the subjects) reported, 'I can tell you, the sex drive disappeared. There was none.' I've lost count of the time I've heard clients telling me that a partner has no interest in sex, followed by bragging that they finally have them on a low calorie diet. Nobody seems to join up the dots.

So, what can we expect to see from entering periods of low calorie diets such as 1800 kcals and very low calorie diets (VLCD). If we learn from Ancel Keys work in The Biology of Human Starvation, (which if your committed to reading 1385 pages is available in my healthCHEK store, or if you do fancy a look but aren't quite up to 1385 pages then try the PDF file attached at the bottom of this
post) we see a host of problems caused by starvation/being low calorie (yes once again 1800 is low).

Physical changes.
• Decreased heart volume

• Slowed pulse rate (and almost certainly low body temperature and raised cortisol)

• Basal Metabolic Rate (BMR) reduced by 40% over expected norms. Just what you need if you are concerned about weight!!

• Voluntary movements became slower. Your thyroid is regulating (slowing) your energy expenditure.

• Subjects felt and acted older

Personality Changes

• Increase in apathy and depression.

• Sensitivity to noise. The body is overloaded and doesn't have enough energy to cope.

• General feeling of ineffectiveness.

• Loss of ambition and narrowing of interests. We no doubt conserve ourselves for important actions.

• Increased neuroticism and hysteria.

• Almost 20% of the subjects suffered severe “character neuroses” and 2 bordered on both violent and hysteria psychoses. We've all been a little bit hangry at times haven't we?

Food obsession/disorders

• Increased interest and preoccupation with food (talking, preparing, making meals last longer using a variety of methods such as sucking food).

• Heightened craving for food. Is it any wonder when we starve ourselves.

• Became possessive about food.

• Increased gum chewing, smoking, drinking of coffee and tea, and nail biting which also links in well with increased cortisol secretion.

• Purchased useless items and/or hoarded money. Clothes, foods, shoes, handbags, I see it all.

• Some escaped and binged with feelings of guilt (some followed by vomiting)

Social Activities

• Responsiveness, tolerance, happiness, and good humor gradually disappeared, very irritable and with only sarcastic humor remaining, venture on any facebook diet/fasting group for examples.

• Reluctance to participate in group activities. Not wanting to go to work etc and when they do resorting to the above.

• Self-centered and egocentric

• Food central topic of conversation, such as the need to cut back, avoid foods, craving cake or chocolate and discussing it with ones friends.

• Not able to control emotions, tears, tantrums, anger are all hard to control on a LCD.

Take a look at those symptoms, and if you're on, or have been on a LCD, either intentionally or not, tell me you've not suffered from them?
As with many nutrition studies it's the after effects that highlight the damage. After the 6 month period the men were unsatisfied no matter how much they ate. They regained the initial weight plus an extra 40 percent.

The men were split into 4 groups, and each of the groups received a different re-feeding kcal amount, ranging from one group that was unrestricted, to the lowest group at 2200 kcals. It was noted by Keys that to fully rehabilitate the body 4000 kcals daily was necessary, and that it would take this abundance of calories to restore normal function. Even supplementing with vitamins and minerals was of little use with out a great quantity of food.

Effects of Re-feeding the groups
• Still overly concerned with food which was understandable.
• Many became even more irritable, depressed and argumentative.
• Still suffering from a slump in morale and maintained the loss of interest in previous activities
• Thirst increased
• Hunger pains more intense
• Appetites insatiable, even in the highest kcal group
• Continued to eat even when full as the body seems determined to get what it can, while it can (fear)
• Gained fat tissue rapidly (fat returned rather than muscle) as the body wants to protect itself and ensure it has safe reserves.
• Lean tissue recovered more slowly (lack of muscle) as it is more important to store energy first in case you encounter starvation again, which most dieters do when they yo yo on and off diets.

Free access to food group
• Ate an average of 5,212 kcals, a massive amount when compared to the 3200 kcals they consumed prior to starvation.
• Ate nearly continuously, then slept or ate again.
• Slow increase of social behavior at meals
• As time passed they all felt nearly normal with food
• 10 of 14 were beginning to eating normal amounts
• Slowly humour and sociability returned, we have all been grumpy when hungry haven’t we?

Losing weight isn’t about starving yourself thin, and despite what people seem to think, 1800 kcals is semi-starvation. Fat storage is an emergency response by the hormonal systems of the body to protect you from the repeated deprivations and stresses it is exposed to. Wise up and eat some food, even better learn your unique energy needs and eat accordingly.

So, how does the body do this? Leptin is a hormone which is found in our adipose tissue (fat tissue in case you’re wondering) that tells our brain (the hypothalamus to be exact), all about the environment around us and the current condition of our reserves for dealing with the environment. Think about it logically, the body has to have someway of deciding how much energy to expend or it runs the risk of grinding to a halt (death). You may have said it yourself, or you may of heard somebody else claiming to have a ‘naturally’ low resting metabolic rate, so it is not ‘their fault’. It is not physically possible to be at the surrender of an ominous metabolic rate that leaves you overweight no matter what you do. It simply responds to the environment we put it in. Yes we do see babies born overweight, and kids that seemingly have a “genetically” low metabolic rate, but, during the final 3 months of pregnancy
a baby is preparing to support itself and live outside the womb. To do this it needs to learn about its imminent environment. Is it being born into a famine such as Ethiopia, or an abundance of energy.

Take a few minutes to consider the typical western mum's diet. Probably attempting to eat low calorie prior to conception, maybe even during, and often consuming processed foods that are high in vegetable oils. We also see skipped meals, lack of care in maintaining a regular supply of energy to the body despite a growing baby to feed and care for. Is it any wonder kids may be born with an adapted metabolic rate (it is working, you just told it a famine is going on) only to find out that food is in abundance. Some of these kids may find some balance, but others may be committed to the same cycle of endless dieting in an effort to lose weight. All while claiming they can't help having a 'low metabolic rate.'

Back to leptin, when we encounter a famine our body fat stores will more than likely decrease. Leptin steps in and signals to slow down the rate at which we use our energy in order to preserve energy (store body fat at every given opportunity). To do this our body temperature and pulse rate will reduce, our energy levels will drop and we feel begin to feel more tired/fatigued (although stress hormones may negate this aspect initially). It's almost as if the body wishes to hibernate, at the same time we become ravenous and the body will signal to eat anything and everything you can, which we frequently blame on weak willpower.

Interestingly when our fat stores increase, leptin tells us that the famine is over, and that body temperature, pulse rate and energy levels can return towards optimal (i.e we can attempt to expend energy at our optimal rate). Except for most this increase in fat stores means one thing—time to diet.

So does that calorie controlled diet still seem like a good idea? Probably not, but what should you do? Well I don't suggest starting a 6000 cal per day diet.

Firstly, if you intend on doing a refeed, you have to accept fat gain as an almost inevitable part of the deal. You did the damage and the quickest rehabilitation amongst Key's groups was those that ate with no restrictions. Factors to consider are that again this is real life, not lab conditions, you potentially have many diets under your belt, so recovery may take longer than those in the experiment.

A wiser approach would be to assess your current Resting Metabolic Rate and set a plan to gradually raise it over time. Potentially raising your RMR by consuming as little as 200 calories more per day than your actual needs. Not as dramatic a recovery but less risky in terms of psychological welfare for lifelong dieters.

Comments

 Weird Diets ~ Concentration Calories, Masturbation and Kellogg Cornflakes...

1/6/2011

I've always been a tad controversial at the best of times, indeed physiology and health are where my controversial nature strikes with vengeance the most. However, this post isn't meant to offend (although it surely will for some). It is intended to open your eyes and make you question the diet and exercise industry a little before succumbing to the marketing ploys.

"For effective weight loss reduce kcal intake by 15-20%. This will help minimize the drop in metabolism whilst encouraging max fat loss."

Is that really the case? I tested this theory on myself as an n=1 experiment way back in 2002-2003 and then again in 2004-2006. n=1 is a single subject experiment in which the lone participant (me in this case) is the sole unit of observation. The two things ideally needed are:

- Randomisation
- Repeated measures.
The randomisation came from asking my boss at the gym to pull 3 sealed options out of a hat, she had been blinded to the process of sealing the envelopes, and I had been blinded to the actual process of recording my resting metabolic rate (RMR) using an indirect calorimeter;

1. My actual RMR
2. RMR - 500
3. RMR = 500

The repeated measures simply came from repeating each option more than once to try and replicate the result. Despite criticism of n1 studies (such as you need a large group), I still believe to this day we all should to some degree, utilise n1 self experimentation as a strategy for individualising our own healthcare, as opposed to relying upon an authoritarian doctrine that is aimed at the masses. (1)

I always use myself when testing the various theories suggested in mainstream nutrition (I say theories because that is all they are, non are backed up by cold hard science) as I never want inflict the consequences on anyone else.

For a start what does a 15-20% reduction mean? Are we using a formula to work out what the person should be eating? Are we working out a person's actual RMR? Or are we, as is usually the case going for the typical method of using daily recommended allowances? I think these are still currently 2000 for women and 2500 for men, although it is confusing for to know what is current recommendation. Check out this BBC article about how maybe the figures are wrong.

I've been fascinated by metabolism since 2000 and in 2004 I started my "overfeeding" theory diet, (I say overfeeding but the theory was based upon increasing metabolic function, as such it isn't truly overfeeding) to see what effects it had upon my body.

I was exercising (I had spin classes to teach), but my exercise levels stayed roughly the same as I trained the same amount, taught roughly the same amount, and competed as usual. The only differences were my intake of food, my body temperature and my lack of fatigue. My original intention was to prove that the overweight diet guru at our local diet club was misguided. She sold the story that at least a 500 calorie deficit was needed to achieve weight-loss, and that without it nobody would or could lose weight.

So, based upon my previous experience where RMR moved to match the environment (i.e. the metabolism altered to suit both the intake and the frequency of feeding), I worked out various amounts for the daily calorie consumption based upon of my weight and activity levels.

Again it was randomised (although I wasn't blinded per se, I was by the fact that RMR hadn't been measured.

1. 3500 calories
2. 4500 calories
3. 6000 calories

I set upon eating 3500 calories a day, ignoring the advice to drop the figure by 500 kcals. My ideas stemmed from the understanding that the thyroid controlled hormonal status, which in turn dictates the rate at which your metabolism functions. So, it made sense that the thyroid would prefer a stable, reliable amount of energy which would allow it function fully. As long as I maintained consistent eating (I'm good that that), my metabolism rose to match the figure (my boss was measuring this for me) and my fat levels were falling quite dramatically. I repeated the measures twice and the measured RMR always responded and closely matched the consistent intake.

When I finally brought the experiment to conclusion I was eating 6000 kcals a day at 10st. I suspected at the time that I made myself hyper metabolic and that I had made my thyroid hyperactive, in reality I had probably just become inefficient and returned to the metabolism of youth. I struggled to cope without food for longer than an hour, and having the metabolism of a humming bird may seem great, but it is somewhat problematic when you have clients to see.
Being in this position may seem enviable to all those with weight to lose, but at either end of the metabolic spectrum comes health risks. As such, it is ideal to be in balance in the middle, so around 3200-3600 kcal works well for me, giving me a decent amount to eat, with less stress round actually sourcing so much food. To eat so many kcals I required packaged processed foods that made it easier to count up my totals and carry then around.

There's lots of evidence debunking calorie restriction online, my personal favorite is one that Matt Stone from 180 Degree Health pointed me towards XI page 64 onwards Food Rationing of Prisoners In German POW camps. Check it out as it's a scary read. As Matt states;

"Many health authorities actually recommend eating far less than Auschwitz prisoners received. As offended as you might be that I say that, know that it is the truth. We modern, educated humans of the world, in the name of health, are eating concentration camp rations."

If you want to lose your health, follow the Auschwitz diet and exercise more while eating less. Chances are, if you're having PT, training at a gym/crossfit, going running, are a member of a slimming club, doing no carbs before marbs, or any of the other crazy diet and exercise regimes out there, you're probably already on it. It won't kill you as quickly as it did them, mainly due to your PT or diet club leader not having as much control over you as the Third Reich (some PT's I've see have come close though, have you seen biggest loser in which that woman shouts as much as possible to cover up her lack of knowledge).

The report states:

"Whereas according to the standards of the Physiological Committee of the Section of Hygiene of the League of Nations a hardworking man ought to receive in 24 hours about 4,800 calories and an average working man more than 3,600 calories, the prisoners at Auschwitz were getting at most from 1302 up to 1744 calories for 24 hours! 1744 calories daily represent a little less than the basic conversion of food into energy of a grown man, or in other words a little less than the amount needed by a man resting in a lying position, covered and motionless. A man who works, nourished in such a way is burning up his own tissues in order to cover the amount of energy expended. This inevitably results in the wasting away of his organism in a manner dangerous to life. The diet of the prisoners working very hard outside the camp possessed such a calorific value. The prisoners who were working in the camp and whose work was also undoubtedly hard were getting at most 1302 calories for 24 hours, which was much below the amount necessary for the preservation of life when lying in bed. The above given data explains in full why the prisoners of the Auschwitz concentration camp were dying in masses after a short period of time, and only those who had the chance of getting stolen food, or were getting parcels of food from their families at home, could preserve their life. All the other prisoners were doomed to destruction".

What shocks me the most is that the 1744 kcals mentioned in the report is remarkably close to the 1800 kcals suggested for me during a module on nutrition at University. It is also remarkably close to the figures I often hear being suggested for weight-loss amongst diet and exercise groups. Now you get why I kept leaving university, I just can't put up with being taught such stupidity, and then being expected to re-teach it to you lot.
It is no secret I argued a great deal at university, in particular the Sports Science and Dietetics Degrees appalled me (along with Physiotherapy but that's a whole different topic). It wasn't quite a concentration camp, but looking at what they suggested I lived on, it wasn't too disimilar. Maybe they just wanted to weaken me and stop me asking the complicated questions so that I would submit to their authority, rather than disrupting the brainwashing. How we can put someone through 4 years of expensive education at MSc level and let them come out with such a backward view of health is beyond my comprehension.

Other notable diet tweets of late are the fantastically backward one which must of escaped from the 1980's,

"Don't eat carbohydrate after 4pm".

I simply can't contemplate why you can't eat carbohydrate after 4pm, somebody should inform your cells that they can't have hydrates of carbon at that time.

My next favorite tweet is probably the ultimate, and I know it will enrage my friend Ali from Milly & Pip,

"Cereal provided a nutritious low fat meal at anytime of the day".

Their are hundreds of daft diets out there, and like usual it is all down to people just wanting to market their products and convince us that it is essential. It is the nature of consumerism I guess, however it is incredibly sad that we suffer due to our trust or faith. I'm not sure if this tweeter is on the books at Kellogg's, but it is scary that a health professional (I use the term loosely, has been conned by marketing, or maybe they just can't be bothered to think for themselves.

The Kellogg's diet is new in town as far as most are concerned. In recent years we've been told to "eat a bowl for breakfast and a bowl for lunch, for 2 weeks". Kellogg isn't new to the diet world though. John Harvey Kellogg was a well respected man in his day, and very influential on the subject of health (he even got involved in Eugenics but that is a whole post of its own). However, that doesn't mean he knew what he was talking about.

Kellogg had remedies for the sin of masturbation (enjoy that one while you eat your cornflakes), which involved circumcision without anesthetic for boys, and mutilation of the clitoris with carbolic acid for girls (yes all those denouncing other races for such barbaric acts, it happened right here too). You really are wondering what those cornflakes are made of now aren't you? Constipation was the cause of "nymphomania" in women, and lust in men, due to impacted stools stimulating the prostate gland or vagina into sexual excitement.

Mad bad old Kellogg believed a vegetarian diet, made up of bran and paraffin oil with every meal was good for you. This no doubt worked for his goals, as the chronic lack of protein, high fibre, and toxic oil would lead to a decline of libido, impotence, and infertility. This is still seen to this day with many "dieting" individuals that requiring IVF treatment, or they just simply can't get it to rise to the occasion. It is interesting to note that various religions have used vegan diets to ensure low libido for their followers, the
monks and nuns. It isn’t as radical a solution as clitoral mutilation, or un-anesthesised circumcision, but it’s just as effective. Putting Catholic Priests on veggies diets might not be as extreme as Kellogg’s original remedy, but it may just stop the News of the World headlines that shame religion so often.

The paraffin oil was used due to the fiber rich diet causing large stools, and naturally the resultant haemorrhoids, the oil had laxative and lubricant effects. Despite anal leakage (remember I’ve consulted with fire breathers who technically consume paraffin) seemingly being the worst effect, it also has the added effect of ridding the body of vitamins A, D, E and K, causing a variety of problems from infertility and birth defects, to diabetes and cancer.

Kellogg did live till 91, largely due to the fact that he was a hypocrite that didn’t follow his own diets (how often is that the case), but he isn’t responsible for the company we know today. His company was the Sanitas Food Company, named after his Sanitarium in which he attempted to reform people to the ideals set out by the Seventh-Day Adventist Church. Along with his brother Will, they sold their whole gain libido killing cereals to whomever would buy it. Will was the real business brain though, he realised that with sugar added to the recipe this company eventually became the Kellogg’s brand that we know today. The company makes billions per year selling their sugar enhanced products which were far less problematic. John Harvey Kellogg is long gone, but his ludicrous ideas still continue to permeate through society. Next time you’re in the supermarket and worried about your excessive libido, or an uncontrollable urge to masturbate in ASDA, be sure to put some Special K in your trolley.

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