

Does eating ice cream make you fat??? *By Marcia Glaze Wyatt (2008)*

Assessing the Trend:

I seem to be gaining weight. How much, I cannot be sure. And if I am gaining weight, I'm not sure I know why.

Twenty years ago I weighed 110, or so my scale indicated. Of course, that was according to my upstairs scale. The downstairs scale weighed me in at 112, give or take a pound. And of course, that was my weight "sans" clothing, no makeup, dry hair, in the morning, and only on my "good" days.

On some days, despite the above-mentioned precautions, the scales showed I'd gained a little. Oddly, the upstairs scale was kinder than the downstairs one. Where I might have gained a pound on my upstairs scale, I showed a gain of more than a pound on my downstairs scale. I never liked that downstairs scale.

I later carpeted the floor upon which my upstairs scale rested. After that, I weighed 109. Weight loss through carpeting; no diet required!

As the years passed, my husband decided the numbers on the scale were much too small to read, so he decided to buy a new scale. He chose one of those high-tech scales. It measured our weights digitally, and then announced the weight aloud...Lovely.

He put this new scale right next to the old one, the one on the carpet. The new one said (literally) that we had both gained weight. On the old upstairs scale, the one on the carpet, my husband weighed 170. The new scale, also on the carpet next to the old scale, said he now weighed 174. Likewise, my weight had increased by four pounds – from 109 to 113. Had I had my way, I would have returned the scale that day!

I tried to shift my focus from the "correct" weight (whatever that was) to the trend of weight. In order to put all the numbers on even footing in order to assess this trend, I added a pound to the new scale's reading (because of the carpet) and then subtracted four pounds because of the new scale's idiosyncrasy. This allowed us to compare our "new" weights in terms of our old weights, before carpet and before new scale. I'd like to believe that the mathematical excursions required at each weigh-in improved the accuracy of our weight logs. After all, reconstructed weights are all I am left with. No longer do I have the raw data.

My mind wanders. Does this numerical artifice guarantee that the weight we calculated was the correct weight? Or did the new scale give the correct weight? Perchance the old scale (before carpet) was right all along. Or perhaps neither scale was correct. By examining the corrected numbers, it appeared there was a trend, but was there?

To complicate matters further, this new, high-tech scale did not just give a reading that differed from the old scale's, it gave the reading in a new, "improved" format. It measured the weight in increments of a hundredth of a pound. Now, instead of being a mere "scooch" over 110 – a weight I dutifully recorded as "110" – I could not escape the quantification of that "scooch". I was hither forward compelled to record my weight in more precise terms – 110.3 versus 110 (and a scooch), for example. The purchase of that darned new precise, chatty scale has coincided with a jump in my weight.

Changes or non-uniform standards of measuring T:

How, what, when to measure.

Changing location of measuring.

Changing environment of the measuring location.

Changing or improving technology of measuring.

What to do with different results?

Use trends: Must "correct" data to make everything equal.

Introduce technology with Increased precision (not necessarily accuracy) –

More data adjustments. Assumed "right" values guide corrections.

"Blend" trends of past & present.

Prompted by the scale’s revolution in precision, my husband is now urging an equally revolutionary revision in our weighing regimen. He claims that our morning weigh-in is insufficient. He maintains that an average weight – our daily maximum averaged with our daily minimum – would be more telling of our actual poundage. Upon his urging, we began to weigh once at six in the morning and again at nine at night, just before bed. I rebelled against this new approach. Averaging in this nighttime weight presented a new wrinkle: it added pounds to my daily weight. Somehow it “feels” as though nothing has changed; yet the numbers continue upward!!!

We both began to question the wisdom in our revised approach, doubting it was any more revealing of our “true heft” than our old method. After all, sometimes we would sleep late or go to bed late, pushing our weigh-in times later in the day. Did that change what our maximums and minimums for the day would have been? And what about those atypical days when I awakened at eleven at night for a late-night snack – after my “maximum” weigh-in - or on those days when I skipped breakfast, yet had already recorded an ostensible “minimum” weight upon waking? Did weighing before I’d reached my likely maximum or likely minimum of the day change my “average” in a way that reflected reality?

A solution surfaced. A digital scale that technologically locked in our minimum and maximum weights was now on the market. We wore the device throughout the day. It actually was able to record our weight as our weight changed throughout the day. When our bodies reached their minimum daily weights, those weights were ‘captured’ by the device. The same happened when our bodies reached maximum weights for the day. Now our averages were not only more precise, but they were also more accurate. Did it matter that we were assessing a trend using both the new, more precise, more accurate values, and values from the past that were neither as precise nor as accurate? Details...We could always apply our mathematical wizardry to correct. We assume the reconstructions were sound.

Somewhere along the line my husband suggested we make weighing a family affair. From that point on, he and I, along with the kids, weighed daily. We had a family average of weight. I chuckled when he suggested that. I told him it was like taking an average body temperature of everyone at a hospital. I wasn’t sure what information was readily apparent from this new metric, but I figured he knew best. So a family affair our weigh-ins became. Now there was a time when our family weight was considerably lower than it is now. Our kids were small when we began this family tradition; thus our family average was lower. Then they gained weight. This is what growing kids do. It’s natural.

Trends are tricky things to assess. I realize now that there was a problem in our measuring that long went overlooked. Our boys weighed downstairs. Even though they used a digital scale similar to the one used upstairs, there was something about the floor down there that always skewed the reading higher than the reading from a similar scale upstairs. We should have corrected for it, but we didn’t. So our family trend consists of many parts: old weights corrected to the standard of the upstairs digital scale, uncorrected new weights from the upstairs digital scale, and weights from the digital downstairs scale not corrected to the standard of our upstairs scale. Likely there were a few mistakes made in recording, as well. Complicated! Best laid plans...

As our boys grew into their teenage years, I cautioned them that they had to watch their diets. Sedentary habits had supplanted recreation; managing a caloric budget was more of a challenge. Seconds at mealtime were allowed only if the boys were losing weight. On numerous occasions they reported weight loss. Of course, at these times I gave them the promised seconds. I also permitted in-between-meal snacks. Come to think of it, the boys

Daily avg:
AM PM

Compare to
single daily
meas of past

Introduce
max/min
‘lock-in’
technology

Again,
compare.

More data
‘corrections’
– which to
correct? Past
or present?
How does
choice affect
trend?

From
individual
averages to
the “global-
avg surf T”.

What
physical
meaning in a
‘global
average’?
None; just a
statistic.

Statistical
outcome a
function of
selected
data entries.

What
messages
are in a
trend?

T data
Siberia
determined
allocation of
funds & fuel
from
Supreme
Soviet. Cold
T more
funds. Vodka
as currency.
Cold Ts
exaggerated.
(D’Aleo/
Watts & ref
w/n)

never looked particularly thin. We were reporting weights on the honor system. You don't suppose they were skewing the truth a little in order to get extra food???

There came a time when the kids were grown. They moved away. No longer did we have their weights to average into the family weight. Now, instead of averaging over four individual weights, we had only two weights to average. When our kids lived at home, our collective family weight changed little, or if it did, it often trended downward (or at least we thought it did). Now, with only two of us at home, it seems our collective weight is more variable, and typically more variable with an upward trend. Is this currently observed trend a product of more honest reporting, an artifact of fewer individuals to average over, or an accurate reflection of physical changes?

On top of these caveats mentioned above, I am moved to question the meaning behind "family average weight". A weight reflects a mass (pulled on by gravity) that has come into equilibrium with inputs and expenditures to that mass's budget. My personal "mass" reflects my personal equilibrium state. But when I mix it with my husband's and my children's, what does this value mean? Certainly, it is not a reflection of a collective equilibrium. I'm not sure what it is.

This leads me to further question the concept of "family average weight". My family includes more than my husband, children, and me; literally, it should include my aunts, uncles, parents, nieces, nephews, etc. Which "family weight" have I been computing?

How about something more tangible than weight to measure my heft? Perhaps I could look to my clothes to tell me if I was taking up more room than I once did. I sorted through some clothes I had held onto for years. There weren't many clothes I'd saved, but could these minimal traces of past history shed light on a trend?

My current size is a four. Of course, truth be told, that depends upon the designer. In some brands I wear a six; others a two. So clothing size is far from an exact science. Furthermore, I found a pair of pants in the recesses of my closet. They were ones I wore years ago, back when I was a younger, smaller version. I can wear them, although not gracefully; yet the irony here is, they are a size 10! Now, I have pants that I wear today that are made by the same designer. These I can wear gracefully. They are a size four. Did I wear clothes more loosely then? Maybe today's clothes are designed to fit more snugly. I simply cannot recall. And some clothes from my past are actually large on me. What am I to conclude? Can these supposed reflections of past weight really tell me beyond a general idea, fraught with caveats?

I came up with a clever record that charts the historical progress of my weight throughout adulthood. Here is what I did: I found some old clothes that I was wearing when I began keeping a record of my weights. Through trial and error, I figured out a formula that connects my pant size to my weight. Then I took all the old clothes that I had saved, those clothes that pre-dated my weight-record, and applied my new algorithm to them. Voila. I now have a weight record dating back decades. But as you know, using clothes to assess weight can be tricky. And a recent experience proves that true. I applied that algorithm to today's wardrobe and came up with weights that are far lower than what the scale tells me. I suppose I need to stick to my scales, so I will eliminate those mis-matched calculated weights, truncate my "wardrobe record" where the divergence begins, and replace the data with just the scale's data. I'm not so sure I like this end-result; it shows an abrupt weight gain in recent years.

Decrease data points correlates with increased T trend = artifact or "warm bias"

stations global (1970) ~ 15,000; ↓ to 12,000 (1983); ↓ to 4000 (1990) < 4000 (2000). (GCHN data)

Average energy is not average temperature. Avg T = statistic.

Average T calculation function of selected data points.

Use proxy data for T? Proxy data contain more mssgs than just T. Qualitative.

Attempts to quantify proxy data, generate algorithms. Noise and "smearing" of variability modify trend.

Alludes to Mann 'hockey stick' controversy: Spliced together a flawed proxy record spanning 100s of years with instrumental record of 20th century. Plot: Flat T trend until instrument meas, then steep "blade". Hockey stick lying flat; blade shoots skyward. Once embraced; now debunked.

Examining the issue of weight gain:

Okay, so why am I so consumed with this weight stuff???

Well, there was a time I was concerned about getting too skinny. Some cautioned anorexia. Hard to believe! Ah, those were the days. Of course, being skinny had its downside; I was ill more often; my bones ached when I sat; I'm told I was a bit scary to look at...but, hey, I weighed less. Isn't that always good?

Then somewhere along the line my appetite kicked in. Not only did I eat more of the natural stuff – healthy proteins, fruits, vegetables, and grains - I started eating ice cream. No one gave a thought to the weight I might gain eating the natural fare, but I was cautioned strongly, and on more than one occasion, that eating ice cream would make me fat. I started to panic. Am I fat?

Well, I looked to the numbers to tell me, you know, those numbers I talked about in the last section. Before I scrutinized how I got the numbers and what the numbers actually mean and didn't mean, it appeared they were affirming my fear – they, along with those slightly tight size tens (the ones smaller than today's size fours). But now the more I've investigated, the more confused I have become.

How do I reason this out? Before I began this innocent inquiry into understanding my weight, it was simple. Getting fat was bad and eating ice cream made one fat. Now I'm not so sure about anything. I am faced with a complex picture: Am I gaining? How much? Why? And am I sure it's bad?

We've discussed the pitfalls of figuring out if I was gaining weight and how much, now I will consider the rest.

Well, first of all, what is my ideal weight? Was it that skinny weight of 80 pounds? Was it the post-baby weight of 130? Is today's weight the ideal? I'm at a loss to know. All I think I know is that eating ice cream makes you fat.

But I didn't eat ice cream when I was pregnant and my immediate post-baby version certainly weighed more than my pre-baby one. I also didn't eat ice cream when I transitioned from my anorexic 80 pounds to a more "normal" 105 pounds. Now, don't get me wrong. I realize these observations don't mean that ice cream isn't fattening. It is fattening. No question. But it does mean that identifying the culprit of every weight gain is made a bit more complicated. Not everyone gains weight when they eat ice cream and not everyone who gains weight eats ice cream.

Someone I know witnessed how much ice cream I've been purchasing. This person told me that I should have gained more weight if I've been eating it all. They did the calculations. I should have gained several pounds by now. I've only gained a scooch. What could explain that?

This someone accused me of stashing some of my ice cream – putting some of it in the freezer instead of in my mouth. Well, maybe I have been putting some in the freezer. This person fears that it is only a matter of time before I retrieve it from the freezer and ultimately pack it on my hips. This doomsayer tells me that it will catch up with me, that down the road I will wake up several pounds heavier. I will have reached a tipping point where my health will suddenly crash because of my indulgent habits. I can't offer arguments for or against. All I know is that I've been eating ice cream. I know that it's supposed to make me fat, but I've escaped that fate so far.

What is normal? What is good? Or bad?

Cause-effect. What contribution from natural and/or internally driven processes? Does only one add to the 'problem'?

Thinking has made things confusing!

Do I see things because they exist, or because I've become convinced that they exist b/c others keep saying so?

There has to be more to what I'm led to believe.

"Stashing" the ice cream refers to the storage of heat in the oceans. Some 90% of all accumulating heat of industrial era in ocean.

Some argue that the stored heat is "commitment heat", that it will flood back into atmosphere & increase Temps

This someone conceded that eating ice cream, by itself, is not what will make me all that fat; it's the other things that happen when I eat ice cream that will push me over the edge. A pound or less might be what I should expect from eating the extra ice cream (assuming I'm not stashing it in the freezer), but all the trickle-down effects of eating ice-cream will push the scales up another two, maybe five pounds. It's only a matter of time.

A nurse explained it to me. She said that with an increase in body mass, my ability to exercise is compromised. Less exercise burning the calories, more ice cream supplying the calories – a 'no-brainer': the "calorie-in vs. calorie-out" budget is pushed to the right. I will gain weight. She called this a positive-feedback response – a consequent action that magnifies the initial response to a change in that calorie-in vs. calorie-out budget.

Stubborn by nature, I resist this final verdict. Could it be more complicated than this? Could there be other possible outcomes? Let's say I eat more and so I have more energy to exercise, so I burn more calories. I end up burning as many as I ingest. This would diminish the initial positive response to the change in the calorie-in vs. calorie-out budget. Or, let's say that my metabolism responds to the increased number of calories by upping its resting state. With more food consumed, the metabolism increases. After all, when a body goes into starvation mode, the metabolism slows in response – a survival mechanism. Couldn't this reverse response – a negative feedback - be equally valid?

This is not all that complicates what my final weight might be, ice cream or not. There are factors other than calories consumed and calories burned that affect my weight. How do I delicately phrase this? Mother Nature uses hormones to manipulate fat stores into functional roles. Age, stress, and sleep are factors that affect placement and size of these fat reservoirs. For the youth of our species, the calories-in/calories-out budget is further modified by Nature's strategic placement of the fat stores. For those of us beyond youth, the rules have changed. Strategic placement is of no value. Fat is thus stored in the darndest places. Furthermore, the amount of that fat storage bears no semblance to the once well-defined calorie budget. Less food and more exercise is not necessarily a ticket to a svelte figure. Storage is crucial. Regardless of calories in and calories out, the efficiency of storage or efficiency of release of that energy is another variable involved in how much weight I will gain. This pattern visits the aging, the stressed, and the sleep deprived. Isn't it dizzying; at one time weight gain seemed so straight-forward.

And then there is the brain. Apparently, serotonin - a brain chemical - controls what my body does with the calories once they are consumed. Two of us might eat the same and exercise the same and end up with different girth sizes!

Now girth is another issue. After all, isn't that what I'm really concerned about? Isn't my weight just a measure by which I keep tabs on my girth size? This begs the question; what correlation exists between size and weight? For example: Let's say I have toned my body through weightlifting. Now I take up less room than I previously did; yet at the same time, I weigh more than I did when I was slightly larger. This is what muscle does. Volume for volume it's heavier than fat. But the scale tells me I am heavier while my clothes tell me I am not. What does that number on the scale really tell me???

And we all know that after a big meal, a tape measure around the girth is the last thing we want. By that measure, my weight gain is fast and extreme. By morning, though, the girth has partially rebounded, and any extra "stored energy" has been distributed in various parts of my body.

Feedback responses: 'wild card'

Responses to initial consequence of CO₂ forcing. Some amplify initial warming response; some damp it.

Feedback responses very poorly understood. Not easily modeled. Grid-size model-resolution issues.

Must estimate and assume feedback forcing values and package all assumed global responses into one constant, a feedback parameter.

Distribution of heat energy, and impact of distribution on temperature, not uniform.

Distribution of heat is not addition of heat to climate system.

Radiative forcing (like CO₂) adds heat to system.

Both affect global-average T; yet broadcast different messages.

From where does the scary scenario originate? The nurse tells me it's "theory" - that the theory is worked out in models. Here is how the theory goes: One must assume several things. *First*, before increasing our intake of ice cream, one's 'calories-in' exactly equals one's 'calories-out'. In other words, prior to upping one's ice cream portions, one has maintained perfect energy balance. *Second*, when we up this ice-cream intake, we don't do it gradually; we double our intake right away, within an instant! That's for the model design. On top of this, if I was eating hamburgers and French fries before upping my ice-cream intake, I continue to eat hamburgers and French fries; no changes are made to my diet other than eating twice the amount of ice cream. And no changes are made to my activity level. But one thing does change, at least according to this modeled theory; I begin eating not only 2x the amount of ice cream, along with my regular intake of hamburgers and French fries; I also begin eating chocolate fudge sauce and whipped cream on my ice cream and add cookies and nuts to the concoction. In this modeled theory, as the nurse explains it to me, the eating scientists input the information into their computer in terms of '0's and '1's. Then they see what a hypothetical "normal" person would gain. They can't account for every variable, as they not only don't know them all, but of the ones they do know of, adding them into the computer takes a lot of time and money; so they simplify, adding in what they think captures the process most accurately. They first run this computer back in time. This is so they can compare it to the person's weight record. When they match it for the most part, they conclude that they have the dynamics of eating ice cream and weight gain figured out. There was a tiny glitch though, or so the nurse told me. She said they did this "matching" to some family weights and found that the weights diverged from the model, but just for a few years. The weights went down, and down by quite a bit, and yet the intake of ice cream was high. The eating scientists tweaked their model by adding a new variable. They added an increased activity level, but just for this short period where the actual weights were less than the modeled weights. The scientists said this made sense. Then, after a few years, according to the scientists' interpretation, all members of the family, all at once, stopped exercising. Their weights began to increase, right in line with what the models said they would. Then the scientists ran the model forward in time. This is where our understanding of the consequences of eating extra ice cream come from. But time has passed, and a look at the predictions show that my girth should be protruding far more than it is. My weight hasn't skyrocketed as much as they had predicted. Maybe I started exercising again; I hadn't noticed...

So what am I to conclude? I can only speculate. Heaven knows enough have done their fair share of that, ostensibly on behalf of my best interests. So far their track record on predicting my weight gain has not been particularly good. With so many uncertainties, dare I take drastic measures to curtail my ice-cream intake?

To be on the safe side, I could limit my intake of ice cream. I could do it voluntarily. That wouldn't hurt anything. But what if I don't have the will power? Should I ask the government to shut down the companies who make the ice cream? This will surely prevent me from getting fat; won't it? Do I trust that I will not get fat without the ice-cream intake? I could eat low-fat cookies instead. Or is there an unintended consequence? I've heard rumblings about such - that this once-promoted solution is a culprit even more impacting than the ice cream it was to replace.

But then again, it's not just my weight that is of concern, and not just the *family* weight. We can consider the global weight. In that case, I could eat ice cream if someone else didn't. That's the answer, as I really don't want to do without. There are places where there is little ice cream to be eaten. I could pay someone there to not eat ice cream. As they weren't going to eat it anyway, it's a win-win situation.

This spells out how Earth's 'climate sensitivity'(cs) is computed in models. Model "recipe" is 2x instant CO₂...close system...

CS is the change in temperature that is reported.

CS often is represented as the expected T rise. This is really the T rise due to CO₂, not necessarily taking into consideration the entire picture. Things other than what are modeled sneak into the T record. Much of it steepens the trend, not just the CO₂.

Then we get into policy. This refers to the carbon-trading idea.

China took money from European countries with promise to destroy HFCs - strong ghg and O₃ destroyer. This strategy was an 'exchange' so European countries could continue using carbon fuels while not upping the global use.

And then there are those places where no one is interested in *not* eating ice cream. They are intent on eating ice cream, regardless of global weight. No one has told them they must stop. But then again, sometimes money speaks louder than ice cream. I could pay someone in one of those places to not eat ice cream so I could eat it! Do you think that could work - that another person will take my money and go without ice cream? Oh, but what if they trick me. What if they actually take the money, make *extra* ice cream, and then with great fanfare, pretend to destroy that ice cream, all the while eating the ice cream stash that I thought they were destroying, or worse, selling some of it on the black market to places that don't allow it? Everyone's eating ice cream!!! Oh the best of intentions...

Forgetting for a moment a pay-for-abstinence scheme, we accept that people in some other countries will continue eating ice cream, regardless of well-intended trade-off strategies. Do we then simply regulate ice-cream intake in my family or in my hometown? And if we do, then what will happen to all those people working in ice-cream factories in my hometown? Will those factories close here and re-open in places that still allow eating ice cream? What will happen to the global weight? What will happen to our economy at home?

And what if the worst happens? What if, after all this sacrifice on a personal, town, and national level, I continue gaining weight, and my family continues, and the globe continues? What if we learn that ice cream isn't really causing most of the weight gain; as the weight gain continues and abates regardless of regulatory measures. Maybe natural changes in exercise habits, foods available, and hormone levels due to a variety of things, all contribute toward the collective weight. Were my sacrifices enough to justify the effect on the global economy that the ice-cream companies' demise caused???

I'm not averse to eating less and to being deliberate about eating wisely for reasons beyond my weight, but I am left to ponder, has eating ice cream really made me fat?

China cheated.

Instead, China created more HFCs; sold on US black market (Schapiro 2010)

ASK: Do we know that we have a real problem? Do we have the right solution for it if it is a problem? If the problem T increase? If so, are there more economical and effective ways to address T?

Are we ignoring far more threatening problems in our focus on just CO2? Are those problems more immediately and tangible solvable?

If US reduces emissions of CO2 by 40% (more than current goals), and assuming a high-end climate sensitivity, T increase prevented by 2050 will be 0.025°C. 0.056°C by 2100.

If all industrial countries reduced 20%, avert 0.025°C by 2050, and 0.045°C by 2100
<http://magicc.org/>

Economic ramifications.