



Underreporting? Who, me? But I have a slow metabolism.

May 2008

WATCH THE VIDEO!

If this title describes you, all it means is that you *are* getting older. And the only way aging might impact your weight is through episodes of “calorie amnesia”--occasional food/calorie memory lapses--not by slowing your metabolism. Aging can also mean you simply don’t move as much as you did in previous years. Or, even more commonly, maybe the latter led to the former. In other words, the gradual age-related decrease in overall daily movement contributes to your calorie forgetfulness because you did actually eat more in previous years without gaining weight. So now you believe the “little amount” of food you consume sticks to your thighs, and this cascades into “calorie blackouts”. Yes – underreporting calorie intake and the metabolism blame game are strange but common bedfellows. Numerous clinical studies show that the heavier we get, the more we underreport. So think about it: The heavier one gets the *more* calories they burn (meaning their metabolism INCREASES) – yet as they gain weight, they report eating less. Wow – something is terribly wrong!

If you are a sensitive person who has trouble controlling your weight, and you don’t believe you *can* control it, you might want to skip to the end and read only the Summary & Solutions.

The “slow metabolism” or “stage in life” plea

There’s no need to rehash last month’s newsletter regarding how people don’t realize, as life changes, that their daily activities may have decreased to a point where adding exercise isn’t enough to offset their decline in OVERALL calorie burn. I simply want to put a picture to last month’s commentary to reiterate that a calorie out cancels a calorie in anyway you do it, whether you exercise or not. But first the facts.

Metabolic rates among humans do not vary significantly

Clinical studies tell us that metabolic rates among same-weight humans do not differ to any significant level for the vast majority of people. In fact, the greatest reported difference between the fastest and the slowest metabolism found in recent studies was 13%. Remember, that’s the SLOWEST compared to the FASTEST, whereas all other recorded differences were 3% on average. So that kills the slow metabolism excuse--unless you think being able to consume 2000 cal/day instead 2060 qualifies as a slow metabolism (this difference can offset by standing instead of sitting 30 extra minutes daily). Okay, so let’s say you are that one person in the world with the dead slowest metabolism. You could offset it completely by walking an extra 2000 steps a day (1/2 hour at a slow pace) and burn the same number of calories as that guy with the fastest metabolism. Now think what you could do

if you stood rather than sat during regular daily activities. GET UP!!!

Now put a picture to the problem and observe the solution

Figures 1 & 2 display calories burned daily and per minute for two people with equal metabolic rates (resting energy expenditure of 1.4 calories/min) working typical office jobs. [Figure 1](#) shows that subject 1 exercises regularly but sits most of day, burning only 2500 total calories/day and claiming, thus incorrectly, a slow metabolism. [Figure 2](#) shows that subject 2 does not work out but remains in motion much of the day by standing, pacing and fidgeting (even when sitting) and burns 3282 total cal/day, allowing 700 calories more food daily than the exercising subject 1 to maintain weight. Now if subject 1 tries to lose 1LB/week, they would have to consume 2000 cal/day or almost 1300 fewer calories per day than the same-sized non-dieting/exercising subject 2! No wonder subject 1 claims a slow metabolism; they watch their counterpart consume the equivalent of two extra Big Macs with fries daily and not gain weight while they are trying to lose weight and be satisfied on 2000 calories. Figure 2 demonstrates how daily activities result in a dramatic increase in subject 2’s calories burned (thus effortless weight control).

“I swear, that’s all I eat so it’s something else” plea

There are countless studies related to people recording daily calorie/food intake and the results haven’t changed much over the years. The most recent statistics show overweight people underreporting daily food intake by 30-40% while normal weight individuals underreport by 16%. Virtually no one over-reports their food intake.

Although anyone can legitimately *underestimate* the calories in meals/foods, underestimation is only part of the equation that results in *underreporting* total calorie intake. Underestimation is easily remedied by making adjustments based on body weight changes. Reasons anyone may *underestimate* a food or meal’s calorie content (shown below) are the same reasons some non-calorie counting people don’t believe they eat as much as they actually do.

What leads to common underestimation of calories

As you read the following, keep in mind that the average American consumes 5 meals/week from restaurants (as opposed to 3.5 per week in 1981).

- **Larger portion sizes** – the larger the portion the more we eat and the more we underestimate. When a study at University of Arkansas asked people to estimate the calorie content of typical restaurant entrees such as a hamburger & fries, chef salad, fettuccine alfredo, etc., they underestimated by 640 calories or nearly 50% (by the way, if you ate an extra 640 calories from *just 1-*

meal a week, you would gain almost 10LBS in one year, or if you're dieting, keep from losing 10LBS!!)

- o Fact: large meals are underestimated by an average of 40%, restaurant meals by 50% and small healthy meals by 5%.
- **Portion distortion** – 50% of food dollars are spent in restaurants. Portion sizes continue to get larger and we don't realize what we actually consume. From a survey of 300 chefs:
 - o 50% demonstrated their typical serving size of pasta was 6-8 times greater than the standard serving recommendation from the USDA food pyramid.
 - o Half reported serving 12 oz steaks--more than double the recommendation for an entire day.
 - o Serving plates are now 11-13 inches as compared to 7 inches in 1960.
- **Forgotten/ignored items** – a bite here, a handful there, sauces, dressings, beverages, even creamer in coffee and sugarless gum (5-8 cal/stick) all count toward calories consumed.
- **Social occasions** – the greater number of people and the more food without nutrition facts posted, the more you will consume and thus report inaccurately.
- **Restaurant meals** – you will never “guesstimate” correctly based on portions and hidden calories (you did not prepare and weigh the food).
 - o 1997 study by NYU showed that well-trained nutrition professionals could not accurately estimate the calorie content of restaurant meals; they were off anywhere from 200-600 calories per meal!!
- **Inaccurate food labels or information** -- many labels are fairly accurate, but some have been shown to be up to 300% off.
 - o Popular restaurants have been shown to be off their posted calorie counts anywhere from 2% to 50%!!

Calorie cluelessness

To be fair, there are overweight people who admit that eating too much is the cause of their weight problems, even if they haven't completely grasped the facts of calorie balance, so this newsletter is not addressing that group – at least for now. Let's get to our target audience.

When only one-third of the population correctly understands that only calories--any kind of calories and nothing else--are responsible for weight gain, it's no wonder the other two-thirds of the world has come up with a million and one excuses for their weight issues. And trust me, it's not a total coincidence that only one-third of the population is lean. Therefore, since so many people *don't* understand that it *is* calories in versus calories out, in order to begin the lifelong search for weight loss magic, the first thing two-thirds of the population must tell themselves (and everyone else) is that they eat well and relatively little. Ah . . . now we've come to underestimating, which spirals into the “U” word – UNDERREPORTING.

Beyond the numbers: how increases in weight can lead to or exacerbate underreporting

Psychosocial predictors of underreporting calorie intake -

The fact that studies have demonstrated that virtually no one over-reports calories shows us that the problem is driven as much by human emotions as it might be from accidental inaccuracies in accounting. Otherwise, why wouldn't a significant percentage of our reports be over-estimations? And why is it that the more overweight we are, the more we underreport?

[Figure 3](#) clearly demonstrates the severity of underreporting in overweight/obese subjects (ALL study participants grossly underreported calorie intake). This was determined by using the scientific gold standard methods of measuring calories burned and body composition changes. Look closely at Subject 7 in Figure 3. Imagine claiming to consume 600 calories/day and actually consuming over 3000!! Now imagine really believing that's all you eat. No wonder so many people think there's something other than excessive calorie consumption causing their weight issues (such as a well-intended professional saying they don't eat enough).

Chronic dieters who underreport often fit a profile of people I have to come to classify as living in a state of conscious or subconscious denial. In other words, this group of generally overweight individuals, though having been informed, does not openly admit or believe that weight gain is solely a result of a person, on average, consuming more calories than they burn; or they've convinced themselves their body just doesn't burn calories like leaner humans.

Numerous studies have clearly demonstrated the characteristics of people who continually underreport beyond the explainable “mathematical errors”.

Underreporting “problems” are more common in:

- Overweight, obese persons, older adults and women
- People with physical activity below the average (less overall daily activity)
- People who desire greater social acceptance & are dissatisfied with body size
- Regular dieters & those who continually make a conscious effort to restrain calories
- Persons with occasional or frequent episodes of total loss of self-control in eating behavior which leads to an “eating frenzy”. This is in response to uncontrollable emotions or the body's drive to counter dieting (a single episode can cancel an entire week or more of successful dieting)
- People who report eating on fewer occasions (e.g. claim 1 or 2 meals daily)

In the end, the challenge of estimating calorie counts combined with adult weight gain (often caused by “calorie amnesia”) is nothing more than an interesting story. Ultimately, one doesn't need to fix all of the above in order to successfully manage weight. One only needs to be logical in next steps. Logical in terms of understanding that numbers are only numbers, and one just needs to be directionally correct in decreasing or increasing the number of calories required to keep weight moving in the desired direction, whatever that number may be.

Example: let's say you are an overweight, basically inactive 160LB person attempting weight loss, but you're no longer losing and swear to me, as your trainer, that you only consume 600 calories per day. My response will be,

“Okay, if moving more is not an option, eat less than whatever you are currently eating” (which is keeping your weight stable). So you see, the number 600 means nothing to me because although I know it’s incorrect (NO 160 LB. human can maintain weight on 600 calories), the solution that will allow you to continue weight loss is the same, whether you *told me* you consumed 5,000, 600 or 3 calories – you must eat less if you can’t move more.

Summary & Solution

You notice there’s no way out - both the pleas below are solved regardless of your sources of information or whether you believe everything in this newsletter. The solutions are bullet proof, no matter what doctrine you subscribe to.

Slow metabolism: If you believe you possess a slow metabolism (this includes thyroid, stage of life and other claims), simply stand up and double your metabolic rate. Instantly your metabolism, no matter who you are, is far faster than any seated human. So never sit to perform an activity, including talking, if it can be done upright.

I really don’t eat much: If you are overweight and not losing weight, you obviously eat more than enough, regardless of how many calories *you think* you consume. Therefore, to make progress simply eat less, move more without increasing your food intake, or use a combination of the two and continue this process until you are consistently approaching your desired weight.

You can run but you can’t hide from the bodybugg® armband

Now you know why we put the “truth-tool” in bodybugg®. Whether you log food accurately or at all, as long as you update your measurements we can tell you how many calories you actually consume because we know how many calories you burn (see caption in Figure 3 for actual example), and we tell you how to properly adjust to stay on goal. There’s no room for error – just actionable facts. If this month’s newsletter was an eye-opener (or “ruffled your feathers”), wait till you see next month’s on how fit people burn fewer calories than unfit people. Until next time -- NEAL

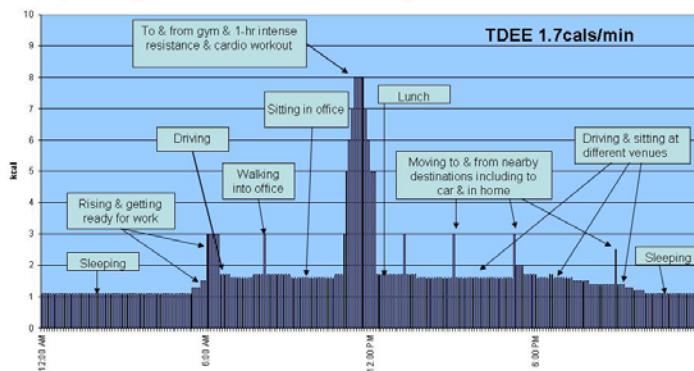
From Figures 1 & 2: The Hidden Truth of Our Lives Exposed by the bodybugg®

- Two people have the same metabolic rate & basic lifestyle, but subject one (S1) sits at all opportunities while subject two (S2) stands/paces whenever possible
- To lose weight (1LB/week), S1 needs to consume 2000 calories per day.
- To maintain weight, S2 should consume 3300 calories per day; 1300 calories more per day than S1 (equivalent to two Big Macs w/fries).
- In order for S2 to lose weight at the same rate as S1, S2 only needs to cut out one of the extra Big Macs, and S2 would still be consuming over 200 calories more than S1’s maintenance calories!
- As S2 ages, or as their lifestyle changes (i.e. can’t or won’t move as much), S2 could slowly turn into S1 and then claim a slowing metabolism.
- **Morale of the story:** Never sit when you can perform the same activity standing or pacing, and when you can’t move as much, simply eat less.

Fig 1: Total Daily Energy Expenditure (TDEE): 2500

Resting metabolic rate: 1.4 cal/min; Sleeping metabolic rate: 1.1 cal/min; TDEE: 1.7 cal/min

Subject 1: 180 lbs., exercises, struggles to control weight, believes s/he has a slow metabolism. Subject 1 (S1) moves only when necessary most awake hours while performing office work & other common daily activities.

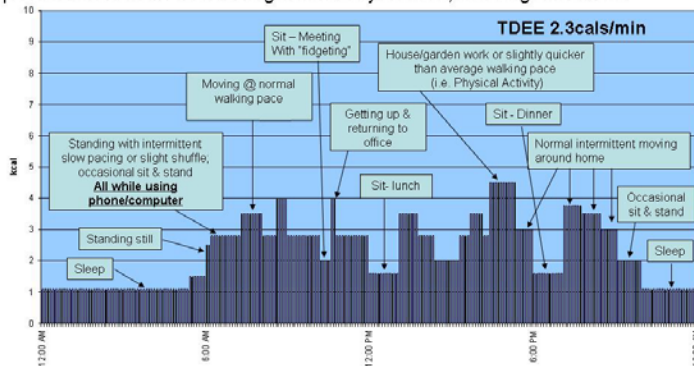


[Click here](#) to view a larger image of Fig. 1.

Fig 2: Total Daily Energy Expenditure (TDEE): 3282

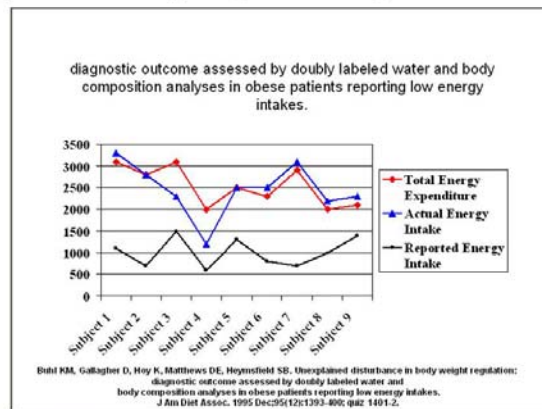
Resting metabolic rate: 1.4 cal/min; sleeping metabolic rate: 1.1 cal/min; TDEE: 2.3 cal/min

Subject 2: 180 lbs., “NON-exercising” lean person, never has weight problems and believes they have a fast metabolism. Subject 2 (S2) moves/stands whenever possible most awake hours during normal daily activities, including office work.



[Click here](#) to view a larger image of Fig. 2.

Figure 3: Underreporting in Overweight & Obese Subjects



Actual energy intake is based on body mass changes mapped to **actual energy expenditure**. All subjects dramatically underreported! Highlighting Subjects 2 & 7: they burned an average of 3000 calories per day but had no change in body mass/weight. Therefore they must have consumed 3000 calories per day, while claiming to only have consumed 600 per day.

[Click here](#) to view a larger image of Fig. 3.