

How to lose weight without eating less

By Reagan D. Brown, PhD and Thomas E. Mueller, MD

(Authors' note: This summary is intended for the technically inclined layperson. Physicians and scientists who want a deeper look into the science behind OneNumber™ are referred to "A Statistical Analysis of the OneNumber Food Rating System" at OneNumberHealth.com > The Science > For Professionals.

Is it possible to lose weight without eating less than you normally do? Yes. Your weight depends as much or more on what you eat than it does on how much. The American Heart Association says that to manage weight and nutrition, one should:

"Make smart choices and manage portion sizes."

OneNumber empowers you to make those smart choices by rating each food you enter on a 0-to-20 scale for its nutrient and Calorie content, then modifying that rating by the specifics you've listed in your profile. For example, if you selected "Lose weight" as your objective, OneNumber will help you achieve that just by directing you to foods that better suit your needs.

Here's how OneNumber™ works for weight loss

Your weight loss or gain is determined by the total Calories you eat minus the total Calories you burn. We know that we can reduce our Calorie intake by eating less. But by eating better, we can cut our Calorie intake without changing the amount we eat. In fact, if we choose wisely, we can eat more and still lose weight. That's by lowering the energy density of our food choices.

What is energy density?

Energy density is the number of Calories in a given volume or weight of food. Many studies have shown that people who are placed on a low-energy-density diet lose weight because it takes fewer Calories to make them feel full. To illustrate, a cup of whole milk has 149 Calories. The same cup of skim (non-fat) milk has only 83 Calories. The same cup of shredded romaine lettuce has 8 Calories. It would take nineteen cups of shredded romaine to equal the 149 Calories in a single cup of whole milk. Hardly any one could or would eat nineteen cups of shredded romaine at one sitting.

How do I minimize energy density?

By lowering your consumption of sugar and fat — especially fat, which contains a lot of Calories in a small amount of food. We saw above that the fat in a cup of whole milk adds 66 Calories. We need some fat in our diets and almost every food, even fruits and vegetables, contains it. Consuming too little would be unlikely, especially if you're a meat eater, and even if you trim all the accessible fat. Table 1 shows one way we can minimize energy density and fat; simply by choosing a leaner ground beef mix from the selections we find in most supermarkets.

Table 1. Fat, Calories, protein and OneNumber™ (1#) ratings for ground beef
(One 4-ounce patty*)

MIX (lean/fat)	FAT (g)	ENERGY (Cal)	PROTEIN (g)	1# RATING
70/30	33	375	16.22	1.0
85/15	17	243	21.01	5.8
90/10	11	199	22.60	8.7
97/03	4	137	24.84	16.0

*Source – USDA National Foods Database

Less fat means fewer Calories

You see in Table 1 how dramatically reducing the amount of fat in the same amount of food reduces Calorie load. If we select a 97/03 ground beef mix over a 70/30 mix, we will save 238 Calories while eating the same hamburger. Now, notice how the OneNumber rating goes up as the percentage of fat goes down. This means that to consume fewer Calories, all we need to do is choose foods with a higher OneNumber rating. This inverse relationship extends to almost every food: fish, poultry, dairy, fruits, vegetables and more. As the OneNumber rating goes up, the Calories go down.

A graphic picture

Looking at Table 1 as a graph illustrates how higher OneNumber ratings lower your Calorie intake. In Figure 1, we placed a dot for the 70/30 mix on the spot where OneNumber rating is about 1.0 and Calories equal about 375. We placed another three dots for the other mixes. Notice that the four dots approximate a straight line sloping downward as we move to higher OneNumber ratings. This downward slope demonstrates the inverse relationship between the OneNumber rating and Calorie content.

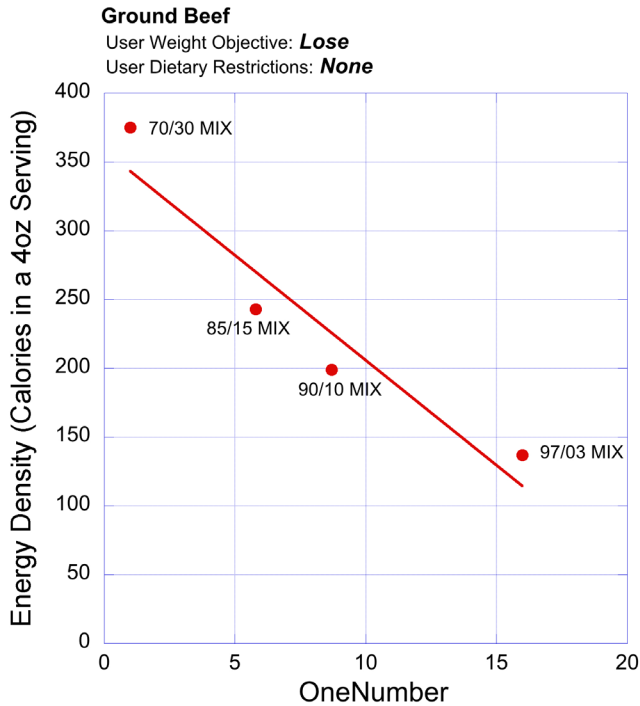


Figure 1. As *OneNumber* rating for ground beef increases, the Calorie load of the same amount of ground beef decreases.

On a grander scale, Figure 2 is similar to Figure 1, but we have placed another 889 dots to show beef cuts and mixes listed in the USDA National Foods Database.

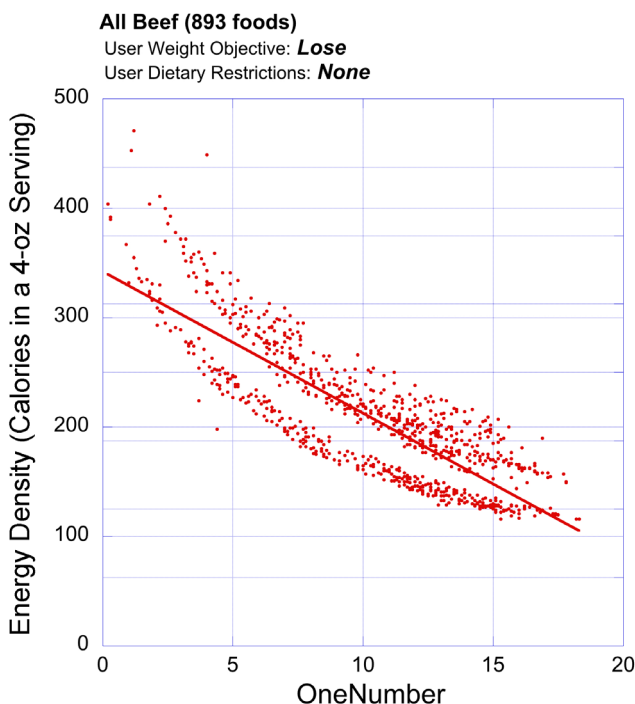


Figure 2. The same inverse relationship between *OneNumber* rating and Calorie density applies to all beef products.

The additional dots moved the line a bit, but you see the same pattern. Now we can estimate what happens to Calories when we change *OneNumber* ratings for all the beef products we eat. For a real life example, look at Figure 3. Here, we changed from our usual 12-ounce rib-eye steak (*OneNumber* = 7.8) to a 12-ounce filet mignon (*OneNumber* = 13.0). In doing so, we cut the energy load of our steak by over 200 Calories. We will still enjoy a 12-ounce steak, but with less fat and more meat. And it's the fat that carries most of the Calories — about six times more than the same weight of lean meat.

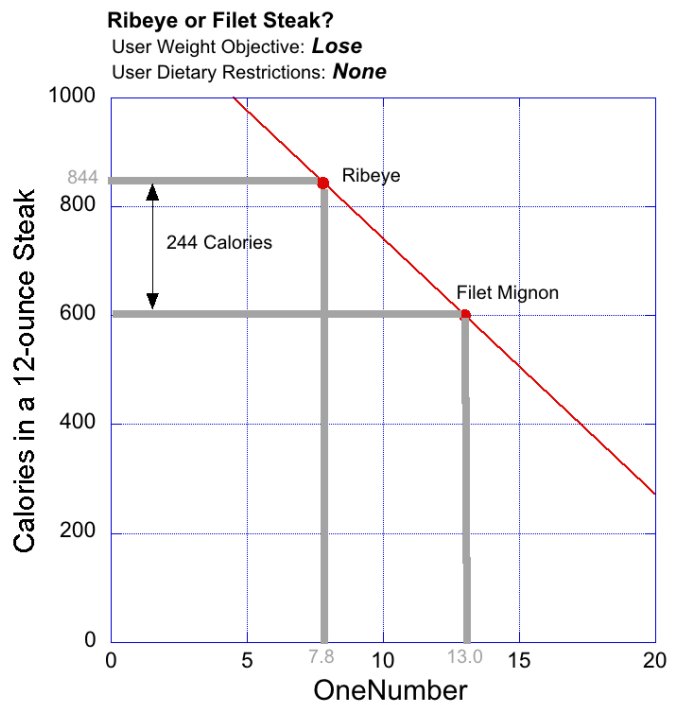


Figure 3. By raising the *OneNumber* rating from 7.8 (rib eye) to 13.0 (filet) we cut the energy content of our steak by over 200 Calories.

With that momentum going, substitute steamed asparagus (*OneNumber* = 20.0) for the loaded bake potato (*OneNumber* = 1.6) and save another 300 or so Calories. Fresh strawberries (*OneNumber* = 10.0) instead of cheesecake (*OneNumber* = 0) and you've had a delicious, filling meal and shaved 500-1000 Calories from what you'd normally eat. Do that twice a week and, in a year, you'll have lost 15-to-30 pounds without visiting the gym or counting a single Calorie. Of course, you need to be more active too, so go to the gym anyway.

No "good" fats

We often hear that plant fats are "good." Yes, they are better than animal fats, which are often saturated while most

plant fats are not. Yes they are devoid of cholesterol. But they still contain loads of Calories that keep us from losing weight. Yes, nontropical plant fats like olive oil contain healthy mono- and polyunsaturated fatty acids, but at a whopping 120 Calories per tablespoon so we must be stingy with them if we need to lose weight. *OneNumber* ratings will direct us toward plant-sourced foods, but toward those with less fat. Because the bottom line is that, if you are overweight, there are no “good” fats.

Here’s another important takeaway from Table 1. As the *OneNumber* rating increases, so does the protein content of the ground beef. That’s because we’re replacing the fat in the mix with lean meat. So not only did the shopper in Table 1 dramatically lower the Calories in his ground beef recipes by changing from a 70/30 mix to a 97/03 mix, he increased their protein content by about 50%. This direct relationship between *OneNumber* ratings and nutrient content, demonstrated in Figure 4, extends across almost all foods.

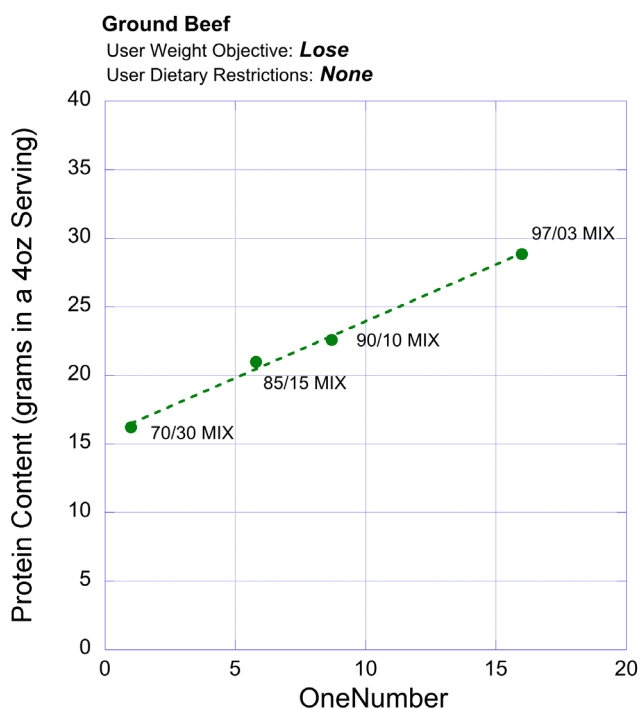


Figure 4. Selecting the highest *OneNumber* rating on ground beef has the additional benefit of increasing protein content.

We see the net result when we combine the two lines on Figure 5. A higher *OneNumber* rating means fewer Calories and more nutrition. We’re eating the same amount while becoming thinner and better nourished.

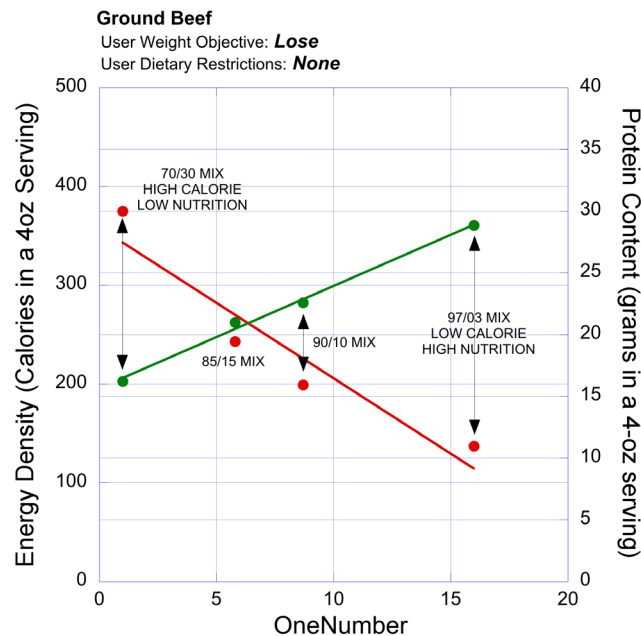


Figure 5. The combined effect of choosing foods with higher *OneNumber* ratings: fewer Calories and more nutrition.

Less sugar too

We are often told to eat fruit every day for our health and weight management. But all fruits are not the same. Some are better than others for our health and weight control. The Calories in fruit come mainly from sugar but the *OneNumber* principle is the same: to lose weight healthily, one needs less energy density combined with better nutrient content. That means eating fruit with higher *OneNumber*-ratings.

Sugar aside, the macronutrients we do need from fruit are protein and fiber, especially fiber. Of the two, fiber is far more important because it’s so hard to get. Protein is readily available from animal sources — meat, poultry, fish and dairy products — but none of these has fiber. So we must get our fiber from plant sources, yet many have very low fiber density. For example, an adult male needs 38 grams of fiber daily, but to get that he would need to eat seven pounds of lettuce. Only a few foods are good fiber sources. One is blackberries.

Table 2. OneNumber (1#) ratings, Calories and nutrients for fruit
(100 gram serving*)

FRUIT	SUGAR (g)	ENERGY (Cal)	FIBER (g)	FIBER + PROTEIN (g)	1# RATING
Grapes	15.5	69	0.90	1.63	1.4
Apple**	10.0	57	2.40	2.68	5.3
Orange	9.4	47	2.39	3.36	8.2
Blackberries	4.9	43	5.30	6.73	20.0

*Source – USDA National Foods Database

**Golden delicious, with skin

Table 2 shows the same reverse correlation between *OneNumber* ratings and Calories in fruit as we saw in beef: the higher the rating the lower the Calories. The direct correlation with beneficial macronutrients is also plain: higher *OneNumber* ratings equate to more good nutrients. This is exhibited again in Figure 6. In summary, you don't need to eat less to lower your Calorie intake. You'll achieve that and better nutrition when you consume foods with higher *OneNumber* ratings.

so don't be surprised if your spouse, child, or neighbor is given a different *OneNumber* rating for the same food.

Reagan D. Brown, PhD, is a tenured professor at Western Kentucky University who specializes in statistics, measurement theory and personnel psychology. He has authored ten peer-reviewed papers and three books on these topics. In 2017 he received WKU's Ogden College of Science and Engineering Award for Teaching.

Thomas E. Mueller, MD, is a practicing physician in Columbus, Texas. He is a fellow of the American Academy of Family Physicians and received the Texas Academy of Family Physicians Presidential Award of Merit for 2019. Dr. Mueller was also named the University of Texas Medical School (Houston) Outstanding Alumnus (1997) and the Texas Family Physician of the Year for the year 2011.

Disclosure: The authors are codevelopers of the OneNumber™ Health System and have financial interests in it.

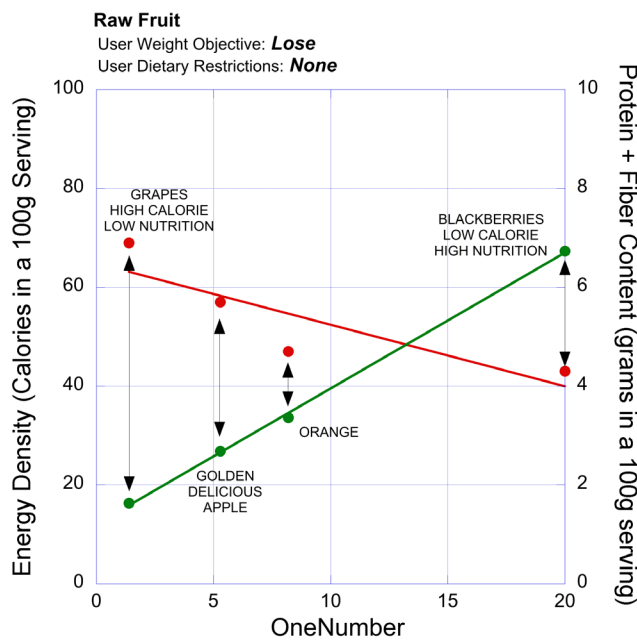


Figure 6. The healthiness of fruits varies widely. Always choose fruits with higher *OneNumber* ratings

So, to eat better and lose weight, you only need to log into the *OneNumber* app, select “Lose weight” as your goal, then choose the highest-rated *OneNumber* options for whatever foods you are considering. Avoid low-rated foods; they're usually loaded with Calories and little else. Finally, remember that every *OneNumber* rating is personalized to you