

Energy Balance

Calories count. But who wants to count them? Go to the health and diet section of any bookstore and you'll see rows and rows of books claiming to have the real "formula" for weight loss. In truth, a more accurate word would be "strategy," because there is only one real formula for weight loss – consuming fewer calories than we use. And regardless of how unique each diet plan claims to be, their results are ultimately based upon that formula. For all they promise, these fad-diet strategies, while accurate in theory, usually fail in the long run. Once the novelty wears off, they simply cannot be maintained.

But why, if the calorie formula is so simple, do diets fail? Well, let's begin to answer that by getting a better understanding of what calories are and how they work.

Foods and beverages provide our bodies with energy. Our bodies use this energy for each and every function: the beating of our hearts, digesting our food, going for a walk, everything. And, if at the end of the day we have consumed more energy than these body functions required, the unused energy is stored as fat tissue. And the reverse is true as well. If energy output is greater than energy intake, energy from fat tissue is released and weight loss occurs. So, in order to establish a means of controlling our energy intake, we have to be able to measure it. And that's where the calorie comes into play. A calorie is a measurement that defines a unit of energy. Pretty much all food portions can be accurately assigned a calorie number, allowing us to count as we eat.

For instance, to lose a pound of fat, you must consume approximately 3500 fewer calories than your body needs.

But really, we weren't designed to spend our days counting calories, were we? No wonder so many fad diets fizzle out. Their whole focus is on charts, scales, and calculators, documenting a calorie value for every morsel we choose to take in. We don't want to commit to that for life, do we? There must be a better way.

And there is. The Barix Nutrition Program is a tool that consistently delivers long-term results in lowering energy intake without focusing on the counting of every calorie. Instead, it offers a more sensible approach to maintaining weight loss. It educates us so we understand how the various food groups contribute to our healthy weight-loss goals.

We learn that the main categories of nutrients that supply calories are protein, carbohydrates, and fat. Alcohol also supplies calories. And the all-important

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vitamins and minerals that our bodies cannot function without come free of calories. This knowledge helps us understand why diets that eliminate entire food groups or specific nutrients have not proven to be effective in healthy long-term weight loss.

The Barix program also stresses important behaviors in making good food choices that will allow the body to have a healthful weight loss. These behaviors include the following:

- Six small high-protein meals/snacks;
- Small portion sizes of $\frac{3}{4}$ - 1 cup of food at each meal;
- Fluids consumed at least 5 minutes before and 30 minutes after meals to prevent “flushing” foods out of the pouch;
- Foods and beverages with less than 2 grams of added sugars;
- Limited amounts of food with a high fat content;
- Adequate fluid –calorie-free fluids except for up to 6 oz of juice daily and up to 24 oz of skim milk;
- Daily multi-vitamin and mineral supplementation;
- Regular exercise;
- Choosing the recommended number of servings from the Barix Nutrition Guide.

When you maintain these habits, you get adequate nutrition to support a healthy weight loss. And the calorie count will take care of itself. Understanding the make-up of the food itself is important as well. Then we can control according to portion size.

Choose calories that satisfy your hunger. For the first year or so after gastric bypass surgery most people find that they are not hungry, and just getting in the recommended amount of protein is a challenge. But after that first year many people acquire a bigger appetite and can eat larger portions. Two strategies are helpful for controlling your intake of food. First, select foods that are solid. Very soft foods (like yogurt, soup, pudding and applesauce) can act like a liquid, leaving you wanting more.

Choose foods based upon their caloric density. Your body senses fullness after eating a certain weight of food no matter how many calories it contains. Choosing foods with a low caloric density lets you feel satisfied with a lower overall caloric intake. The caloric density of a food is simply the number of calories it provides per ounce. High caloric density foods--those containing 68 calories or more per ounce-- are no more filling than other foods. To calculate the caloric density of a food, divide the calories by the serving size in ounces. For example, an 8 oz serving of frozen chicken and vegetable bake dinner provides 360 calories. So the caloric density of this frozen entrée is 360 divided

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by 8, which is 45. If the sugar and fat are also in line, it's a good food choice. Fresh fruits and vegetables, lean meats, low fat dairy products and some whole grain products all have a lower caloric density. Highly processed restaurant foods and fast foods tend to have a higher caloric density. The chart below gives you some examples.

Food	Serving Size	Calories	Caloric Density
Apple	5 oz	81	16
McDonald's Grilled Chicken Cobb Salad	10.7 oz	280	26
Grilled chicken breast	3 oz	142	47
Light bread, 1 slice	.7 oz	35	50
Mc Donald's hamburger	3.7 oz	240	65
Arby's Beef and Cheddar	6.9 oz	480	70
McDonald's Quarter Pounder hamburger	6.1 oz	430	70
Regular bread, 1 slice	1.1 oz	70	72
Arby's cheddar curly fries	6 oz	460	77
Arby's curly fries	3.8 oz	310	82
McDonald's Filet 'O Fish	5 oz	410	82
Arby's chicken finger 4 pack	6.7 oz	640	96
Arby's mozzarella sticks	4.8 oz	470	98

We also recommend keeping a food and exercise log for a couple of weeks. Measure your food for this short period of time and make sure you know what you're really taking in. That bowl of cereal may actually be two portions instead of one.

Keep in mind that as you lose weight, it takes less energy to do the same things. A regular exercise program can increase your energy output and make up for the energy that's no longer used to carry around the excess weight. Regular exercise also helps minimize muscle tissue loss. This in turn leads to a higher daily energy requirement (metabolism). A great way to help insure that you are getting adequate activity for weight loss is to wear a pedometer. Your ultimate goal should be at least 10,000 steps each day.

The Barix program is flexible as well. Each time you have a follow-up visit, the nutritionist will review the foods and beverages that you choose and will make recommendations for changes if needed.

Do fat cells really communicate with our brains? It should be noted that research is constantly increasing our understanding of the body's weight control dynamics. Much of it involves the complex interplay between the brain, stomach, intestines, and nervous system. It's helping us better understand why some

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people who eat a lot remain slim, while others seem to just smell food and gain weight--and why unusually rapid weight gain sometimes follows a weight loss. Barix nutritionists are watching this research closely, and are ready to apply any helpful new information as it unfolds.

Meanwhile we can utilize everything we do know about energy balance to tip the scales in our favor. Your Barix nutritionist can help you to establish a healthful calorie goal. You may want to estimate your caloric needs by looking at the charts below.

Female

Calories Required at Specific Age (1.2 activity factor)

Height		Age			
inches	cm	20	30	40	50
57	145	1168	1112	1055	999
58	147	1194	1138	1081	1025
59	150	1220	1164	1108	1051
60	152	1246	1190	1134	1077
61	155	1272	1216	1160	1103
62	157	1299	1242	1186	1129
63	160	1325	1268	1212	1155
64	163	1351	1294	1238	1181
65	165	1377	1320	1264	1208
66	168	1403	1346	1290	1234
67	170	1429	1372	1316	1260
68	173	1455	1399	1342	1286
69	175	1481	1425	1368	1312
70	178	1507	1451	1394	1338
71	180	1533	1477	1420	1364
72	183	1559	1503	1446	1390

Male

Calories Required at Specific Age (1.2 activity factor)

Height		Age			
inches	cm	20	30	40	50
62	157	1449	1381	1313	1245
63	160	1499	1431	1363	1275
64	163	1549	1481	1413	1345
65	165	1599	1531	1463	1395
66	168	1649	1581	1513	1445
67	170	1699	1631	1563	1495

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68	173	1748	1680	1612	1544
69	175	1798	1730	1662	1594
70	178	1848	1780	1712	1644
71	180	1898	1830	1762	1694
72	183	1948	1880	1812	1744
73	185	1998	1930	1862	1794
74	188	2048	1980	1913	1844
75	191	2098	2030	1962	1894
76	193	2148	2080	2012	1944
77	196	2198	2130	2062	1994

To sum it all up, calories do count. But counting calories is not necessary if you focus on the Barix Nutrition Program recommendations. Making healthful lifestyle choices will enable you to reach and maintain your weight loss goals without feeling like you are following a lifelong diet.

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