

# Obesity: A Constellation of Causes and Treatments



By Ruth Kava — December 12, 2016



Obese couple [1]

Here we are at holiday time again — and along with getting together with family and friends, we can anticipate many opportunities for holiday parties and holiday eating and drinking. And of course the opportunity, come January first, for more resolutions about losing that holiday pudginess. So perhaps it's an appropriate time to think a little about obesity and what to do about preventing and/or treating it.

Obesity isn't a one-size-fits-all affliction, as we [said](#) [2] over 20 years ago. Although the hope has been that as we learn more about the genetic underpinnings of the condition — which genes make it more likely to add fat — we'd come up with a unique means of dealing with the excess adiposity. Instead, what we've learned is that there will be no one means of preventing or treating obesity that works for all.

Back in 2009, Dr. Frank M. Sacks from the Harvard School of Public Health and multiple colleagues [compared](#) [3] the weight loss stimulated by 4 diets that differed in the percent of calories from fat, protein or carbohydrates over a 2-year period. All the diets contained fewer calories than participants were used to eating. And all the diets resulted in "clinically significant weight loss" no matter what the macronutrient composition was. These results are, of course averages, and some people lost more than others (of course some may have been better at sticking to the diets as well). So although one type of diet may be touted as the "best" for weight loss, and numerous diet gimmicks (e.g., the paleo diet) certainly are based on this, there doesn't seem to be really strong evidence for any one type. Thus a person wanting to use dietary restriction as their main means of weight loss (after the holidays, of course) will have to take a 'try it and see' approach to find one that works for him or her.

And what if dietary restriction isn't the means to the desired end? There are, of course

pharmaceutical avenues to investigate. There are drugs that specifically target weight, and others that are used for different conditions, such as diabetes that have a secondary effect of weight loss. But again, it's not a one size situation. A drug may work well for one person, yet have adverse effect that prevent its use in another, for example.

Are the different effects of diets and drugs based on genetics? Quite possibly — there are certainly genetic [syndromes](#) [4] that can affect the metabolism of energy (e.g., leptin deficiency leading to severe obesity) to a variable extent. Adoption studies show stronger correlations between the BMIs of the offspring and those of their biological vs adoptive parents. And it may be the case that information about a person's genetic makeup will at some point indicate which method of weight loss (if any) would be most successful.

Even the most extreme treatment for obesity — bariatric surgery — is not equally successful in all participants. And depending on the precise type of surgery, some people have unfortunately managed to gain back the weight they initially lost.

So where does that leave us this holiday season? First with recognition that the old adage of moderation in everything will work for some but not all. And when it gets to the New Year's Resolution stage, we may have to make a multi-pronged promise to try more than one approach, if the first doesn't work.

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