Genetics and Obesity

By Dr. Joseph E. Donnelly

Much media attention is given to genes as a major cause of being overweight. Our research and clinical group has not given a great deal of emphasis to this notion as the upswing of overweight individuals began in the eighties, yet it takes thousands of years for genes to change. What has changed in the past 30 years is the food and physical activity environments. For example, a service station used to actually service cars and dispense gas with minimal opportunity to obtain food—such as an 8 ounce bottle of soda. Currently, convenience stores offer a wide variety of foods and beverages and dispense gas without car service. Portion sizes of meals have grown exponentially and contribute to the availability of excess energy intake. For example, depicted is a burrito that fills a take-home container—AFTER it has already been eaten for lunch.

The need for physical activity has diminished considerably over the past few decades. Technology in both friend and foe allowing more work to be completed quicker with less effort yet diminishing the levels of energy expenditure. The act of being sedentary and particularly sitting is now linked to increased chronic disease even in those who exercise.

Although the food and physical activity environments have changed in the past 30 years, genes have not. Of course, this does not preclude that old genes are poorly suited for the new environment (gene/environment interaction) but it may not be useful to think of genes changing or primarily causing overweight.

A recent study by Papandonatos et al., examined The Diabetes Prevention Program (DPP) and LookAHEAD, two large randomized trials and concluded, “Most obesity-predisposing gene variants were not associated with weight loss or regain within the DPP and Look AHEAD trials, directly or via interactions with lifestyle.”

The University of Kansas Weight Management Program is designed to provide strategies and tools to successfully deal with a changing environment to allow an individual to lose weight and maintain weight loss. For further information please see contacts below. Papandonatos, et al, Diabetes, 2015
2015 American Dietary Guidelines By Dr. Lauren Ptomey

The Dietary Guidelines provide recommendations on food and physical activity for Americans aged two years and older and are the driving force behind federal nutrition policy, education, outreach and food assistance programs, including school breakfast and lunch programs. Every 5 years, the US Department of Agriculture and Department of Health and Human Services jointly release the Dietary Guidelines for Americans. Some of the major changes in the new 2015 Dietary Guidelines are:

• Removal of the upper limit of total fat consumption
• Elimination of dietary cholesterol as a nutrient of concern
• Recommending that added sugars make up no more than 10% of total daily calories
• All people should aim to consume fewer than 2,300 mg of sodium a day, even those at risk for heart disease
• Recommending the consumption of coffee
• Consuming more plant-based proteins and less red meat

What does this mean for you? Avoid foods that are modified to be in lower in fat but higher in added sugars (i.e. reduced-fat Oreos or peanut butter). You should not worry about the total fat or cholesterol in your diet but instead make sure your food choices are low in saturated fat. You should avoid eating foods with added sugar and sodium and instead choose fresh fruits and vegetables. If you are a coffee drinker, know that there is nothing wrong with having 3 cups of coffee a day; in fact, there is evidence that shows it may be associated with reduced risk of diabetes and heart disease.

Diet, Exercise & Brain Health By Dr. Amanda Szabo-Reed

Reductions in weight through diet and exercise are associated with decreases in diabetes, heart disease, certain types of cancers, and other disorders and diseases. Did you know that improving your diet and increasing exercise can also positively impact your brain health?

A recent study published by Derby and colleagues by the Alzheimer’s Disease Association suggests that individuals who consume a healthier diet (one that is high in whole grains, fruits, vegetables, low fat dairy, and meat products) are 35% less likely to have impaired cognitive function on of tests of executive control, which include ones ability to plan, reason, problem solve, and remember things. These findings suggest that what you eat affects your ability to think and complete daily tasks. Not only is having a healthy diet important for brain health, but exercise is also crucial.

Research conducted on the University of Kansas, University of Kansas Medical Center and the University of Illinois has shown a positive association between exercise and maintenance of executive control as you age, suggesting that to have a healthy mind when you get older, regular exercise is required. Together these findings illustrate why it is important to get your diet and exercise regimens on track now, as poor diet and exercise behaviors are not only associated with diseases that can harm your body but ones that can harm your mind as well.
Tiny Bites = BIG Calories  By Dr. Jeannine Goetz

If you have been adding “mystery” pounds lately or your weight loss efforts have slowed, take a minute to really stop and think about what you consume throughout the day – chances are you may actually be underestimating how much you are consuming. Is mindless snacking or “tiny bites” here and there an issue for you? Oftentimes these are calories that we don’t think about, but we should because they can add up quickly! Let’s take a look at some “tiny bites” you might encounter throughout the day – do any of these sound familiar?

- **Your kids are having OJ for breakfast. Only ½ cup is left in the carton. You might as well finish it, right?**
  - Calories: 28

- **You go out to lunch with co-workers and order a salad loaded with veggies and grilled chicken, but forget to ask for low-calorie dressing on the side.**
  - Calories: 100
  - **Add two mints. You can’t go back to work with bad breath!**
  - Calories: 40

- **Someone brought in cake for your co-worker’s birthday...you take just a “sample”...or two...**
  - Calories: 80

- **While at the grocery store you grab a cracker with cheese. After all, It’s only a little sample!**
  - Calories: 55

- **You’re still hungry so you grab a small package of peanuts at the check-out counter.**
  - Calories: 160

- **You are walking through the kitchen and you see a bag of chips – one little handful won’t hurt!**
  - Calories: 100

- **2 tablespoons macaroni and cheese as you cook to make sure it tastes OK!**
  - Calories: 54

- **While watching TV, an ice cream commercial comes on – it looks so good! You make a small bowl for a little evening treat!**
  - Calories: 200

**Grand Total “Extra” Calories for the Day: 817**

While each of these “tiny bites” by itself doesn’t seem like it would derail your weight management efforts, if you add them all up throughout the day and do this on a regular basis, it is easy to see how this could be slowing your efforts. If you think this might be a problem for you, commit to writing down every bite you eat for a few days so you are aware of what you are eating and whether these “tiny bites” might be the issue.
The Buzz on Coffee

By Dr. Matt Schubert

How often have you heard that coffee is good for you? Or bad for you? What can you believe? Coffee, despite being one of the most widely consumed beverages in the world, has long been cast as a saint or a demon. Coffee production, shipment, processing, and sales is a $30 billion industry. Allow me to shed some light on some of the ‘myths’ of coffee consumption.

**Myth**: Coffee dehydrates you

**Fact**: Coffee contributes to daily fluid intake. While caffeine is a mild diuretic, you only lose an extra 50-100 milliliters of urine. Your kidneys are naturally very efficient at retaining fluid.

**Myth**: Coffee causes cancer

**Fact**: Wrong! In fact, many studies in the literature, in tens or hundreds of thousands of people, find that coffee drinkers are actually protected from a number of different cancers compared to non-coffee drinkers. This is likely due to coffee being naturally high in antioxidants.

**Myth**: Coffee causes insomnia

**Fact**: The main bioactive ingredient in coffee, caffeine, disappears from the body fairly quickly due to it’s short half-life of 4-6 hours. This means half of the caffeine you ingest will be gone after 4-6 hours. So, as long as you don’t have a coffee right before bed, you’re not likely to have any sleep interference.

**Myth**: Coffee can increase the risk of heart diseases

**Fact**: This is generally false. While you likely will experience small increases in heart rate and blood pressure, these are short-lived. But a number of large studies have found no link between coffee consumption and increased risk of higher cholesterol, irregular heartbeats, heart attack, or heart disease.

**Myth**: Coffee sobers you up

**Fact**: You only think coffee is sobering you up. Reaction time and judgement are still impaired from alcohol consumption and caffeine may actually speed up alcohol metabolism.

**Myth**: Caffeine helps weight loss

**Fact**: Not really. Many companies include caffeine in ‘weight loss supplements’ because it slightly increases energy expenditure, but it is only a small amount that is typically lost in the day-to-day ‘noise’ of daily energy expenditure. Where caffeine may help is by making exercise more tolerable and enjoyable.

**Myth**: Caffeine is addictive

**Fact**: This ‘half-truth’ depends on who you talk to. While regular consumption causes a mild physical dependence (this is because caffeine is a central nervous system stimulant working in the brain), it does not threaten your social, economic, and physical health like ‘typical’ drugs of addiction do. If you were to stop consuming caffeine, you may have a few hours or a day of mild withdrawal symptoms, but because the symptoms don’t last as long or aren’t as severe as alcohol and street drugs, most experts do not consider caffeine dependence a serious addiction. Cheers!
Alcohol & Weight Management By Erik Willis, M.S.

As tempting as it may be, alcohol can be a slippery slope when trying to manage your weight. When you eat, your body breaks down the components in the food (alcohol, protein, carbohydrate, and fat) and converts them into energy. Sustained increases in energy intake without increasing energy expenditure (physical activity) can lead to a positive energy imbalance and result in weight gain.

There are several reasons why alcohol consumption in particular merits careful consideration when trying to manage your weight. First, alcohol is utilized as a source of energy by the body. However, alcohol is high in caloric content, yet is a nutritionally poor food source. Alcohol provides 7.1 calories per gram, which second only to fat as a source of energy. Second, total energy can vary considerably by alcoholic beverage type. For example, a 12 oz. bottle of light beer contains approximately 103 calories and 11 g of alcohol, while a 4.5 oz. piña colada cocktail contains considerably more alcohol and energy with 245 calories and 14 g of alcohol. More importantly, this excess calorie intake from alcoholic beverages has been shown to be poorly compensated with a decrease in subsequent food intake.

It has been reported that individuals increase energy intake between 7-30% when meals are given with alcoholic beverages compared with non-energetic beverages (i.e. water). While the exact mechanism causing this increase in energy intake still requires further research, one possible explanation for the lack of regulation is alcohol’s effect on hormones related to appetite control and causing an increase brain’s sensitivity to external food cues which leads to greater food consumption.

If you do decide to drink alcoholic beverages, doing so sensibly can help you manage your weight. It is important to know the recommendations for limits. According to the Dietary Guidelines for Americans, recommends having up to 1 drink per day for women and up to 2 drinks per day for men. Be aware of the portion sizes of a drink. One drink is either a 1.5 oz shot of 80 proof distilled spirits, 5 oz of wine, or a 12 oz beer. Alcohol has a complex role affecting multiple mechanisms for regulating food intake. Limiting alcohol intake and making smart choices are vital to success in managing your weight.

Gin and tonic/ vodka and tonic: 126 calories
Bottle of white wine: 555 calories
Pint of lager (5%): 240-250 calories
Pint of cider: 180-250 calories
Brandy: 110 calories
"February 4, 2015, my husband and I were told that our best bet of having a child was IVF. In order to undergo the in-office anesthesia for egg retrieval, I had to have a BMI of 35. That meant around 100lb weight loss. I truly thought it was going to be impossible. The doctor handed me a flyer for the KU Weight Management Program and I decided to go to orientation and ultimately participate in the program.

Wow. Not only does the VLCD work, but it works fast and amazingly. I can’t stress enough that staying completely on plan truly works. The recipes we are provided, along with what you can find online, make it easy to survive on shakes only. You really can stick to the shakes only if your mind is in the right place. I also didn’t think I’d be able to do 300 minutes of cardio a week, but I find myself doing more and *gasp* enjoying it!

My prom dress and high school graduation dresses fall off, and I have lost almost 90 pounds since I started the program March 11, 2015. I still have 4 weeks left and am transitioning into the LCD, but I am BELOW my BMI goal of 35 and on my way to no longer being obese per the BMI chart! I am no longer on ANY prescription medications, and I feel amazing. For the first time in my life, I am asking people to please take pictures of me instead of dodging the camera. I cannot wait to join Phase II and work on maintaining all this progress!"
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