



Nutrition for Family Living

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December, 2006 Topics

Will testing your genes help you fit into your jeans?

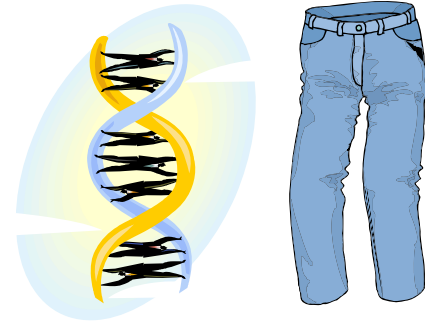
Since you asked.....

Reducing Children's Television-Viewing Time: A Qualitative Study of Parents and Their Children

Will testing your genes help you fit into your jeans?

By Anne Escaron and Sherry Tanumihardjo

There is a new kid on the block of nutrition research known as nutritional genomics or nutrigenomics. It is the study of why one person's genetic makeup (genotype) causes their body to interact with their diet differently than another person. Combinations of genes are responsible for various body functions: building muscle, storing fat, or burning carbohydrate. Each of the body's 30,000 genes has lots of variation, up to 7 million combinations! For example, while we all have the gene most critical for metabolizing folate (a B vitamin), small differences in this gene in a mother may increase the risk for neural tube defects in her baby.



Did you say genes or jeans???

Because of the sheer number of genes, it is easy to see how complex gene interactions can get. Even more mind-boggling is how combinations of genes are affected by various dietary components. Only a fraction of genes are well-understood and the simplest amount of food contains hundreds of unique chemicals. Some examples of vitamins and minerals being studied for their impact on genetic variation are vitamin B12, iron, vitamin D, and folate. The metabolism of fructose, fat, alcohol, and lactose are also under study.

While scientists are beginning to understand some of the relationships between genes and dietary components, we are a very long way off from being able to make dietary recommendations based on one's genes. Still, some U.S. businesses have capitalized on our hopes for improving health based on nutritional genomics. A recent government report found that internet businesses were selling kits to analyze a customer's DNA in exchange for nutrition and lifestyle guidance based on that individual's genetic profile. All these tests require are a cheek swab, a detailed questionnaire and payment ranging from \$100 to \$1000. Essentially, the companies give out nutrition and physical activity advice, making it seem personalized to the customer. Some of these companies suggest customers buy supplements that are similar to multivitamins found in grocery stores, but cost 30 times more than grocery store prices. These expensive schemes tap into consumers' curiosity about their own health and their desire to keep disease at bay. Ultimately, these companies cannot deliver the outcomes that they promise. The research is simply not there to back their claims.



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The bottom line: Research in this area is hot and well-funded at the University of Wisconsin. Chances are high that the majority of us will not have the genetic makeup to be able to eat a high-fat, high-calorie diet and still stay slim and fit into our jeans. The good news for all of us is that the *Dietary Guidelines for Americans 2005* (DGA) contain the most current information on diet recommendations that will not cause nutrient deficiency and will promote optimal health for the overwhelming majority of the U.S. population. The DGA are research-based and include a diverse population foundation. While nutritional genomics may play a role in the future for rethinking individualized nutritional requirements based on genetics, for now we can rely on the DGA to guide our nutrition education efforts.

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Since you asked.....

By Amy Rettammel, Susan Nitzke, and Sherry Tanumihardjo

Q: Now that Nutrition Facts panels on food labels show the grams of *trans* fat per serving, it is easier to teach people how to compare food products and choose foods that are low in *trans* fats. However how do I teach about products that are labeled as 0 grams *trans* fats if they list “partially hydrogenated vegetable oil” as an ingredient?

A: When a food has less than 0.5 gram of *trans* fat in a standard serving, the Food and Drug Administration (FDA) allows it to be labeled 0 grams *trans* fat on the Nutrition Facts panel. This rule also applies to the labeling of saturated, monounsaturated, and polyunsaturated fats. As a result, consumers may see a few products that list 0 grams *trans* fat on the label, while the ingredient list includes “partially hydrogenated vegetable oil.” Foods with 0 grams *trans* fat per serving and partially hydrogenated vegetable oil in the ingredient list contain a very small amount of *trans* fat (less than 0.5 g per serving). In general, foods with this small amount of *trans* fat are not considered meaningful sources.

Now that Nutrition Facts panels are required to show the amount of *trans* fat in foods, it is easier to compare products for *trans* fat content using the Nutrition Facts panel than to look for one specific term in the ingredient list. This is also true for saturated fats which can also contribute to heart disease risk. Thus, helping people compare products to choose those with less combined *trans* and saturated fats (together referred to as solid fats in MyPyramid) is a better approach.

When choosing food labels to use in nutrition education about solid fats, keep the big picture in mind. Data are available that tell us where Americans are getting their solid fats (see pages 33 and 34 in the Dietary Guidelines for Americans). Use that information to guide your choice of food packages for lessons involving product comparisons and label reading for fats. In other words, rather than spending your time comparing foods that are already relatively low in solid fats (saturated and *trans* fat), start with foods that are most likely to be high in solid fats (e.g. cakes, cookies, crackers, and pies for *trans* fat and cheese and beef for saturated fat). As with any good nutrition education, when consulting the data on sources of solid fats, also consider which of those foods are regularly eaten by your learners.

Using data and knowledge of what your learners eat to guide your teaching will help you target the main sources of solid fats in your learners’ diets. This will also prevent you from being sidelined into details about food labeling that are much less significant to overall health.

Learners with more experience comparing products for *trans* fat may specifically ask about products with small amounts of *trans* fat (less than 0.5 gram per serving). When addressing this question, remember that the only clue to the presence of small amounts of *trans* fats when the label says 0 grams are the two words “partially hydrogenated” in the ingredient list. (By itself, the word “hydrogenated” is not sufficient evidence of *trans* fats. In fact, “fully hydrogenated” indicates the presence of saturated fat – not *trans* fat -- see Crisco 0g *Trans* Fat Per Serving All-Vegetable Shortening as an example <http://crisco.com/index.asp>).

Bottom Line: The Nutrition Facts panel is the best place to start when comparing products and choosing foods that are low in *trans* fat and/or saturated fats. Getting into more detail about detecting small amounts of *trans* fats in foods, based on the words “partially hydrogenated” in the ingredient list, can usually be reserved for answering questions from more advanced learners.



Reducing Children's Television-Viewing Time: A Qualitative Study of Parents and Their Children

By Gayle Coleman

Goal and methods

The primary goal of this study was to explore how parents and their school-age children react to limiting TV and toTV reduction strategies. A total of 180 children and one of their parents or guardians participated in this research. There were 60 parent-child pairs in each of three age groups: 6 to 7, 9 to 10, and 12 to 13 years. Parents and children participated in separate small group discussions or individual interviews, and completed a household media inventory. Parents also completed questions about their socioeconomic background and their own television use.

Results

- On average, families in this sample had four working television sets in their homes including 63% having a TV in the child's bedroom and 46% having a TV in an eating area such as the kitchen or dining room.
- 99% had at least one DVD or VCR, 88% had a video game unit, 85% had a computer, and 56% had Internet access.
- 6- to 7-year old children report spending about 2.8 hours a day watching TV, 51 minutes playing video games and 15 minutes on the computer.
- 9- to 10-year old children report spending about 3.5 hours a day watching TV, 1.5 hours playing video games and 51 minutes on the computer.
- 12- to 14-year old children report spending about 3.2 hours a day watching TV, 1.8 hours playing video games and 1.3 hours on the computer.
- Parents reported that their children watched about 2 hours of TV per day, which is less than the children reported.
- Almost all the parents reported that they had at least one rule related to television viewing.
 - The most frequently cited rules related to content, particularly exposure to sexual content, violence, and foul language.
 - Approximately half of parents reported using TV as a reward or being contingent on completing tasks such as doing homework.
 - Almost half of parents limited when their children could watch TV or how much viewing was allowed.
 - A small number of parents reported restricting access, with the most common rule being "no television in the child's bedroom".
- Although parents thought that limiting television viewing to no more than 2 hours a day was reasonable, they were skeptical about being able to make it work, especially on weekends.
- Most parents in this sample did not think that they needed to limit television with their own children. For example, a parent said, "A lot of these kids are overweight or they are couch potatoes... but not my kids."
- There was confusion among parents about what counts as screen time. For example, there was discussion about whether watching TV or videos with their children should be exempt from the 2-hour limit because they valued this time together.
- There were a variety of obstacles to limiting TV viewing.
 - The appeal of TV to children and adults.
 - Parents were reluctant to reduce their own television viewing.
 - Parents also expressed concern that limiting children's viewing time would limit their ability to complete their own chores and require them to spend more time keeping their children safely occupied.



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- Parents were generally positive about turning off the TV when no one was actively watching, but some were resistant to this idea because they liked to have television as background or were concerned about how their children would react.
- When asked about limiting TV during mealtimes, children and parents generally accepted the idea but had some concerns. For example, parents were concerned that they would miss their own TV shows or that there would be more bickering at mealtimes.
- Parents and children had more concerns about the idea of no TV in the child's bedroom. Most thought it would be easier to avoid putting a TV in a child's bedroom in the first place than removing one that was already there. Opposition was strongest with 9- to 10- year olds and, especially 12- to 13-year old boys.

Discussion

Results for the children in this study are similar to results from nationally representative studies where children report spending about 5 hours a day in front of a TV, computer or video game. The themes found in this study suggest that if the Stages of Change Model is applied to the parents, then most are at the precontemplation stage with regard to limiting their child's TV time. Although they agreed with a 2-hour limit in principle, many felt it did not apply to their children or they perceived numerous barriers to implementing the recommendation.

Implications for Extension Educators

The American Academy of Pediatrics (AAP) recommends that children over age 2 spend no more than 2 hours a day with screen media such as television, computers or video games because excessive viewing has been linked to physical, academic and behavioral problems. This research indicates that providing information on the AAP recommendations and why limiting TV time is important may not lead to reduced TV viewing for children. Additional education approaches such as facilitating discussion of the benefits of reducing screen time for individual families and ideas for overcoming barriers to limiting TV time for both parents and children may be needed. In addition, monitoring screen media use might increase awareness of the issue with parents.

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