

# the real dish

with *Lauren*  
Lauren Moller-Seat, RDN



January 2022

## Understanding Nutrition *Science*

**EVER FEEL LIKE** nutrition advice is changing every day? That's one of the main reasons I became a dietitian; I wanted to understand the *facts*. Well, as with most things, the more you know, the more you realize what we *don't* know. Nutrition is still a new science, and once you think about how research is conducted, you'll have a better understanding of why it's so hard to get the facts straight.

The first vitamin was discovered in 1926—not even 100 years ago. (We were flying airplanes before we knew what vitamins were!) From that point, most of what we came to know about nutrition was learned through the Great Depression and WWII, when food shortages caused nutrient deficiencies. Since this time of discovery, we have developed a greater understanding of how individual nutrients affect the human body.

For example, we learned that iodine can prevent goiters. As a result, food manufacturers started producing iodized salt, which caused a significant decrease in the occurrence of goiters (to the point that most people, in fact, don't know what a goiter—or enlarged thyroid gland—is). In 1941, based on early research, the first Recommended Daily Allowances were announced and provided healthy guidelines for total calories and select nutrients (protein, calcium, phosphorus, iron and specific vitamins) per adult, per day.



The USDA Food Guide Pyramid

This focus on single nutrients made sense when war and famine showed the dramatic cause- and-effect of nutrient deficiencies. However, nutrition science continued to try to find *one* nutrient that caused diseases, which led to the low-fat craze of the 1970-80s in an effort to reduce heart disease. In 1973, nutrition labels were required on any product that made nutrition claims such as “very low fat,” etc.

In the 1980s, the first Dietary Guidelines for Americans were created. These focused on specific nutrients like fat, fiber, sugar, and sodium. In 1990, in an attempt to provide consumers with a better understanding of processed foods, Nutrition Fact Labels were required on all products (but were optional for fruits, vegetables and fish).

## Nutrition *and* Your Health

### Dietary Guidelines for Americans

- 1 Eat a **variety** of foods.
- 2 Maintain an **ideal weight**.
- 3 Avoid too much **fat, saturated fat & cholesterol**.
- 4 Eat foods with **adequate starch and fiber**.
- 5 Avoid too much **sugar**.
- 6 Avoid too much **sodium**.
- 7 **If you drink alcohol, do so in moderation.**

Sources: U.S. Department of Agriculture, U.S. Department of Health and Human Services

In the 1990s, as chronic diseases continued to rise, the focus on single nutrients was questioned and public health practitioners started looking into eating patterns. Research focused on the Mediterranean diet, vegetarian and vegan diets, but this is where the research gets more challenging.

There are two main research methodologies: experimental or observational studies.

Experimental studies are considered better because you control for more variables, and therefore can draw more

conclusions. Observational studies look at what traits are already occurring and try to draw conclusions from a large amount of gathered data.

To draw accurate conclusions, you want to control for as many variables as possible. This means that you'd want to compare groups that are already similar to each other or you want to have included enough subjects so that you're getting a natural and inclusive variety.

For example, you'd want to control for age, gender, previous diet, supplement use, stress levels, economic status and health conditions, just to name a few.

When you think about all the things that can affect someone's health or diet, you realize how hard it is to draw conclusions around nutrition. Because of all the confounding, or mixed, factors that influence our health and nutrition, it's very challenging to draw conclusions. And as any scientist will tell you, correlation does not equal causation. So just because the research *looks* like there's a clear correlation doesn't mean that it's a factual cause.

## Understanding Correlation Versus Causation

If you're just looking at the numbers, you may notice that in certain months of the year, ice cream sales increase, and you may also notice that, in those same months, there are more reports of sunburn. The data shows two events increasing at the same time of year, so you might want to conclude that eating ice cream causes sunburn. But this doesn't take into account the confounding factors: that ice cream sales increase in the summer, and sunburn increases in the summer. So while there may be a *correlation* between eating ice cream and getting a sunburn, it doesn't show the actual *cause*.

### CONDUCTING NUTRITION RESEARCH

is hard on its own, but

another factor that contributes to the confusion is the role of the media. News organizations are businesses that need clicks, followers and viewers to be successful, so it's in their best interest to create a sensation. That's why so



**Remember...Do your research!** The media often contributes to nutrition confusion.



## Remember the Nutrition Basics

Rather than focusing on the latest trends, focus on what you *can* control when it comes to wellness:

- Try to achieve a balanced diet that includes a wide variety of colorful fruits and vegetables, whole grains, legumes and lean proteins.
- Rather than skipping meals, try to eat consistently throughout the day.
- Don't forget about other aspects of your well-being: Aim for some type of movement or stretching, work on getting adequate sleep, and take care of your mental and social health, too.

many nutrition headlines sound too good to be true. News outlets love to simplify the latest research to get a good headline, and it's only after doing a deeper dive into the research that you realize the study was only conducted on 12 mice...*So how applicable is it, really?*

**TO FIND THE TRUTH:** When assessing nutrition research, you want to know:

- How big the sample size was
- Whether there was a comparison group and how closely the groups were matched
- The confounding factors that were controlled for
- How many people fell out of the study
- Any conflicts of interest the researchers may have

If you have questions about the latest research or are interested in more personalized nutrition recommendations for your health needs, call the Barbara L. Posner Wellness & Support Center at 410-427-2598 to schedule a consultation with Lauren.

## For More Information

- [USDA Food Pyramid](#)
- [USDA Dietary Guidelines](#)
- [Vox - Study Designs](#)

**Editor's note:** The information provided in this newsletter is for educational purposes only. Please speak with your health care team about your specific dietary and health needs.