

Apply Your Knowledge Example

Topic Introduction

In this module, I learned about some of the strengths and weaknesses of the scientific method, also called "positivism". On the one hand, science is great because it's given us all the wonderful medical procedures and public health strategies that have eradicated disease and saved millions of lives. On the other hand, because the scientific method focuses on individual variables that can be studied in surveys or experiments it can sometimes cause us to miss the bigger picture. I particularly enjoyed Michael Pollan's piece "Unhappy Meals" where he talked about missing the bigger picture with our diets. Pollan introduced the term "nutritionism" meaning that we focus on individual nutrients instead of the overall picture of natural diets that are healthy.

Research Process

Since I was interested in that, I decided to search out an example of real research on the topic. I picked a popular diet, the Atkins Diet, that focuses on just one aspect of diet, namely how low it is in carbohydrates. I searched the scientific literature using the Web of Science, following the procedure described in Module 2 of this course. I used the search term "Atkins Diet" and then ranked the results by "times cited" to find an article that has been cited a lot, meaning other scientists think it's important. Below I have cited and included the abstract of the article I found.

Citation and Abstract

Lara-Castro, C., & Garvey, W. T. (2004). Diet, insulin resistance, and obesity: zoning in on data for Atkins dieters living in South Beach. *The Journal of Clinical Endocrinology & Metabolism*, 89(9), 4197-4205.

Insulin resistance is a central pathogenic factor for the metabolic syndrome and is associated with both generalized obesity and the accumulation of fat in the omental and intramyocellular compartments. In the context of the current obesity epidemic, it is imperative to consider diets in terms of their ability to both promote weight loss and ameliorate insulin resistance. Weight loss under any dietary formulation depends on hypocaloric intake, and only moderate weight loss (5–10%) is sufficient to augment insulin sensitivity. However, increments in insulin sensitivity may be more directly related to loss of intramyocellular or omental fat rather than loss of total body weight per se. The widespread acceptance of popular low-carbohydrate high-fat diets (e.g. Atkins Diet, Zone Diet, South Beach diet) further underscores the need to evaluate dietary interventions regarding their safety and metabolic effects. These high-fat diets have been shown to be safe in the short term; however, their long-term safety has not been

established. With respect to insulin sensitivity, diets enriched in saturated fats can induce insulin resistance, whereas fat substitution with monounsaturated fats can enhance insulin sensitivity. On the other hand, high-fiber, high-carbohydrate diets comprised of foods with low caloric density can similarly be used for effective weight reduction and to ameliorate insulin resistance. Although some data suggest that low-glycemic index diets are most advantageous in this regard, these effects may have more to do with increments in dietary fiber than differences in available carbohydrates. Popular low-carbohydrate, high-fat diets are being fervently embraced as an alternative to challenging modifications in lifestyle and intentional calorie reduction. Current data do not support such unbridled enthusiasm for these diets, particularly in relationship to high-fiber, high-carbohydrate diets emphasizing intake of fresh vegetables and fruits. Long-term studies to determine the efficacy and safety of both popular and experimental diets are warranted. (J Clin Endocrinol Metab 89: 4197–4205, 2004)

[Relate Article to Module Content](#)

The findings of this research article support the points that Michael Pollan makes. The abstract says, "Current data do not support such unbridled enthusiasm for popular low carbohydrate diets, particularly in relation to high carbohydrate, high fiber diets emphasizing fresh vegetables and fruits." This is exactly what Michael Pollan is saying: don't focus on any one nutrient like low carbohydrate, instead eat a balanced diet with lots of plant foods!