

# TYPE AND QUALITY OF CARBOHYDRATES MATTER MOST



## Experts propose a nuanced approach to define high-quality carbohydrate foods

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For decades, people have often associated higher intakes of carbohydrate-containing foods with less healthy lifestyles. Yet, evidence suggests this perspective view is overly simplistic, and it is instead the type and quality of carbohydrate foods that matter most for supporting health.

While some measures of carbohydrate quality exist, such methods often use highly variable, and thus unreliable, indicators.

In a newly published perspective in *Nutrients*, a group of nutrition

researchers, who collectively make up the Quality Carbohydrate Coalition-Scientific Advisory Council (QCC-SAC), outline the opportunity for a stronger, more evidence-based approach to defining quality carbohydrate foods to support overall health and provide clearer dietary guidance.

“To better guide food choices and nutrition literacy, the dialogue around high-quality carbohydrate foods must be advanced to consider the evolving science,” explains Adam Drewnowski, Ph.D., University of Washington, a QCC-SAC member.

**Above:** Based on evidence, carbohydrate guidance must move away from individual and unique biological interactions with foods, and towards recommendations based on intrinsic qualities of a food (i.e., nutrient- and food-based indicators).

“As a first step, we conducted a scoping review of the scientific literature to examine the evidence behind existing measures of carbohydrate food quality and ways in which to build upon this work,” Drewnowski informs.

The QCC-SAC is a team of six world-renowned experts in carbohydrate research, nutrient profiling, cultural competency and epidemiology.

The group was assembled by the Quality Carbohydrate Coalition, which was spearheaded and is funded by Potatoes USA.

### ROLE OF CARBOHYDRATES

The Coalition’s ambition is to assess and advance evidence to explore the role of carbohydrate foods in health.

Collectively, the QCC-SAC members agree that, based on the evidence, carbohydrate guidance must move away from individual and unique biological interactions with foods, and towards recommendations based on intrinsic qualities of a food (i.e., nutrient- and food-based indicators).

This includes shifting away from the decades-old focus on glycemic index

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(GI) when discussing high- versus low-quality carbohydrate foods.

It is the QCC-SAC consensus that the GI is a flawed (and misused) approach to defining carbohydrate foods quality.

“GI is frequently used as a metric for carbohydrate food quality, but it is an outdated and flawed indicator with too much variability,” says Julie Miller Jones, Ph.D., licensed nutritionist, clinical nurse specialist, St. Catherine University (emeritus), a member of the QCC-SAC.

“In fact, GI was created as a research tool for use in the laboratory and was never intended to be used by the general population,” she explains.

“Instead, we require a measure that reflects both a carbohydrate food’s contributions to fiber, nutrient and phytochemical intake, as well as its role in a healthy diet,” Jones continues.



**Skillet Fajita Hash Browns**

**Above:** Research demonstrates that the Glycemic Index varies considerably based on different contexts, such as eating situations (e.g., mixed meals) and individual characteristics (e.g., biological and behavioral factors like age, weight, physical activity and gut microbiome).

#### ACCURATE MEASURE NEEDED

“An omnibus measure of carbohydrate food quality indicators that is accurate and applicable to real-life eating patterns is needed,” she concludes.

Specifically, research demonstrates that GI varies considerably based on different contexts, such as eating situations (e.g., mixed meals) and individual characteristics (e.g.,

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## **Type and Quality of Carbohydrates Matter Most...**

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biological and behavioral factors like age, weight, physical activity and gut microbiome).

“A new review analyzing GI values found the variability with rice can fluctuate so significantly that it can be considered both a low GI and high GI food,” shares QCC-SAC member Siddhartha Angadi, Ph.D., University of Virginia.

“Further, even the GI of bread can vary up to five-fold between individuals,” Angadi says. “These large inter-individual variations make the utilization of GI as a marker of carbohydrate food quality problematic.”

Despite its historic use to guide carbohydrate choices among consumers with type 2 diabetes, GI is not a consistent predictor of health.

A 2019 series of systematic reviews and meta-analyses rated the evidence regarding the long-term effects of GI on health outcomes, such as cardiovascular disease, type 2 diabetes and colorectal and breast cancer, as “low or very low.”

“These findings support the need for a new, holistic approach to replace the overreliance on GI as a single evaluator of carbohydrate quality,” states Yanni Papanikolaou, MPH (Master of Public Health), Nutritional Strategies, Inc., a QCC-SAC member.



**An omnibus measure of carbohydrate food quality indicators that is accurate and applicable to real-life eating patterns is needed.**

### **VALIDATED APPROACH**

The QCC-SAC will develop a series of papers for peer-reviewed publication that will introduce a new, validated approach for measuring carbohydrate foods quality.

The series will demonstrate how the approach can be integrated into dietary guidance tools to help people of all ages, ethnicities and cultural preferences improve their food choices.

The approach will involve developing a composite measure that harmonizes multiple, intrinsic carbohydrate foods quality indicators from the scientific literature into an easy-to-use tool.

“Compared to existing metrics, this tool will be unique, evidence-

based and practical,” notes QCC-SAC member Judith Rodriguez, Ph.D., registered dietician, University of North Florida.

“It will reflect how people actually eat and will recognize cultural patterns and traditions, a novel approach that is often underrepresented in similar dietary guidance tools,” Rodriguez outlines.

The QCC-SAC plans to release more details on its harmonized composite approach to assess carbohydrate foods quality in the coming year.

In a forthcoming manuscript, the QCC-SAC will introduce a new, validated algorithm for measuring carbohydrate food quality that builds on existing scientific work to-date. **BCT**



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