

# Industry Perspective on Achieving Sugar Reduction Targets with the use of Non Caloric Sweeteners

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# Disclosures

<b>AFFILIATION/FINANCIAL INTERESTS</b> (prior 12 months)	<b>ENTITIES</b>
Grants/Research Support	Project SWEET 774293-64
Scientific Advisory Board/Consultant/ Board of Directors	Project i-sense (EU), Project SWEET(EU) Rockey FFAR Fellowship, NCSU CALS, IAFNS, CCC, ISC, ISA
Owner	NA
Speakers Bureau	NA
Stock Shareholder	Cargill, Inc; General Mills
Employee	Cargill, Inc
Other	Received travel awards for speaking engagements from Trade Associations The comments provided today are my own, and do not necessarily represent those of Cargill, Incorporated



At Cargill, we provide food, ingredients, agricultural solutions, and industrial products to nourish the world in a safe, responsible, and sustainable way.

160,000+

Employees

70

Countries

158

Years of experience

\$117B

Annual revenues

We source and transform raw materials into ingredients, finished goods and energy

We move products around the world

We provide insights

# High Intensity Sweeteners

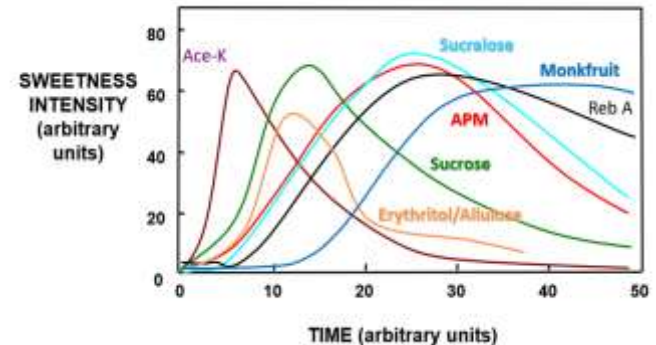
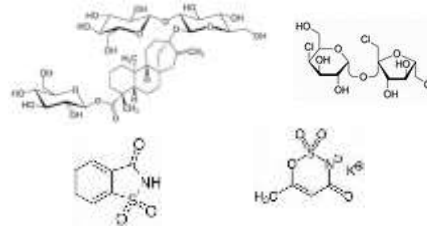
Sugar substitutes that are hundred to thousand times as sweet as sucrose

## Types

- Sucralose
- Aspartame
- Cyclamate
- Acesulfame-K
- Saccharin
- Steviol glycosides
- Advantame
- Neotame
- Neohesperidine DC
- Thaumatin
- Monk-fruit

## Diverse molecules

- Sweetening potency
- Chemical structure
- Stability
- Artificial
- Plant based
- Protein
- Excreted
- Absorbed
- Act on different receptors



# Recent Media Focusing High Intensity Sweeteners

Newsweek 90

HEALTH

## America's Most Popular Artificial Sweetener Damages Our DNA, Scientists Say

BY PANDORA DEWAN ON 6/2/23 AT 1:08 PM EDT

HEALTH • 5 MIN READ

A Sugar Replacement May Be Linked to Heart Attacks and Strokes. Don't Throw Out Your Stash Yet

The New York Times

Could fructose contribute to the development of Alzheimer's?

Commonly used sweetener found linked to anxious behaviour in mice

Extrapolation of findings to humans suggests separate consumption may produce neurobehavioral changes

ScienceDaily • Friday, 26 November 2022 09:09

The Link Between Highly Processed Foods and Brain Health

New Warning About Zero-Calorie Sugar Substitute: What Experts Are Saying About Erythritol

Arianna Johnson, Forbes Staff



## New Evidence That Ultra-Processed Foods May Increase Cancer Risk

Daphne Ewing-Chow, Senior Contributor @ Food, Agriculture, Sustainability... with a passion for

## Artificial sweetener erythritol linked to heart attack and stroke: Study

Erythritol is widely used in sugar replacement or reduced-sugar products.

By Haley Yamada, GMA  
February 27, 2023, 9:32 PM



# Recent High Intensity Sweetener Recommendations

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- **USDA (2020-2025)**

- LNCS should be considered as an option for managing body weight and resolving the question regarding substitution of SSB with LNCSB remains a high priority.

- **WHONUGAG (2023)**

- Recommends against the use of NSS to control body weight or reduce the risk of noncommunicable diseases (NCDs).

- **JECFA Aspartame Hazard and Risk Assessment (2023)**

- JECFA concluded that the data evaluated indicated no sufficient reason to change the previously established acceptable daily intake (ADI) of 0–40 mg/kg body weight for aspartame. The committee therefore reaffirmed that it is safe for a person to consume within this limit per day.

- **IARC Aspartame Hazard and Risk Assessment (2023)**

- IARC classified aspartame as possibly carcinogenic to humans (IARC Group 2B)

- **EFSA Re-evaluation of a number of sweeteners**



# Industry Actively Engages with External Groups

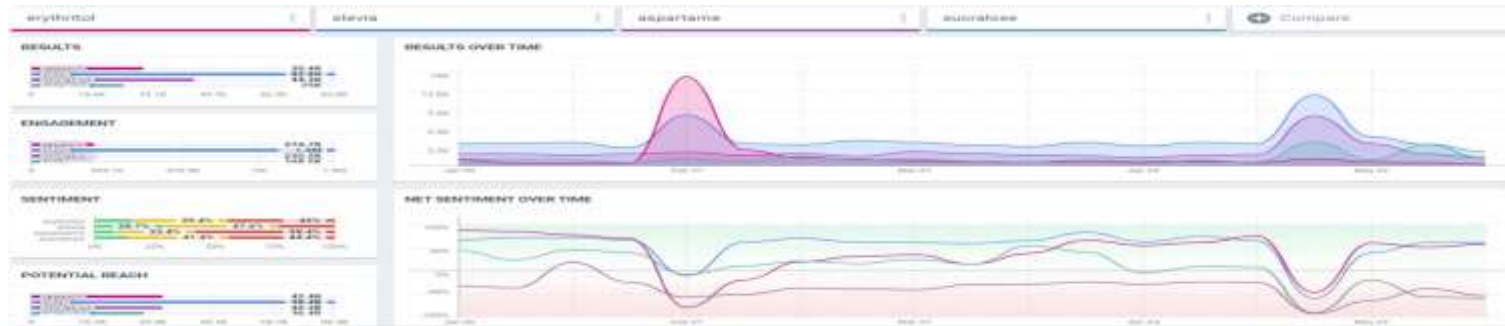


## Critically Review to Study

## Monitor Media Pickup

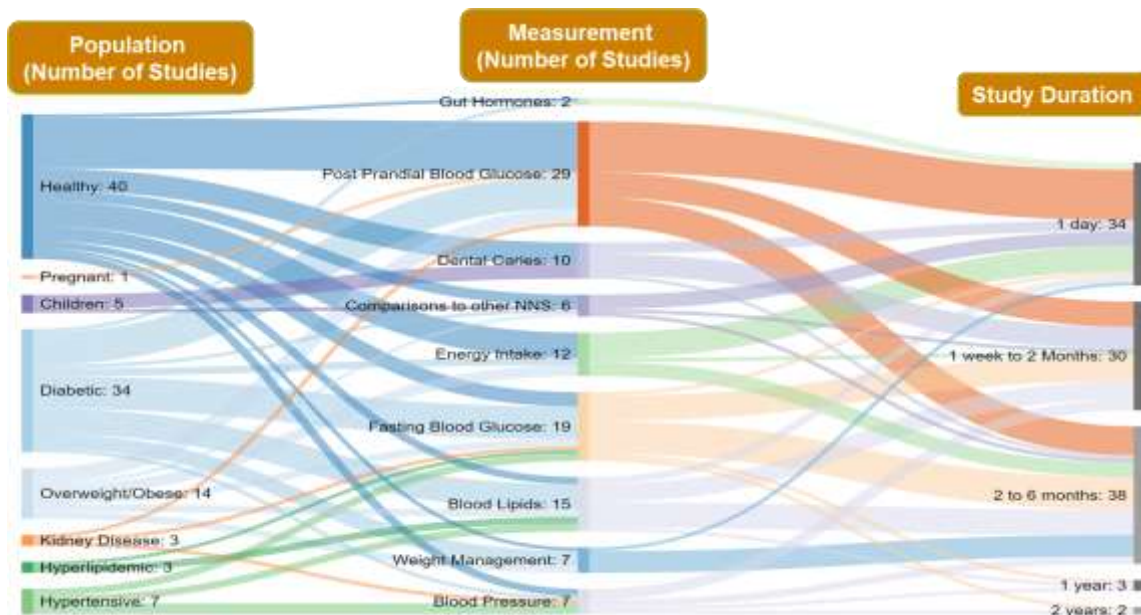
## Align with and communicate through Trade Associations

**Release Statements** “This study was conducted in a laboratory environment which cannot mimic the complex mechanisms of the human body, even when human cells are used. Therefore, the results of the study cannot be inferred by extension to humans and the general population,” said Robert Rankin, President, Calorie Control Council. “For the millions of people who rely on low- and no-calorie sweeteners to help manage body weight and reduce the risk of non-communicable diseases like diabetes and obesity, it is important to know the facts, which is sucralose has been rigorously studied by scientific and regulatory authorities around the world and is safe to consume.”



# Industry Funding of Sweetener Research

- Objectives are to fill significant research Gaps



## Industry Funded Registered Studies

- Stevia and Glycemia
- Stevia and Food Intake
- Stevia and Gut Microflora
- Stevia and Appetite Hormones
- Stevia and Brain Response
- Stevia in Children



# The Industry Forms Partnerships in Sweetener Research

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- 5 year, 10MM Euro
- 29 partners
- Seven Work Packages
  - Health and Safety
  - Sustainability
  - Economics
  - Regulations
  - Consumer Acceptance

Project I-sense  
Sweetness levels in the Diet  
Partial Financial Support  
Scientific Advisory Roles

# Industry Perspective on High Intensity Sweetener Use

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- High Intensity sweeteners have a long history of safe use and global regulatory approval
- High Intensity Sweeteners are useful tools for sugar reduction strategies
- Controversies exist concerning safety and efficacy
  - Mainly through different study types (Observational vs. RCTs)
- The Industry Responds Internally and Externally via
  - Review Studies and Releases
  - Leveraging Trade Associations
  - Identify Gaps-Transparency in industry funded research with world class researchers
  - Involvement in research consortia
  - Technological advances and discovery to improve sweeteners (i.e. sustainability via fermentation; blends)

