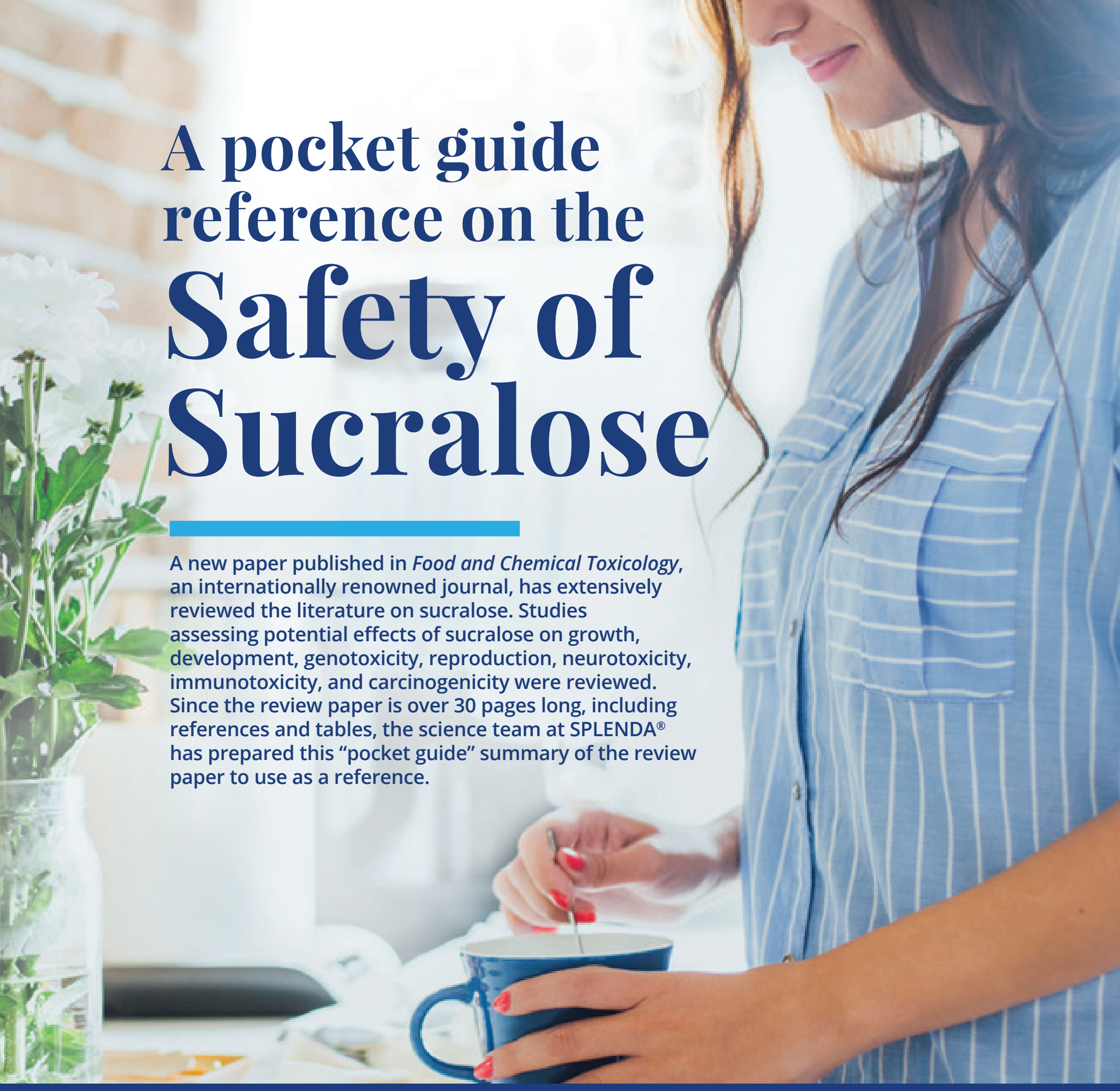
A pocket guide reference on the Safety of Sucralose



A new paper published in *Food and Chemical Toxicology*, an internationally renowned journal, has extensively reviewed the literature on sucralose. Studies assessing potential effects of sucralose on growth, development, genotoxicity, reproduction, neurotoxicity, immunotoxicity, and carcinogenicity were reviewed. Since the review paper is over 30 pages long, including references and tables, the science team at SPLENDA® has prepared this "pocket guide" summary of the review paper to use as a reference.

Numbers At-a-Glance

133
Peer-reviewed studies referenced in this paper

46
Government and regulatory reports referenced in this paper

5
Species tested in pre-clinical studies referenced in this paper

10
Different genetic toxicology and carcinogenicity studies on sucralose referenced in this paper

24
Human studies on sucralose reviewed in this paper

19
Human randomized controlled trials on sucralose reviewed in this paper

16
Human studies on sucralose and glycemic parameters reviewed in this paper

Regulatory Status and Health Agency Position

FIND IT ON PAGE 325, PARAGRAPH 1.1

Regulatory bodies around the globe conclude that sucralose is a safe sweetener.

Major health agencies around the world support that sucralose can be a helpful tool for lowering calorie and/or carbohydrate intake when replacing sugar.

Chemical Structure, Metabolism and Excretion

FIND IT ON PAGE 327, PARAGRAPH 2.1.4

Studies suggest that sucralose has many similarities in structure and chemistry to sucrose (common table sugar). Unlike sugar, sucralose cannot be broken down for energy.

As a result, most consumed sucralose is never even absorbed and is excreted intact in the feces.

In all species evaluated, there is no evidence of retention or build-up of sucralose, nor evidence of sucralose dechlorination, and any absorbed sucralose is quickly excreted.

Blood Sugar

FIND IT ON PAGE 340-342, PARAGRAPHS 2.6-2.6.1.3

Well-designed, clinical studies in healthy subjects and subjects with diabetes confirm a lack of effect after repeated, long-term consumption of sucralose on overall health, including glycemic control.

Incretin hormones (such as glucagon-like peptide-1 [GLP-1] and insulin) are not acutely impacted when sucralose is consumed in the presence or absence of other food.

Cancer

FIND IT ON PAGE 329-340, PARAGRAPHS 2.2-2.5

The overall body of literature shows sucralose is not a carcinogen and does not increase the risk of cancer.

Reliable studies designed to assess long-term exposure of sucralose on neurotoxicity, gene toxicity and cancer development repeatedly demonstrate a lack of safety concerns.

Weight Gain

FIND IT ON PAGE 349, PARAGRAPH 4

Research reviewed from both animal and human studies confirms that sucralose does not cause weight gain.

Intake During Pregnancy and Childhood

FIND IT ON PAGE 349, PARAGRAPH 3

The average daily intake (ADI) of children are well within the ADI levels set by regulatory agencies around the world.

Estimated intakes of sucralose, even using conservative approaches, remain well below acceptable daily intake values.

Evidence also shows that there is no adverse effect of sucralose in pregnancy.

Reproduction, Growth and Development

FIND IT ON PAGE 334, PARAGRAPH 2.3.4

Specific investigations show no effect of sucralose on fertility or reproduction.

In animal model studies, including with in utero exposure, no adverse impacts of sucralose have been observed. Multiple generation studies with high daily sucralose intakes during gestation, weaning and throughout life show no health implications for growth or development.

Gut Microbiome and Function

FIND IT ON PAGE 338, PARAGRAPH 2.3.6.2

No health effects could be expected by exposure of sucralose to the gut microbiome.

A wide body of evidence shows sucralose is not an energy source for, or metabolized by, the gut microflora.

Research also shows a lack of clinically meaningful effect on gut hormones and/or gut function.

In Summary

Over 100 scientific studies representing over 20 years of research support the safety of sucralose. That sucralose can be used as part of a healthy diet is also supported by independent health authorities including:

- Academy of Nutrition and Dietetics
- American Diabetes Association
- American Heart Association
- American Academy of Pediatrics
- American Cancer Society
- Food safety regulatory agencies around the world (including FDA, Health Canada, European Food Safety Authority, Japanese Ministry of Health and Welfare, Food Safety of Australia/New Zealand, among others).

ALL CONCLUSIONS WITHIN THIS RESOURCE CAN USE THE FOLLOWING CITATION:
MAGNUSON, B. A., ROBERTS, A., & NESTMANN, E. R. (2017). CRITICAL REVIEW OF THE CURRENT LITERATURE ON THE SAFETY OF SUCRALOSE. FOOD AND CHEMICAL TOXICOLOGY, 106 (PART A), PP. 324–355.

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