

SWEETENERS, MYTHS AND TRUTHS

OBJECTIVES:

- Study different types of sweeteners and their level of Acceptable Daily Intake (ADI).
- Find out which sweeteners are most consumed.
- Study possible fears regarding sweeteners, and see if these fears have a rational base; study the myths and truths about of sweeteners.

PROBLEM:

- Chemophobia.
- Ignorance of the term “Acceptable Daily Intake (ADI)”.
- Bad name for no acceptable reason.
- Origin of the sweetener.

ACCEPTABLE DAILY INTAKE:

Amount of sweetener that can be ingested daily without noticable risk to health.

$$ADI = \frac{NOAEL}{Interspecific\ variability * Intraespecific\ variability}$$

TYPES OF SWEETENERS:

- Synthetic

Saccharin

Cyclamate

Aspartame

Acesulfame-K

Sucralose

- Natural

Xylitol

Stevia

Sweetener	ADI (mg/kg)
Saccharin	2,5
Cyclamate	11
Aspartame	40
Acesulfame-K	9
Xylitol	-
Stevia	4
Sucralose	0-15

PEOPLE'S THOUGHTS:

- Known sweeteners:



Saccharin, Stevia



Cyclamate, Acesulfame-K

- Most consumed sweeteners:



Saccharin, Stevia



Cyclamate, Acesulfame-K,
Xylitol, Sucralose

- Sweetener's fame:



Stevia



Aspartame

- Fame based on the origin of the sweetener:



Natural



Synthetic

- Chemophobia: A high percentage of people have a fear of or a prejudice against chemical substances.

CONCLUSIONS:

- A big part of the population has an irrational fear of sweeteners, especially in reference to the letter E on the label, and in reference to the origin of the sweetener.
- Saccharin is the most consumed sweetener, and together with stevia, the most famous. In contrast, aspartame is the one with the worst name. These data are quite inconsistent with the acceptable daily intake levels.
- The Acceptable Daily Intake (ADI) chart helps to see that wide spread beliefs in relation to sweeteners are false.