

Ultra-processed foods (UPF) and obesity, CVD/diabetes, cancer risk: state of the art and critical aspects: Association or causal effect

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Conflict of Interest (for last 3 years)

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Ultra-processed food: What is it?

Heart and Stroke Canada Definition

Those foods that go through multiple (?) processes (extrusion, moulding, milling) (? Boiling, baking, frying?). May contain added ingredients (? Christmas cake?) and are highly manipulated (? Pancakes tossed in a frying pan?).

Official Examples are soft drinks, sweetened breakfast cereals, chips, candy, chicken nuggets, hot dogs, fries and more (?).

(Beer, wine, spirits =“traditional” therefore as “Traditional foods” not included).

NOVA Definition

Group 4: Ultra-processed foods

They are the ones that use many ingredients including food additives to improve palatability, processed raw materials, hydrogenated fats, modified starches etc. and ingredients that are rarely used in home cooking such as soy protein or mechanically separated meat.

These foods are mainly of industrial origin and are characterized by a good and pleasanter taste and the fact that they can be stored for a long time.

Is Dairy – “Processed?”

Is milk (dairy) highly processed?

2% milk- set amount of fat removed

Heated to the right temperature to kill pathogens

Vitamin D added from highly processed

Sheeps’ wool washing with solvent added and removed to purify the lanolin (wool grease) from which the D is extracted

Bread – “Processed?”

Is bread processed: harvested, milled and separated into white flour by differential milling, separating the germ and cereal fiber from the “white flour”. These can then be reassembled in the right combination to give a “whole wheat” product (after careful heating of the germ fraction to prevent fat rancidity on storage).

Traditionally the less processed flour is “stone ground”- no separation or reconstitution – flour grain particle size may be larger with stone grounding.

Whole wheat Products

Processed as flour and baked or cooked as “wholegrain”

Bread baking – processing (flour, water, salt, fat)

kneading

then wait and let dough “leaven”

then bake at specific temperature for a specific time

This processed food is called “whole wheat “

Is it whole?

You can have whole grains or intact grains as

bulgur, tabouli salad, pumpernickel breads – lower GI than regular “breads”

Still called “whole grain” not “intact grains”

**Is processing “acceptable” – how much is required to make it
“ultra” processed and unacceptable**

Pasta

Is pasta an Ultra processed food?

No it is “traditional”

But very complex preparation from wheat flour more processed than white bread

Is all processing harmful?

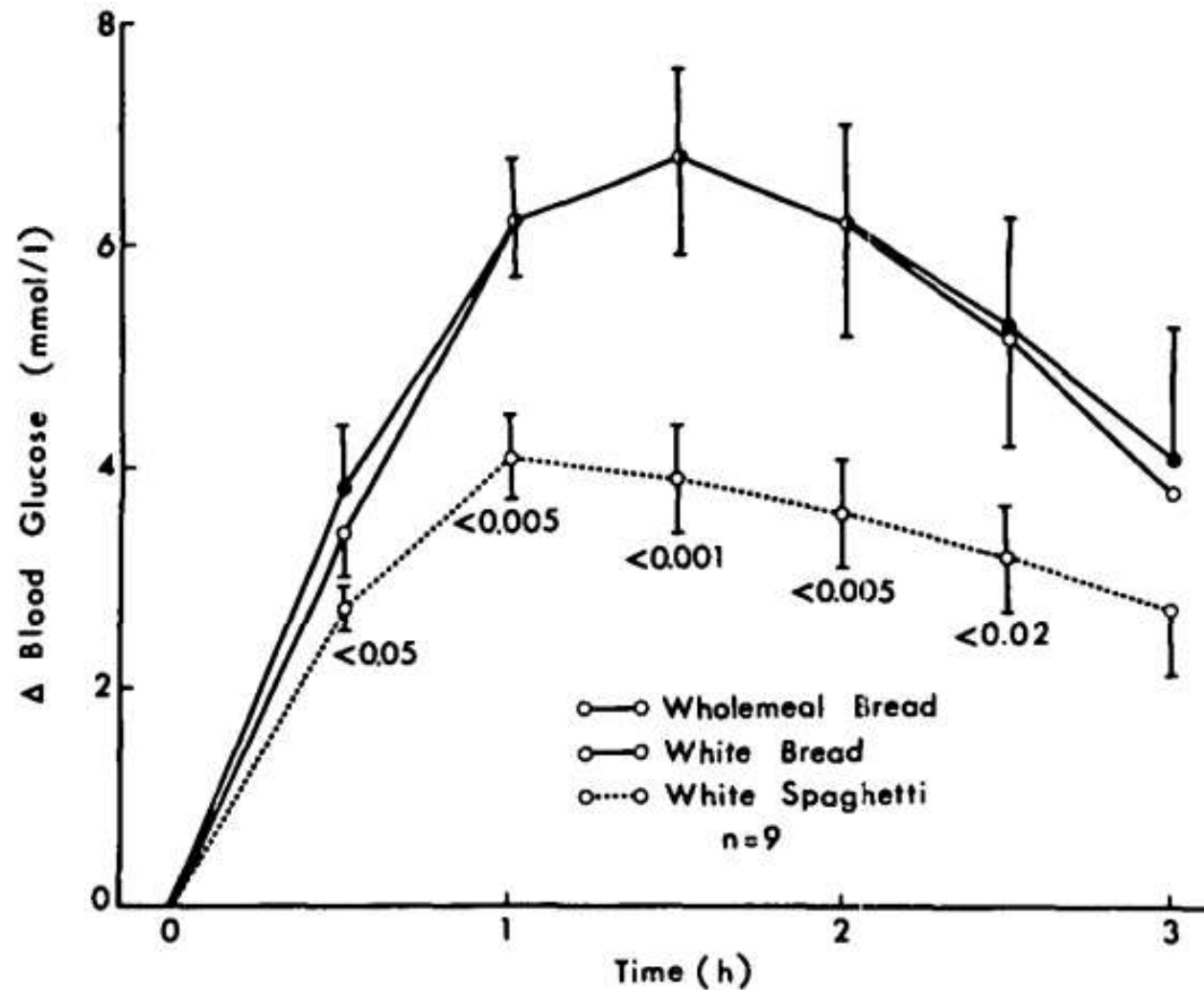
White Pasta may have health advantages over white bread

Our Livia Augustin studied the association of bread and pasta with breast and colorectal cancer risk using data from two Italian case-control studies.

The ORs of breast cancer for the highest versus the lowest quintile were 1.28 (95% CI: 1.03-1.58, P-trend = 0.0342) for bread and 1.07 (95% CI: 0.88-1.31, P-trend = 0.7072) for pasta.

? So Pasta –more processed- better than white bread?

Glycemic Response to Pasta versus White bread



Pasta v bread postprandial glycemc response

Christopher Gardner's SWAP- MEAT trial: Animal v Plant products, Meat v Vege-Burger

Crossover trial of 36 participants

Mean ↓ TMAO, Vege v Animal 2.7 ± 0.3 v 4.7 ± 0.9 (P=0.012)

Mean ↓ LDL-C, Vege v Animal 109.9 ± 4.5 v 120.7 ± 4.5 (P=0.002)

Mean ↓ Weight, Vege v Animal 78.7 ± 3.0 v 79.6 ± 3.0 (P< 0.001)

Vege-Burger highly processed

Meat unprocessed

**So Ultra Processed foods means bad food but in practice it all depends
Traditional things are good! (beer, wine,)**