Berry Polyphenol

Nutrition science shows that non-nutrient components of plant foods improve health

WHAT?

- Polyphenols are the main type of bioactives (non-nutrients) in plant foods
- Protects plants from environmental stressors & pathogens
- Contributes to their colour, flavour & smell

KEY CLASSES?

- Flavonoids
- Lignans
- Phenolic acids
- Stilbenes

KEY SOURCES?

- Fruits & vegetables
- Nuts & seeds
- Grains
- Oils
- Legumes
- Tea, coffee & wine

The rise of polyphenols

2800 BC — Evidence of plant foods being used as medicine

1912 — Vitamins first discovered to explain health benefits of food

1980s — Many polyphenols in plants first identified as health promoting

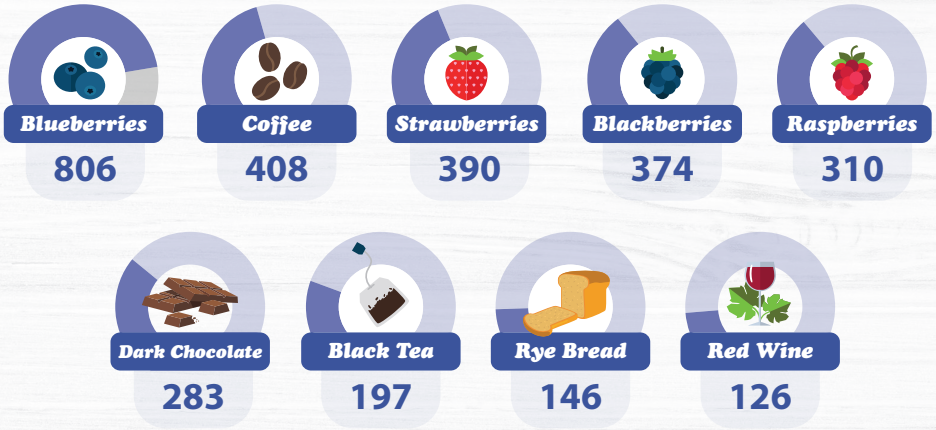
1990s — Antioxidant capacity in fruits shown to correlate to their polyphenol content

TODAY — Health benefits established with 8000+ polyphenol compounds identified

Common sources of polyphenols

Total polyphenol content per serve (mg)[1]

- Berries are the highest food source of polyphenols per serve[1]
- Anthocyanins represent up to 70% of their total polyphenol content[2]
- Some berries have been associated with lower Type 2 Diabetes risk[3] and weight gain[4] than for total fruits, possibly due to their high polyphenol content



Polyphenols are much more than antioxidants

CARDIOPROTECTIVE

- Anti-platelet effects
- Anti-inflammatory effects
- Inhibits LDL oxidation
- Lowers incident of CVD

ANTI-DIABETIC

- Can enhance insulin production
- Improves insulin sensitivity

PREBIOTIC

- Prebiotic-like effects
- Increases Bifidobacterium & Lactobacilllus

ANTI-CANCER

- Protective effect in human cancer cell models

ANTI-AGEING

- Antioxidant & anti-inflammatory effects may result in anti-ageing benefits

NEUROPROTECTIVE

- Improves brain plasticity
- Supports memory
- May reduce cognitive decline

1. Perez-Jimenez et al. EJCN. 2010 2. Olas. Front. Pharmacol. 2018 3. Bertoia et al. PLoS Med. 2015 4. Muraki et al. BMJ. 2013

NRAUS NUTRITION RESEARCH | Hort Innovation

The project has been funded by Hort Innovation using the blueberry, raspberry and blackberry research and development levies and contributions from the Australian Government. Hort Innovation is the grower-owned, not-for-profit research and development corporation for Australian horticulture.