ALMONDS & GUT HEALTH

ALMONDS CONTAIN:

- ✓ Protein
- ✓ Vitamin E
- ✓ Healthy Fats

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The Gut Benefits of ALMONDS

Interest in gut health has increased exponentially over recent years. Understanding what drives a healthy gut is still in its infancy, but current knowledge suggests a healthy gut is dependent on an abundant and diverse gut microbiota [1]. Lower gut microbiota diversity is associated with a range of disorders and disease states, including cardiovascular disease, type 2 diabetes and inflammatory bowel disease [1]. The nutrients that we get from food, in particular fibre, phytochemicals (particularly flavonoids and polyphenols) and unsaturated fatty acids, can positively impact the gut microbiota [2,3].

Almonds contain a unique nutrient package that includes all three, but what exactly is the evidence base for nuts and gut health?

SUMMARY: What do clients need to know?

- Gut health, and specifically microbiota balance and diversity, can influence overall health.
- Almonds are one of the few foods to contain a unique package of fibre, phytochemicals and unsaturated fat, that can all positively affect the gut microbiota composition.
- There is established evidence that eating at least 1 large handful (>42g) of almonds daily has a positive effect on gut microbiota - both increasing beneficial bacteria and decreasing potentially pathogenic types.
- Evidence suggests that long-term nut consumption may also decrease the risk of colorectal (and colon) cancer recurrence and death, and this link may be more apparent in women than men. Almonds contain the highest content of fibre, and one of the highest amounts of phytochemicals, of all nuts.

About the research

A literature review investigating the relationship between nuts, specifically almonds, and gut health was conducted by Nutrition Research Australia (NRAUS). A review of the literature was undertaken via the PUBMED database. Study types were limited to randomised controlled trials (RCTs), cohort studies and systematic literature reviews (SLR). Targeted searches were also conducted in Google Scholar using key terms.

Research findings in a snapshot: THE GUT MICROBIOTA

A 2020 SLR and meta-analysis of nine RCTs found strong evidence that both almonds (5 studies) and walnuts (3 studies) can improve the gut microbiota. There was an absence of evidence for other nut types [8]. Almonds had a dual effect, increasing the abundance of healthy short chain fatty acids producing bacteria, and decreasing potentially pathogenic bacteria [3,4,7,13]. In one study, even greater effects were found in children, where 42.5g and 85g of almonds per day over 3 weeks had a more pronounced effect on gut microbiota in four-year-old children compared with their parents [7].

Is the level of processing important?

Research has shown that whole and chopped almonds have a greater positive impact on the gut microbiota than almonds in butter form [2].

This may be because approximately 50% of the fibre content of almonds is found in the almond skin [9].

Research findings in a snapshot: COLORECTAL AND COLON CANCER

The effect of nuts on colorectal (and colon) cancer risk remains inconclusive, across two SLRs of case control and cohort studies, plus one additional cohort study not included in the SLRs published to date.

A 2015 SLR of two cohort studies and one case control study reported a positive effect of nuts on colorectal cancer risk, while another 2018 SLR of six cohort studies found no association [10,11]. Differences may be attributed to sex, with larger risk reductions reported in women. In a large prospective cohort study involving ten European countries, eating at least 6.2g nuts per day was associated with a 31% and 19% lower risk of colon and colorectal cancers in women, respectively, with no association found in men [12].

A 2018 cohort study reported that eating at least two handfuls (>57g) of nuts per week was associated with a lower incidence of both colorectal cancer recurrence and death, compared to patients who abstained from nuts [13].

How are Almonds linked to GUT HEALTH?

Nuts are one of the few foods that provide a nutrient package of fibre, phytochemicals (flavonoids, flavanones and polyphenols) and unsaturated fatty acids, which may explain their strong beneficial effects on bacterial abundance and microbiota composition.

Fibre is well known to provide important fuel for colonic bacteria, and phytochemicals act like prebiotics, positively influencing the maintenance of healthy and diverse microbiota [3,4]. Unsaturated fatty acids have been shown to have antimicrobial properties and also benefit gut microbiota composition [2].

Amounts and frequency: What does the science say?

- One large handful (42g) of almonds or walnuts per day over 3-12 weeks had positive effects on the gut microbiota.
- Two or more handfuls (57g) of nuts per week were associated with a lower incidence of colorectal cancer recurrence and death [13].

5 REASONS

Why Almonds are good for GUT HEALTH

- Source of fibre (3g/serve), including prebiotic fructans that feed the gut microbiota [14].
- High insoluble to soluble fibre ratio (7:1), with the skin containing approx. 50% of the fibre [9].
- Rich in unsaturated fatty acids [14].
- Contains phytochemicals (flavonoids, flavanones and polyphenols) - again these are particularly rich in the skin [3,4].
- Compared to other nuts, almonds have the highest content of fibre, and one of highest amounts of phytochemicals [9,15].

Where to from here?

While it is clear that almonds improve the gut microbiota, more evidence is required on what the health outcomes of these specific changes to the gut microbiota are.

Further clinical trials that look specifically at the health effects of these microbiota changes are needed and will provide additional evidence-based recommendations for consumption.

TAKE HOME MESSAGE

Almonds are one of only a few foods that contain fibre, phytochemicals and unsaturated fat, nutrients that can positively affect bacterial abundance and microbiota composition, and support gut health. Eating at least 1 large handful (>42 g) of almonds daily, preferably whole or chopped, has been shown to have a positive impact on the gut microbiota.

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