Joint Working groups

In this guide

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This is a paper for discussion. It does not reflect the views of the Committee and should not be cited.

Joint position paper from the Advisory Committee on Novel Foods and Processes (ACNFP) & Committee on Toxicity (COT) on establishing a Safe Upper Limit for delta-9-tetrahydrocannabinol (Δ9-THC) and its precursor as contaminants of hemp-derived products and CBD novel foods

1.139 To support the assessment of cannabidiol (CBD) novel foods the Joint Advisory Committee on Novel Foods and Processes (ACNFP) and COT Subgroup developed a statement on a safe upper intake level for tetrahydrocannabinol

(THC) as a contaminant of food.

1.140 The Committee reviewed the draft statement which summarises the position reached by the Subgroup and the evidence that underpins it.

1.141 The Joint position paper from the (ACNFP) & (COT) on establishing a Safe Upper Limit for delta-9-tetrahydrocannabinol (Δ9-THC) and its precursor as contaminants of hemp-derived products including CBD novel foods | Advisory Committee on Novel Foods and Processes was later published.

Plant-based drinks

1.142 Plant-based drinks are widely used as alternatives to animal milks such as cows' milk. They include drinks made from beans, peas, cereals, nuts and seeds.

1.143 While the availability and use of plant-based drinks in the UK have increased in recent years, they are still much less popular than cows' milk.

1.144 Oat drinks are currently the most popular plant-based drink in the UK, followed by soya and almond drinks.

1.145 Cows' milk is an important contributor to intakes of calcium and other minerals and vitamins ('micronutrients') and for children aged 1 to 5 years, cows' milk is also a major contributor to energy, protein and saturated fat intakes.

1.146 Both cows' milk and plant-based drinks may contain chemical contaminants or naturally occurring components. These could include organic chemicals, heavy metals and mycotoxins. Naturally occurring components include glycosides, isoflavones and naturally occurring oestrogens may also be present. Some of these components may have positive or negative health effects.

1.147 In England and Wales, the Nursery Milk Scheme allows childcare settings to reclaim the cost of providing one-third of a pint of milk per day to children in their care. Also, the Healthy Start scheme provides its recipients with weekly payments that can be spent on healthy foods, including cows' milk. To inform considerations about the inclusion of plant-based drinks in these schemes, and, to provide holistic advice to on plant-based drinks to consumers, the Scientific Advisory Committee on Nutrition (SACN) and the COT agreed to undertake an assessment of the nutritional and toxicological aspects of plant-based drinks.

Approach to the assessment

1.148 SACN and COT carried out a benefit-risk assessment comparing cows' milk with almond, oat and soya drinks, the most popular plant-based drinks in the UK at the time of the assessment. They also compared milk with water.

1.149 The assessment considered the impact of both nutritional intake and toxicological exposure on health outcomes. The full report includes details of the methods and processes used in the assessment.

1.150 The assessment had a specific focus on children aged 1 to 5 years. However, given the increasing availability and consumption of plant-based drinks, the assessment was expanded to also cover adults and children aged 5 years and over.

1.151 The assessment did not cover individuals or groups of people with specific dietary or nutrient requirements, except for those following a vegan diet (or a diet that is mostly free from animal products).

1.152 SACN and COT used the Benefit Risk Analysis for Foods (BRAFO) approach to compare cows' milk with almond, oat and soya drinks.

1.153 The assessment considered the impact of replacing cows' milk with almond, oat and soya drinks from a nutritional and toxicological perspective. The assessment was mainly informed by:

- Previous evaluations undertaken by SACN on nutrition and by COT on toxicology and health outcomes.
- UK dietary survey and purchasing data for information on total volumes of cows' milk consumed and the types of plant-based drinks available in the UK.
- A nutritional substitution analysis to consider the potential impact on nutrient intakes of replacing cows' milk with plant-based drinks or water. This is discussed in more detail in the main report.

Benefit risk assessment

1.154 SACN considered the following nutrients in the assessment:

- Energy,
- Protein,
- Saturated fat
- Free sugars,

- Fibre,
- Vitamin A,
- Riboflavin,
- Vitamin B12,
- Vitamin D,
- Calcium,
- Potassium,
- Iodine,
- Zinc.

1.155 The rationale for the nutrients selected is discussed in the full report. SACN also considered salt.

1.156 COT considered a number of chemical contaminants and naturally occurring components and identified those for inclusion in the benefit-risk assessment based on:

- Their likely occurrence in cows' milk and plant-based drinks.
- Whether exposure was close to the relevant Health Based Guidance Value (the amount of chemical in food that a person can consume on a regular basis usually over a lifetime without any significant risk to health).
- Evidence on health outcomes and whether changes in exposure to chemical contaminants or naturally occurring components would likely be a public health concern.

1.157 COT included the following chemical contaminants or naturally occurring components in their assessment:

- Isoflavones,
- Lead,
- Dioxins and dioxin-like polychlorinated biphenyls (PCBs),
- Non-dioxin like PCBs,
- Per- and polyfluoroalkyl substances,
- Perchlorate,
- Mycotoxins (aflatoxin and ochratoxin A),
- Deoxynivalenol,
- Naturally occurring oestrogens (such as oestradiol).

Findings

1.158 At the time of the assessment, almond, oat and soya drinks available in the UK were not nutritionally equivalent to cows' milk. Replacing cows' milk with almond, oat or soya drinks would result in potential benefits and risks from both a nutritional and a toxicological perspective.

Nutritional benefits and risks

1.159 Replacing cows' milk with almond, oat and soya drinks may have nutritional benefits or risks, depending on whether they are typical, enhanced or 'unfortified and/or sweetened'. This is discussed in more detail in the main report.

Toxicological benefits and risks

1.160 For most toxicological chemical contaminants and naturally occurring components considered in the assessment, there was no clear difference between cows' milk and almond, oat or soya drinks. This was because either the chemical contaminants or naturally occurring components were not present in either cows' milk or plant-based drinks or were present at levels that posed little or no risk.

1.161 The only potential toxicological concern clearly identified relates to isoflavones from soya drinks in children aged 1 to 5 years following a vegan diet. This is because children are more highly exposed on a body weight basis than adults because of their smaller body size. Children following a vegan diet may consume a higher amount of soya than other children. This risk could be partially mitigated by ensuring that children following a vegan diet consume a variety of non-animal protein sources rather than relying solely on soya products.

1.162 The ingredients used to make plant-based drinks may be at risk of fungal contamination, which can result in the presence of mycotoxins (naturally occurring toxins produced by fungi that can contaminate food and cause health problems). The limited data available suggests that this may not be a major concern in the UK, but it will be important to monitor the possible presence of these naturally occurring contaminants.

1.163 The full report provides detailed conclusions and recommendation for the general population, government and industry. It can be viewed at: Assessing the health benefits and risks of consuming plant-based drinks.