



# Assessing the health benefits and risks of consuming plant-based drinks: peer review comments form

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## Introduction

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The draft report is a joint report from the <u>Scientific Advisory Committee on Nutrition</u> (SACN) and the <u>Committee on Toxicity of Chemicals in Food, Consumer Products and the</u> <u>Environment</u> (COT).

You are invited to provide comments on the scientific content of the joint SACN and COT draft report, Assessing the health benefits and risks of consuming plant-based drinks. Please provide your comments in this peer review comments form. Add your comments to the tables in the '1. General comments' and '2. Comments by paragraph' sections, as appropriate.

You are also invited to draw the committees' attention to any evidence that they may have missed that meets the inclusion criteria provided in table A3.1 in the draft report.

After this peer review process, any eligible evidence will be considered by SACN and COT. These will only be included in the final report if they change existing conclusions or add to existing work.

Issues of risk management are outside the remit of SACN and COT and will not be considered as part of this peer review process.

#### How to complete this form

You do not have to complete both sections of the peer review.

Do list any references in full that you wish the committee to consider (and that meet the inclusion criteria).

Do not PDF this form.

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### How to submit this form

The deadline to submit this form is 5pm on 17 September 2024.

Once you've completed this form, <u>complete this survey</u> to give your details and upload the form.

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All correctly submitted peer review comments and SACN and/or COT responses will be published with the final joint report.

# 1. General comments

#### What general comments do you have about the draft report?

Give general comments in the format 'Keyword - Comment'.

Use the table below to give your general comments.

Press 'Tab' in the last cell of the table to create a new row.

Keyword	Comment
Summary	The Vegan Society welcomes the conclusion of the draft report that fortified, unsweetened soya, almond or oat drinks are an acceptable alternative to cows' milk and should be offered as an alternative where cows' milk would usually be consumed, with soya being preferred due to the higher protein content. This has long been the nutritional advice of the registered dietitians who work at the Vegan Society. We hope that this recommendation results in Government providing alternative milks to children in settings where cows' milk is currently offered or consumed, particularly under the School and Nursery Milk schemes, as our 'Play Fair with Plant Milk' campaign has called for. Currently, parents of children who cannot eat animal milk products must provide their own drinks, which is inequitable and not always possible for low-income families.
	We support the report's call for increased fortification of Plant-Based Drinks and encourage industry to fortify products where they have not already done so, and where appropriate risk analysis has been carried out across population groups, while noting that any industry standards should be realistic and equitable across the Plant-Based Drinks and other dairy alternative industries. It should be considered that the data provided in the COT/SACN report is now out of date in terms of the prevalence of different fortificants in Plant-Based Drinks, and an updated data set is required.
	The Vegan Society maintains that cows' milk is not an essential component of human diets, but that "if it is not consumed, substitution of other dietary components is needed to replace the micronutrients it provides". The Vegan Society notes that replacing cows' milk with oat or almond milk would lead to reduced population intakes of protein, however the National Diet and Nutrition Survey and Diet and Nutrition Survey of Infants and Young Children indicate

Keyword	Comment
	that current protein intakes for all ages currently exceed recommendations. Plant-Based Drinks also have the potential to increase fibre and decrease saturated fat intakes in the UK population, improving the numbers of people meeting the recommended daily intake of these nutrients with benefits for long- term health outcomes.
	We submit further evidence below on these and other topics raised in the report, including the classification of free sugars, isoflavones and micronutrients, in the hope that these will be considered before the Committee makes a final report.
Free sugars	The Vegan Society notes that the UK dietary guidelines use a definition of 'free sugars' that explicitly excludes lactose and galactose (which is by contrast implicit in the definition used by the World Health Organisation (WHO) , Guideline: Sugars intake for adults and children. Geneva; 2015. <u>https://iris.who.int/bitstream/handle/10665/149782/9789241549028</u> <u>eng.pdf;jsessionid=D406600B739816E7E97AFD9F13258999?seque</u> <u>nce=1</u> ).
	We need further information and justification on the exclusion of lactose and galactose from the definition of 'free sugars'. A decrease in cariogenic properties of lactose sugars is referred to in the report, but the same is not stated for galactose. There is now increasing evidence that during extended breastfeeding, lactose is shown to be significantly cariogenic ("any breastfeeding $\geq$ 18 months significantly increased caries risk (RR = 1.45, 95%Cl 1.31–1.60)." Whilst this evidence has come to light after the initial cut-off for inclusion of studies, we feel it would be remiss not to consider it due to its direct relevance to the subject matter. ("A longitudinal study on the impact of breastfeeding with or without formula milk on dental caries" Sritangsirikul et al. 2024, Nature https://www.nature.com/articles/s41598-024-60582-w ). The demonstrated cariogenicity of lactose means that consumption of mammal milk after the age of 2 needs to be re-examined. This report needs to carefully examine whether lactose and galactose do in fact meet the level of detriment used by SACN/COT to classify

Keyword	Comment
Free sugars (ctd)	'free sugars' in people over the age of 2.
	The Scientific Advisory Committee on Nutrition (SACN) states that 'free sugars' should not exceed 5% of energy intake for children aged 2 years and above, and children aged 1-5 should not be given sugar sweetened beverages.
	The free sugar content of plant-based drinks (PBDs) has been highlighted as a concern. However, at less than 5g per 100ml for even sweetened varieties of Plant-Based Drinks fall into the category of 'low' or 'moderate' sugar content. The overall sugar content of sweetened Plant-Based Drinks is comparable to that in cows' milks, which contain lactose and galactose sugars (about 7% by calories, 5% by mass).
	When compared to unsweetened Plant-Based Drinks, which contain no free sugars, cows' milks have been found to contain almost four times the sugar content.
	The majority of Plant-Based Drinks are compliant with current guidance around HFSS (high fat, sugar and salt) foods, and all unsweetened versions are HFSS compliant.
	The Feeding the Future (FEED, Assessing Performance of Contemporary Plant-Based Diets against the UK Dietary Guidelines: Findings from the Feeding the Future Study. Nutrients 2024; 16(9) 1336 https://doi.org/10.3390/nu16091336, https://www.mdpi.com/2072-6643/16/9/1336 ) study found that the average intake across all diet groups exceeded the recommendation for the maximum intake of free sugars (<5% energy). For clarity, excess intake of free sugars was not disproportionately higher in those consuming Plant-Based Drinks.
	The Vegan Society also questions whether the sugars naturally found in oat milks from breakdown and processing of oats should fall into the same category as 'free sugars' as they currently are in this draft COT/SACN report. Please can further explanation of this decision be provided including the rationale for the UK's dietary guideline definition of free sugars in this capacity.

Keyword	Comment
Isoflavones/ phytoestrogens	The current draft of this COT/SACN report states that intake of phytoestrogens from soya drinks in children aged 6 months to 5 years of age is significantly less than the estimated maximum intake of 9.5mg/kg(bw)/day when considering soya formula (which contains 0.98-2.8mg/kg(bw)/day) but also suggested that other soya products in the diet may bring phytoestrogen intakes closer to maximum level. The draft states this may affect some population groups more than others, for example vegan infants.
	The Vegan Society questions the validity and applicability of the evidence on phytoestrogens used to inform the statements made in the draft report. To date, no studies done in human infants have shown any risk to growth or development for infants fed soya-based formula. A 2014 systematic review and meta-analysis found that soya infant formula can support normal growth and development in full-term infants, and that blood results, bone health and protein levels for these infants were comparable to those fed cows' milk formula or human breast milk. (Safety of soya-based infant formulas in children, 2014, Vandenplas et al. Br J Nutr. 111,1340–60. doi: 10.1017/S0007114513003942, https://pubmed.ncbi.nlm.nih.gov/24507712/ ) .
	From the age of 6 months, the British Dietetic Association (BDA) paediatric specialist group states that soya infant formula can be used for infants unable to consume animal milk products for medical or ethical reasons. This is on the basis that any hypothetical risks to infant development (which have been identified in studies of non- human animals only) from phytoestrogens are significantly reduced. (Paediatric Specialist Group Position Statement Use of Infant Formula based on Sov Protein for Infants 2022.
	<ul> <li>Formula based on Soy Protein for Infants 2022, <u>https://www.bda.uk.com/static/a15e4650-c305-4e79-8a2ee03a6216420a/Paediatric-Specialist-Group-Position-Statement-Soy-Infant-Formula-Use-July-2022-Branded.pdf</u>).</li> <li>A study of Plant-Based Drinks for vegetarian and vegan toddlers found that Plant-Based Drinks should not be considered equivalent to cows' milk for these age groups, mainly due to the lack of iodine and zinc present in Plant-Based Drinks available for this particular study population.</li> </ul>

Keyword	Comment
Isoflavones/ phytoestrogens (ctd)	The Vegan Society continues to reinforce that cows' milk products should not be considered the human nutritional standard. Rather, human milk for infants under the age of 2 is the appropriate standard. The study authors consider that the best Plant-Based drink choice for vegetarian and vegan toddlers is fortified soya milk due to the higher amount and quality of protein, with other varieties recommended for toddlers allergic to soya. This continues to be the recommendation of The Vegan Society dietitians.
	(Plant-based drinks for vegetarian or vegan toddlers: Nutritional evaluation of commercial products, and review of health benefits and potential concerns. Food Res Int 2022 Oct:160:111646. doi: 10.1016/j.foodres.2022.111646. https://pubmed.ncbi.nlm.nih.gov/36076378/ ).
	The potential health risks of phytoestrogens in soya milk have been discussed at length in the literature and subsequent reports. Despite misconceptions, research suggests that soya products do not negatively impact hormones or fertility in adult humans.
	A COT report from 2013 stated that there was no definitive evidence that phytoestrogens in soya-based infant formula could adversely affect the health of infants. (Statement on the potential risks from high levels of soya phytoestrogens in the infant diet, COT 2013 https://cot.food.gov.uk/sites/default/files/cot/cotstaphytos.pdf).
	There have been arguments of a potential mechanism for risks associated with soya-based infant formula, but we are not aware of any human studies which have substantiated this hypothesis.
	Soya eaten early in childhood has been shown to have protective benefits against certain cancers. (Early Intake Appears to Be the Key to the Proposed Protective Effects of Soy Intake Against Breast Cancer, 2009, Messina & Hilakivi-Clarke, Nutrition and Cancer, 61:6, 792-798, <u>https://pubmed.ncbi.nlm.nih.gov/20155618/</u> ).
	Furthermore, "there is little evidence to suggest that isoflavones, when consumed at levels not exceeding typical Asian adult intake (<100mg per day which is equivalent to 850ml of soya milk), exert untoward effects in adults". (Neither soyfoods nor isoflavones warrant classification as endocrine disruptors: a technical review of

Keyword	Comment
Isoflavones/ phytoestrogens (ctd)	the observational and clinical data, 2021, Messina et al. Crit Rev Food Sci Nutr 2021;1-57. doi: 10.1080/10408398.2021.1895054, <u>https://www.tandfonline.com/doi/full/10.1080/10408398.2021.189505</u> <u>4</u> . ).
	There are fewer studies in children, but those conducted found soya isoflavone intake in children is safe and there are no clinically relevant effects on children's hormones. (Exposure to Soy-Based Formula in Infancy and Endocrinological and Reproductive Outcomes in Young Adulthood. JAMA. Strom BL, Schinnar R, Ziegler EE. 2001;286(7):807–814
	https://pubmed.ncbi.nlm.nih.gov/11497534/; Developmental status of 1-year-old infants fed breast milk, cow's milk formula, or soy formula. Andres et al. Pediatrics. 2012 Jun;129(6):1134-40. doi: 10.1542/peds.2011-3121, https://pubmed.ncbi.nlm.nih.gov/22641754/).
	Children's upper limit of isoflavones is currently halved (50mg/day = 430ml soya drink/100g tofu), despite no harm evidenced above these levels demonstrated in humans (Estimated Asian adult soy protein and isoflavone intakes, 2006, Messina M, Nagata C and Wu AH. Nutr Cancer. 2006;55(1):1-12. https://pubmed.ncbi.nlm.nih.gov/16965235/ ).
	United States of America Food and Drug Administration (USA FDA) and the World Health Organisation (WHO) conclude that foods containing naturally occuring oestrogens including soya and cows' milk are safe for human consumption and do not have adverse effects. (Naturally occurring hormones in foods and potential health effects, 2020, Palacios et al. Toxicology Research and Application. 2020;4. doi:10.1177/2397847320936281, https://journals.sagepub.com/doi/10.1177/2397847320936281 ).
	The Vegan Society highlights that the evidence used to assess maximum recommended level of soya isoflavones from the age of 6 months is outdated, of poor quality or not directly applicable to human infants (This is because much of the evidence for potential harms is based upon non-human animal studies, or case studies of extreme soya intake in human adults, and are thus explicitly outside the scope of recommendations for relevant literature laid out by

Keyword	Comment
Isoflavones/ phytoestrogens (ctd)	SACN/COT.) Furthermore, to have a robust evidence base, the effect of mammalian oestrogens in cows' milk should be considered and the references supporting the safety of mammalian oestrogen consumption for infants included in the report. We know that cows in farming are milked whilst they are pregnant, which introduces significant cow's oestrogen into the supply for human consumption.
Micronutrients	For adults, the main nutritional goal of Plant-Based Drinks is to provide calcium and other micronutrients. A study published in Nutrients in 2023 (A Comprehensive Analysis of the Nutritional Composition of Plant-Based Drinks and Yogurt Alternatives in Europe, Medici, Craig & Rowland, Nutrients 2023, 15(15), 3415; https://doi.org/10.3390/nu15153415, https://www.mdpi.com/2072-6643/15/15/3415 ) stated that Plant- Based Drinks when appropriately fortified have comparable levels of key vitamins and minerals to cows' milk. Another comprehensive review of Plant-Based Drinks across Europe supported the inclusion of appropriately fortified Plant-Based Drinks in the diet of healthy populations for the improvement of planetary health without risk of dietary deficiency. The Vegan Society supports the optimisation of fortification of Plant- Based Drinks to address potential nutrient shortfalls in the UK population. However, it should be acknowledged that the data provided in the COT/SACN report is now out of date (latest data set in 2022) in terms of the prevalence of different fortificants in Plant- Based Drinks. This is noted by the draft report for iodine (at an increase from 7 to 30% of Plant-Based Drinks being fortified since the 2022 data collection) but not made explicit for other micronutrients. Therefore, further exploration of current micronutrient fortification levels is needed. Firstly, we need to determine the percentage of Plant-Based Drinks now meeting the SACN/COT 'enhanced' definition as laid out by this draft report:

Keyword	Comment
Micronutrients (ctd)	"p105 'Enhanced typical' nutrient profile soya, almond and oat drinks
	"5.65 The potential benefits associated with the consumption of 'typical' nutrient profile plant-based drinks also apply to 'enhanced typical' plant-based drinks which include fortification with vitamin A and iodine at levels comparable with those found in cows' milk."
	Secondly, there is evidence presented that, given vitamin A, B12, calcium, iodine and zinc are all key nutrients for young children, they should be fortified in all Plant-Based Drinks based upon the data for this demographic. Currently, Plant-Based Drinks are not routinely fortified with vitamin A.
	The Vegan Society do encourage all manufacturers of Plant-Based Drinks and other Plant- Based products industries to further optimize the fortification of their products.
	However, The Vegan Society note that the SACN report: Feeding young children aged 1-5, reports that the mean vitamin A intake was above the Reference Nutrient Intake (RNI) in all age groups. The recent FEED study (The Feeding the Future (FEED, Assessing Performance of Contemporary Plant-Based Diets against the UK Dietary Guidelines: Findings from the Feeding the Future Study. Nutrients 2024; 16(9) 1336 https://doi.org/10.3390/nu16091336, https://www.mdpi.com/2072-6643/16/9/1336 ) also came to the same conclusion, that the mean vitamin A intake was above the RNI, across all dietary groups.
	In fact, vitamin A has only been identified as a nutrient of concern in children aged 1-5 years with well below the mean intake. Thus, the Healthy Start scheme was developed to fulfil the nutrients deserving attention in this age group (vitamins A and D). The current uptake of the Healthy Start scheme is far too low, with some Local Authorities potentially below 50% of eligible children (note, figures since Jan 2023 currently under revision: Healthy Start, NHS 2024 <a href="https://www.healthystart.nhs.uk/healthcare-professionals/">https://www.healthystart.nhs.uk/healthcare-professionals/</a> . Therefore, The Vegan Society believe that government attention should be focussed upon reaching universal uptake of Healthy Start, as opposed to reliance on cows' milk for vitamin A for children aged 1-5 years.

Keyword	Comment
Micronutrients (ctd)	Furthermore, there is a conflict between the evidence, and the recommendation of this draft report for vitamin A fortification in Plant-Based Drinks. We therefore ask for a review of the evidence: is vitamin A fortification of Plant-Based Drinks needed at all, and would pro-vitamin A carotinoids be a safer option than retinol.
	The Vegan Society recognises that organic drinks do not contain additional micronutrients, posing a risk of nutrient shortfalls for people substituting cows' milk with these Plant-Based Drinks. However, these represent a very small percentage of the UK market. As dietitians we continue to recommend fortified Plant-Based Drinks.
	As Plant-Based Drinks continue to grow in popularity, there is a need to have consistency in micronutrient fortification and help consumers incorporate them in the context of healthful and varied diets.
	The Vegan Society along with the British Dietetic Association (BDA) Maternal and Fertility Nutrition specialist group and representatives from the Food and Drink Federation (FDF) urge market leaders to fortify Plant-Based Drinks with equivalent amounts of iodine to cows' milk (25-50ug/100ml) due to its role in thyroid hormone production and foetal brain development.
	A study surveying plant-based dairy alternative products available on the UK market in 2023 found that only 28% of milk alternatives were fortified with iodine, compared to 88% with calcium and 83% with vitamin B12. (Iodine fortification of plant-based dairy and fish alternatives: The effect of substitution on iodine intake based on a market survey in the UK. Nicol et al. Br. J. Nutr. 2023, 129, 832–842, https://pubmed.ncbi.nlm.nih.gov/35373723/ ).
Macronutrients	A study published in Nutrients in 2023 (A Comprehensive Analysis of the Nutritional Composition of Plant-Based Drinks and Yogurt Alternatives in Europe, Medici, Craig & Rowland, Nutrients 2023, 15(15), 3415; https://doi.org/10.3390/nu15153415, https://www.mdpi.com/2072-6643/15/15/3415 ) stated that Plant- Based Drinks made from soya or other legumes have ample protein

Keyword	Comment
Macronutrients	levels, and provide all 9 essential amino acids.
	Pea milk is another high-protein Plant-Based Drinks which is not addressed in this report but provides an average of 2g protein per 100ml and is a source of all 9 essential amino acids.
	Whilst oat and almond milk contain low amounts of protein, this is not a concern for the average UK adult population, who can obtain protein from a variety of food sources. Evidence from the National Diet and Nutrition Survey (NDNS) shows that the average UK population generally exceeds their daily protein requirements. A recent study from 2024 found that whilst protein intakes for vegans are on average lower, they still meet national recommendations.
	The UK Diet and Nutrition Survey of Infants and Young Children (DNSIYC) shows that mean intakes of protein for children were also above the Reference Nutrient Intake (RNI). Furthermore, higher total protein intake in children aged 1 to 5 years is associated with higher BMI/weight in childhood. The SACN report: Feeding young children aged 1 - 5 years recommends "that government consider strategies to reduce consumption of excess protein in children aged 1 to 5 years". (https://www.gov.uk/government/publications/sacn-report-feeding-young-children-aged-1-to-5-years ). Replacing cow's milk with Plant-Based Drinks could support this recommendation.
	These findings are of concern in relation to wider evidence on the high prevalence of overweight and obesity in childhood in the UK, particularly in lower socioeconomic groups and in some ethnic groups.
	Evidence from NDNS and DNSYIC also show that mean intakes of dietary fibre fell below recommendations and saturated fats were above the current recommendation for both adults and children at all ages.
	In the latest NDNS in 2016-2019:
	Saturated fat intake exceeded the government recommendation of no more than 10% of total energy in all age groups. Mean intake was 13.1% of total energy for children aged 4 to 10 years, 12.6% for children aged 11 to 18 years, 12.3% for adults aged 19 to 64 years

Keyword	Comment
Macronutrients (ctd)	and 13.3% for adults aged 65 years and over.
	Average population intake of fibre was below the government recommendations of 30g per day. For children aged 1.5 to 3 years, 4 to 10 years and 11 to 18 years, mean intakes were 10.4g, 14.3g and 16.0g respectively. For adults aged 19 to 64 years and 65 years and over, mean intakes were 19.7g and 18.7g respectively.
	In the DNSYIC: Children aged 18-47 months had a mean intake of 14.8% of total energy from saturated fat, and children aged 48-60 months had a mean intake of 13.5% total energy, compared to the government recommendation of <10% energy intake.
	Fibre intake fell below the recommendation of 15g/day for ages 2 years and above (there is no fibre recommendation for children under 2 years of age). For children aged 18-47 months mean intake was 10.4g, and 88% did not meet daily fibre recommendations. In children aged 48-60 months mean intake was 12.6g and 72% did not meet daily fibre recommendations.
	All Plant-Based Drinks are low in saturated fats, which has been shown to benefit heart health and reduce the risk of cardiovascular disease. This is in comparison to cows' milk, which contains mainly saturated fatty acids. Cows' milks were found to contain four times the saturated fat content of Plant-Based Drinks in a study from 2023. This is particularly important when thinking about the Feeding the Future (FEED, Assessing Performance of Contemporary Plant-Based Diets against the UK Dietary Guidelines: Findings from the Feeding the Future Study. Nutrients 2024; 16(9) 1336 https://doi.org/10.3390/nu16091336, https://www.mdpi.com/2072-6643/16/9/1336 ) study, which found that of all dietary patterns only the vegan population meets national recommendations for saturated fat intake.
	All Plant-Based Drinks contain some fibre, and could contribute towards more of the UK population meeting the Reference Nutrient Intake (RNI) for fibre. This has potential positive health outcomes when considering cancer risk, bowel disease risk and cardiovascular disease risk (long term health conditions).

Keyword	Comment
Substitution	The Vegan Society supports the statement in this report that "cows' milk is not an essential component of the diets of young children or other age groups" but that "if it is not consumed, substitution of other dietary components is needed to replace the micronutrients it provides".
	There is evidence that calcium content and bioavailability of some fortified Plant-Based Drinks are equivalent to that of cows' milk. (Calcium Bioavailability of Calcium Carbonate Fortified Soymilk Is Equivalent to Cow's Milk in Young Women, Zhao et al (2005) J. Nutr. 135: 2379–2382, <u>https://pubmed.ncbi.nlm.nih.gov/16177199/</u> ).
	The current UK EatWell Guide, which is applicable for those aged 2 years and above, already recognizes the role of plant-based dairy alternatives such as Plant-Based Drinks in its 'Dairy and alternatives' section as good sources of calcium, protein and micronutrients for those who do not consume animal milks, or wish to reduce their intake of animal milk products. It primarily recommends unsweetened, calcium-fortified versions as also recommended in the draft report.
	The British Dietetic Association (BDA) has recognised that well- planned vegan diets can support healthy living across all life stages and recognize that for those who do not consume animal milk products, plant-based dairy alternatives are a viable alternative.
	We support the conclusion of the draft report that fortified, unsweetened soya, almond and oat drinks are an acceptable alternative to cows' milk for children aged 1 year and above and for adults.
	Unsweetened, fortified plant milks can be a healthy addition to a balanced diet. Importantly, this highlights one of the problems with the overly simplistic 'ultra-processed food' (UPF) debate: fortification is a vital type of processing, that can significantly benefit the nutritional health of the UK population.
	We ask that reference to "UPFs" is avoided in this draft report given the limited scientific evidence available. This is in line with recommendations made by SACN last year in their report on UPFs. (https://www.gov.uk/government/publications/sacn-statement-on-

Keyword	Comment
Substitution (ctd)	processed-foods-and-health/sacn-statement-on-processed-foods- and-health-summary-report).
	The Vegan Society supports the conclusion of the draft report that providing these alternatives is preferable to providing water in situations where cows' milk is normally consumed, and our 'Play Fair with Plant Milk' ( <u>https://www.vegansociety.com/take-action/campaigns/play-fair-plant-milk</u> ) campaign emphasises the need for policy changes in early years settings based on this statement.
	The free School Milk Scheme is designed to increase calcium intake for growing children, which can also be achieved with fortified plant- based alternatives. Parents and guardians of children who cannot drink cows' milk must currently provide their own drinks, which is inequitable and not always possible for low-income families. The Vegan Society wants to see broad, equitable access to plant-based alternatives such as unsweetened, fortified soya milk wherever animal milk is currently supported or promoted.
	The Vegan Society supports the conclusion of the draft report that that replacing cows' milk with water, as is the current reality for children unable to consume cows' milk under the School Milk Scheme, causes detrimental impacts on the children's intake of several micronutrients.
	For adults, The Vegan Society reinforces the findings of this draft report that replacing cows' milk with Plant-Based Drinks would lead to lower intakes of saturated fat and higher fibre intakes, both of which are associated with favourable health outcomes.
	Whilst outside of the scope of the report, availability of Plant-Based Drinks where cows' milk is currently supported or promoted would benefit those who cannot consume animal milk products for either ethical or health reasons, or who are choosing to consume less animal milk products.
Consumption	The data on consumption of Plant-Based Drinks by the UK population is limited by the quality or type of information collected by the National Diet and Nutrition Survey (NDNS) and Diet and Nutrition

Keyword	Comment
Consumption (ctd)	Survey of Infants and Young Children (DNSIYC) on plant-based alternative consumption.
	It is likely that data used for the draft report is not representative of the current intake of Plant-Based Drinks in the UK, as more recent market research suggests up to 48% of adults consume Plant-Based Drinks. The NDNS states 7% consumption in adults. This is a large discrepancy, which may be in part due to increasing popularity of PBDs since data collection, but likely also due to the lack of stratification for fully plant-based options within meals in NDNS data to date.
	The Vegan Society supports improved data collection on numbers of people following a vegetarian/vegan diet, and the consumption of plant-based dairy alternatives and soya-based foods in the NDNS and DNSIYC. This should include stratification by population subgroups. The Vegan Society have been in communication with the research team leading the NDNS regarding this point, and is pleased that they have confirmed a new structure will be in place for the NDNS covering 2019-2023, with additional levels of data collection within food groups to identify fully plant-based options, including Plant-Based Drinks.
	The recent Feeding the Future (FEED, Assessing Performance of Contemporary Plant-Based Diets against the UK Dietary Guidelines: Findings from the Feeding the Future Study. Nutrients 2024; 16(9) 1336 https://doi.org/10.3390/nu16091336, https://www.mdpi.com/2072-6643/16/9/1336) study recruited 6342 participants across five dietary groups (omnivore, 'flexitarian', vegetarian, pescatarian, vegan). They found Plant-Based Drinks were consumed by all diet groups, with highest consumption in vegans (average 226.5 ml/day). The study showed a higher consumption of Plant-Based Drinks across diet groups in FEED study than previously reported in other studies of this kind (European Prospective Investigation into Cancer and Nutrition (EPIC, https://epic.iarc.fr/), Nurses Health Study (https://nurseshealthstudy.org/ ), UK BioBank (https://www.ukbiobank.ac.uk/ ), Adventist Health Study (https://adventisthealthstudy.org/ ).

Keyword	Comment
Consumption (ctd)	and the importance of accessibility and affordability.
	The FEED study also showed that all diet groups, even those abstaining from animal milk products completely, met Reference Nutrient Intake (RNI) for calcium, protein, vitamin A, vitamin B12 and zinc. This suggests that there does not need to be a reliance on cows' milk to obtain sufficient amounts of these nutrients.
Industry	The Vegan Society recognises the value of industry optimisation of Plant-Based Drinks to include micronutrients including Vitamin B12, D, calcium and iodine.
	We acknowledge the report's recommendation that Plant-Based Drinks should be fortified with vitamin A, riboflavin, vitamin B12, calcium and iodine at least at comparable levels to those found in cows' milk, and also fortified with vitamin D.
	However, when considering an 'industry standard' or minimum nutritional composition it is important to acknowledge that the micronutrient content of cows' milk varies by season, husbandry and feeding practices and that cows' milk does not contain vitamin D. Therefore, realistic industry standards are important. The Vegan Society continues to reinforce that cows' milk products should not be considered the human nutritional standard. Rather, human milk for infants under the age of 2 is the appropriate standard.
	The Vegan Society notes the industry recommendations to:
	monitor and release data on the nutritional composition and levels of substances of toxicological concern (including isoflavone and mycotoxin content) of plant based drinks
	and:
	minimise the toxicological risks associated with Plant-Based Drinks. This includes minimising both contamination and undesirable naturally occurring components (such as isoflavones and mycotoxins)
	However, as the risk of toxicological contamination for Plant-Based Drinks was deemed both as low and not significantly different to

Keyword	Comment
Industry (ctd)	cows' milk, there is no rationale for recommending cows' milk over plant-based milks from a toxicological safety perspective, or imposing different levels of industry standards for monitoring and reporting contaminants to those in place for animal milk.
Socioeconomics	Households in the highest socioeconomic status (SES) group were the most likely to buy Plant-Based Drinks. We must therefore consider seriously, is there an inequality gap that the government can help address, especially given this is reflective of the overall health gap between socioeconomic groups. Whilst outside the scope of the current draft report, it is worth noting that unavailability of Plant-Based Drinks under government schemes has a disproportionate effect on minority ethnic groups in the UK who have a higher prevalence of lactose intolerance. This also goes for affordability of Plant-Based Drinks as research by The Food Foundations shows that SES, being of an ethnic minority group in the UK, as well as being a household with children, being a household with Disabled adult members, being a single adult household and/or being a household in receipt of benefits are each linked to food insecurity (The Food Foundation nationally representative surveys 2020 - present, https://foodfoundation.org.uk/initiatives/food-insecurity-tracking ).
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# 2. Comments by paragraph

#### What comments by paragraph number do you have about the draft report?

Give comments in the format 'Paragraph number - Comment'.

Use the table below to give your comments by paragraph.

Press 'Tab' in the last cell of the table to create a new row.

Paragraph number	Comment
Table 3.3	It is worth noting that the profile of Plant-Based Drinks in terms of fortification has changed since last data collection in 2022, with progressively more products covering a broader range of micronutrients than indicated in this table.
	All types of soya milk contain comparable protein to cows' milk at 3.1-3.6g/100g.
	Whilst oat and almond milk contain low amounts of protein, this is not a concern for the average UK adult population, who can obtain protein from a variety of food sources. Evidence from the National Diet and Nutrition Survey (NDNS) shows that the average UK population generally exceeds their daily protein requirements. A recent study from 2024 found that whilst protein intakes for vegans are on average lower, they still meet national recommendations.
	The UK Diet and Nutrition Survey of Infants and Young Children (DNSIYC) shows that mean intakes of protein for children were also above the Reference Nutrient Intake (RNI). Furthermore, higher total protein intake in children aged 1 to 5 years is associated with higher BMI/weight in childhood. The SACN report: Feeding young children aged 1 - 5 years recommends "that government consider strategies to reduce consumption of excess protein in children aged 1 to 5 years". Replacing cow's milk with Plant-Based Drinks could support this recommendation.
	These findings are of concern in relation to wider evidence on the high prevalence of overweight and obesity in childhood in the UK, particularly in lower socioeconomic groups and in some

Paragraph number	Comment
Table 3.3 (ctd)	ethnic groups.
	The content of even sweetened soya milk is only 2.4g/100g free sugars which fits the definition of a low sugar product. Typical and enhanced soya milk contained <1.5g/100g free sugars.
	Oat and almond are slightly higher but contain less than 4g/100g free sugars even for sweetened varieties, with typical and enhanced varieties of almond milk (<0.3g/100ml) and enhanced typical oat (0g/100ml) much lower.
	We feel it is remiss that total sugar content has not been analysed in this table, particularly relevant due to the lactose and galactose content of animal milk which is not declared as part of the table analysis.
	All types of soya milk, plus typical and enhanced almond milks contain less carbohydrates/100g than cows' milk, which is suggestive of lower sugar content, in the absence of declared total sugar contents. Only oat milk is higher in carbohydrates than cows' milk per 100g, due to naturally occurring carbohydrates in the oats.
	Both typical and enhanced typical Plant-Based Drinks provide valuable contributions towards B vitamin (including riboflavin, folate, B12), vitamin D, calcium, iodine, zinc, potassium and magnesium intake.
	All typical and enhanced Plant-Based Drinks have the advantage of providing vitamin D compared to cows' milk which contains none.
	Evidence from National Diet and Nutrition Survey (NDNS) and UK Diet and Nutrition Survey of Infants and Young Children (DNSIYC) show that mean intakes of dietary fibre were below recommendations and saturated fats were above the current recommendation.
Table 3.3 (ctd)	All Plant-Based Drinks contain some dietary fibre, as compared to cows' milk which contains none, and could contribute towards more of the UK population meeting the Reference Nutrient Intake

Paragraph number	Comment
	(RNI) for fibre. This has potential positive health outcomes when considering cancer risk, bowel disease risk and cardiovascular disease risk (long term health conditions).
	All Plant-Based Drinks assessed in this table are low in saturated fats , which has been shown to benefit heart health and reduce the risk of cardiovascular disease. This is in comparison to cows' milk, which contains mainly saturated fatty acids. Cows' milks were found to contain four times the saturated fat content of Plant-Based Drinks in a study from 2023. This is particularly important when thinking about the Feeding the Future (FEED) study, which found that of all dietary patterns only the vegan population meets national recommendations for saturated fat intake.
	This has potential positive health outcomes when considering cancer risk, bowel disease risk and cardiovascular disease risk (long term health conditions). Whilst sweetened and/or unfortified drinks do not show comparable micronutrient profile to cows' milk, it is worth noting that these iterations made up a small percentage of available Plant-Based Drinks in the UK. The Vegan Society continues to encourage consumption of fortified products to support those following a vegan diet to meet their calcium and other micronutrient needs.