LEAF annual conference 2024

TABLE - University of Oxford
Dietary change away from meat is not ‘optional’

The impacts of actual UK diets

Over 55,000 surveyed
High meat > 100g/day
Low meat < 50g day

Biggest reductions come from switching from high meat to low meat & from vegetarian to vegan

What about SCS in grazing systems?

Wang, Yet al. (2023). Risk to rely on soil carbon sequestration to offset global ruminant emissions. Nat Commun 14, 7625
Who's eating meat today in the UK?

Eight in ten British men say they are meat eaters compared to two-thirds of British women

<table>
<thead>
<tr>
<th>Diet Type</th>
<th>All Britons</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat eater (eat meat and/or poultry)</td>
<td>73</td>
<td>80</td>
<td>66</td>
</tr>
<tr>
<td>Flexitarian (mainly vegetarian, but occasionally eat meat or fish)</td>
<td>12</td>
<td>8</td>
<td>15</td>
</tr>
<tr>
<td>Vegetarian (do not eat any meat, poultry, game, fish or shellfish)</td>
<td>6</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Pescetarian (eat fish but do not eat meat or poultry)</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Plant-based / Vegan (do not eat dairy products, eggs, or any other animal product)</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>None of these</td>
<td>4</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

85% of Brits eat meat & dairy
2% don't eat any animal products
UK trends in meat consumption are unclear

Various healthy & sustainable diets have been modelled

Weekly

No more than **98 grams** of red meat (pork, beef or lamb),

**203 grams** of poultry

**196 grams** of fish

**1750 litres** milk / week

OR **175g** cheese

“Overall, the health of people following plant-based diets appears to be generally good, with advantages but also some risks, and the extent to which the risks may be mitigated by optimal food choices, fortification and supplementation is not yet known.”


### Overview of nutrients at risk of inadequacy and nutrients of favorably high intake across dietary patterns.

<table>
<thead>
<tr>
<th>Dietary Pattern</th>
<th>Nutrients at Risk of Inadequacy</th>
<th>Nutrients of Favorably High Intake</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegans</td>
<td>EPA, DHA, vitamins B12, D, calcium, iodine, iron (in women), zinc</td>
<td>fiber, PUFA, ALA, vitamins B1, B6, C, E, folate, magnesium</td>
</tr>
<tr>
<td>Vegetarians</td>
<td>fiber, EPA, DHA, vitamins B12, D, E, calcium, iodine, iron (in women), zinc</td>
<td>PUFA, ALA, vitamin C, folate, magnesium</td>
</tr>
<tr>
<td>Meat-eaters</td>
<td>fiber, PUFA, ALA (in men), vitamins D, E, folate, calcium, magnesium</td>
<td>protein, niacin, vitamin B12, zinc</td>
</tr>
</tbody>
</table>

**Systematic review of 141 studies from Europe, N America & SE Asia**


**Meat vs no meat: it isn’t either or**
The starting point is ill health

Caseloads of specific diet-related diseases are rising fast

- People in the UK with type 2 diabetes: Growing 1.3% each year for the next 10 years, from 4.0 million in 2019 to 4.6 million in 2030, an increase of 15%.

- People in the UK with coronary heart disease: Growing 1.4% each year for the next 20 years, from 2.7 million in 2019 to 3.6 million in 2040, an increase of 33%.

- People in the UK with colorectal cancer: Growing 1.4% each year for the next 20 years, from 41 thousand in 2019 to 56 thousand in 2040, an increase of 37%.
What if we shifted to a more circular food system?

Circularity principles: minimise and recycle food waste, human excreta and overconsumption of nutrients

Headline results

• Meat consumption would fall ~50%
• Milk cattle & fish remain important; specialised beef production & pork virtually disappear; poultry & eggs substantially decline
• Feed-food competition drastically reduced; some fodder crops remain
• Agri land use would fall by ~70%
• Per capita food emissions would fall by 29% (healthy diets scenario) or 22% (not healthy) or 33% (if exporting - although absolute increase of 55%)
• New crop rotations to maximise human nutrition needed

• Per capita impacts still higher than allowable food emissions threshold of 0.5 tonnes
• Whatever we do will require a lot of change!
Thank you

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