‘Sustainable’ Eating: Opportunities for Nutrition Professionals

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► What is a ‘sustainable diet’? Definitional aspects (and complexities)

► Dietary change needed? Evidence...

► Eat Well Guide - a healthy and sustainable diet?

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FACTS - Our current diets - Environmental impact

- Animal production = responsible for 1/3 of all agriculture’s greenhouse gas emissions (GHGe)
- 36% of calories produced by world’s crops are used for animal feed (Only 12% of those ultimately contribute to the human diet as meat and other animal products)
- Good diets = high amount of horticultural produce, yet land use is distorted by feeding ++animals (for meat and dairy)
- Food = major source of degradation of water, soil and biodiversity (not on a food label)
- We are unaware of high water use for food.
  - (The average US diet consumes 5,400l of virtual water/day - even veggie diet consumes 2,600 l/day).
- 87% of global fish stocks are over/fully-exploited (but we are still advised to eat fish!)
- Global food waste continues to be out of control!
  - (EU food waste is 89 million tonnes a year, worth about £950 per household)

www.foodsource.org
Food consumption - is there a problem?

• More people are fed than ever before
• The world produces enough food to feed everyone
• Food availability is 2870 kcal per person per day (FAO, 2011) - an increase of 670 kcal since 1961
• Increased consumer choice and food variety
• Proportion of income spent on food in wealthy countries is lower than it has ever been

BUT....

Global diet-related conditions

► Hunger: 850 million people globally with not enough to eat
► Nutritional deficiencies: 2 billion with nutritional deficiencies
► Overweight: 1.9 billion adults (>18 years); of these 650 million obese
► Obese children & teenagers: 41 million (<5 years) and 340 million (5-19 years)
► Diabetes:
  ► prevalence doubled since 1980 to 8.5%
  ► 420 million people with diabetes
  ► expected to rise to almost 650 million by 2040
  ► prevalence rising more rapidly in low and middle income countries
**THE FUTURE?**
Security for supply of nutritious food for a growing population at risk

Production of enough food of good nutritional quality to feed a growing population is reliant on adequate:

- Suitable land and soil
- Clean water
- Sunlight
- Pollinating insects

**Sustainability:**
a “*used by all means nothing*” term...?
What is a sustainable diet?

“Eat food. Not too much. Mostly plants” *Michael Pollan*

“Those diets with low environmental impacts which contribute to food and nutrition security and to healthy life for present and future generations. Sustainable diets are protective and respectful of biodiversity and ecosystems, culturally acceptable, accessible, economically fair and affordable; nutritionally adequate, safe and healthy; while optimizing natural and human resources” *Food & Agricultural Organisation, 2010*

A healthy and sustainable diet?

- Diversity - a wide variety of food eaten
- Balance achieved between energy intake and energy needs
- Based around: minimally processed tubers and wholegrains; legumes; fruit and vegetables - particularly those that are field grown
- *Meat, if eaten, in moderate quantities* - and all animal parts consumed
- Dairy products or alternatives eaten in moderation
- Unsalted seeds and nuts
- Small quantities of fish and aquatic products sourced from certified sources
- Very limited consumption of foods high in fat, sugar or salt and low in micronutrients
- Oils & fats with a beneficial Omega 3:6 ratio such as rapeseed and olive oil
- Tap water in preference to other beverages - particularly soft drinks

Adapted from Gonzalez-Fischer C and Garnett T (2016) Planets, pyramids and the Planet: Developments in national healthy and sustainable dietary guidelines: a state of play assessment
Some evidence that DIETARY CHANGES will make a difference...

A systematic review of studies shows GHG reductions are possible by switching to different diets

Systematic review of 63 studies

Relative differences in GHG emissions (kg CO2eq/capita/year) between current average diets and sustainable dietary patterns.

https://doi.org/10.1371/journal.pone.0165797
http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0165797

Real life non-meat diets have lower GHGs than various meat-based diets (UK example)

Do recommended healthy diets reduce GHGs?

Recommended Dutch diets have lower GHGs than average Dutch diets, but higher GHGs than balanced vegetarian, vegan or Mediterranean diets.

BUT: French study - some real life healthier diets can have higher GHGs than unhealthy diets

Healthier diets had higher GHGs, due to consumption of certain meats & dairy (both having high GHG) and some types of fruits.

Low nutrition diets had lower GHGs, due to higher consumption of sugary foods (sugar has low GHG).


Potential impact of a shift to a ‘healthier’ diet...

Higher impact

- Healthier dietary diversity, healthy calorie intake but:
  - Moderate meat
  - High in dairy
  - High in fruit & veg grown in greenhouses or air-freighted

Lower impact

- Healthier dietary diversity, healthy calorie intake and:
  - Low meat
  - Moderate dairy
  - High in legumes & pulses
  - High in seasonal field grown robust veg and fruit

How does the Eatwell guide compare to current intakes?

- Peter Scarborough et al. BMJ Open 2016;6:e013182
Change in intake of selected food groups and energy intake.

<table>
<thead>
<tr>
<th>Foods and beverages</th>
<th>Change in intake %</th>
<th>Energy intake change</th>
<th>New energy intake change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk and dairy</td>
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<tr>
<td>Meat</td>
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<td>Fish</td>
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<td>Fruit</td>
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<td>Vegetables</td>
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Harland et al (2012) (Previous Eat Well Plate)

Using NDNS data:
- 4% of UK adults met 5 targets
- (51%) achieved none
- 1% met all 6 targets

Even ‘achievers’ = not eating ‘sustainably’

“...improved consumer understanding and practical advice on how to use the eatwell messages is clearly required”

Meeting the UK EatWell recommendations?

Low income households need support to afford foods contained in Eat Well Guide:
- 26.9% households need to spend >1/4 disposable income
- For those earning < £15,860 42% of (after housing) disposable income would have to be spent
## A challenge for nutrition professionals?

### Practical applications

<table>
<thead>
<tr>
<th>Driver</th>
<th>Opportunity</th>
<th>Role for Nutrition Professionals</th>
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<tbody>
<tr>
<td>Habits</td>
<td>Non-meat or lower meat choices to be good value, accessible and desirable</td>
<td>Provide practical advice, such as meat-free recipes, recipes including more plant protein, how to</td>
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<td></td>
<td>tasty choices</td>
<td>increase fruit, vegetables and wholegrains</td>
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<td>Cultural significance of meat eating</td>
<td>Draw on traditional diets based on lower meat/plant-based eating</td>
<td>Educate on different types of plant-based diets e.g. Mediterranean diet, Asian and Middle Eastern</td>
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<td>cuisine</td>
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<td>Price/cost</td>
<td>Lower meat diets can save money and enable ‘better’ meat choices within</td>
<td>Educate and provide practical suggestions; advice on how to use leftovers, portion sizes, seasonal</td>
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<td>the same budget</td>
<td>fruit and vegetables etc, to minimize waste and save money</td>
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<td>Interest in Health</td>
<td>Promotion of strong public health messages on health benefits</td>
<td>Highlight health benefits; practical advice to ensure nutritional adequacy; bust nutritional myths</td>
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<td>eg. Protein and iron adequacy</td>
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<td>Awareness of the environmental impact</td>
<td>Awareness raising campaigns, information, education and better labelling</td>
<td>Provide information and educate on the role of the food system on the environment; reconcile the</td>
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<td>(where appropriate)</td>
<td>nutritional and environmental science to give consistent messages about a healthy sustainable diet</td>
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<td>Knowledge about alternatives to meat and</td>
<td>Growth in meat and dairy alternative market, provides opportunities for</td>
<td>Advise on suitable alternatives to ensure nutritional adequacy</td>
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<tr>
<td>dairy</td>
<td>consumers to transition to a more plant-based diet</td>
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Adapted from Garton L Sustainable Diets: Why what and how. Complete Nutrition 17(6) 51-53
Opportunities for nutrition professionals?

- Education (for sustainability)
- Advocacy (for sustainability)
- Collaboration (for advocacy of sustainability)
- Policy (and sustainability)

Pettinger C (2018) Sustainable Eating: Opportunities for nutrition professionals
Nutrition Bulletin, 43, 3, 226-237 (FREE online from 24 Oct - 31 Dec)

Education (for sustainability)

Curriculum design & Professional Standards of Education
CPD & Shared learning (educating self)
Extending remit of evidence based practice (Keeping up with pace)

‘Sustainability literacy’ (What does it mean for me as a nutrition professional?)
Advocacy (for sustainability)

**Strategic priorities:**
- Food system issues
- Evolving roles

**Professional bodies**
(Training & Practice)

**Leadership:**
People centred advocacy

See BDA Sustainable Diets Policy Statement (BDA 2017)

Collaboration (for advocacy)

**Cross-sector working**

**Breaking down barriers**

‘Inter/intra-nutrition student’ collaboration
(See Pettinger et al 2018)

**Networking and knowledge exchange**
Policy (and sustainability)

Stear & influence policy

Food System Transformation
Upstream measures

Multi-Sector Partnerships

Acknowledgements

- Colleagues & friends
- University of Plymouth (PedRIO - funding)
- British Dietetic Association (BDA)
- Nutrition and dietetic students
- Industry partners (e.g. ALPRO)
- Others...(with passion to make a difference)
Nutrition Professionals:

Our Voice counts to Drive CHANGE within the Food System!

What to do now (my opinion):
- Read, read, read - round the topic
- Learn how to interpret the evidence
- Keep up with the pace of emerging evidence
- Talk to others and network
- Join groups/forums/social media (caution)
- Write, blog, share your learning
- Think about your own behaviour (what can you change?)

Any Questions?
... please get in touch

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