

CHANGING THE SCRIPT FOR SUSTAINABLE FOODS

TAKE HOME BOOKLET

Healthy Cognition Lab



**University
of Glasgow**



CONTENTS

MYTH OR FACT?

P. 1

THE RESEARCH

P. 6

TOP 10 TIPS

P. 10

RECIPE GUIDE

P. 15

RESOURCES

P. 19

CALENDAR

P. 21

REFERENCES

P. 23

Myth or Fact?

1



Eating 'local'
reduces carbon emissions
(go to **p. 2**)



Individual action makes little
climate impact
(go to **p. 3**)

Eating meat is necessary for
a healthy, balanced diet
(go to **p. 4**)

There isn't enough land to grow
plant-based crops for everyone
(go to **p. 5**)

②

Eating 'local' reduces carbon emissions

MYTH



What you eat matters more than **where** it comes from in terms of greenhouse gas emissions.

Factors such as transport distance, retail, packaging and farming methods have **relatively small** environmental effects compared to the type of food chosen. As a result, greenhouse gas emissions from plant-based products are as much as **10 - 50 times** lower than animal based products.

Sources:

Poore & Nemecek (2018)

Takacs et al (2022)

Kause et al (2019)

Ritchie (2020)

Individual action is **necessary**, and also **impactful**.

For example, an individual that reduces meat **1 day a week for a year** saves 789 bathtubs of water, 3 tennis courts of forests and adds 2 days to the lifespan!

Remember: every time you choose a plant-based option, you reduce demand for meat and dairy, increase demand for tasty alternatives, and **inspire others** around you.

Individual action makes little climate impact

MYTH

Sources:
Meat Free Mondays
(2023)
Bublitz
(2022)



4

Eating meat is necessary for a healthy, balanced diet

MYTH



Eating meat
regularly is **not
necessary** for our
daily nutrition needs.

Consuming red and
processed meats regularly
leads to higher risks of stroke,
diabetes, coronary heart disease and
colorectal cancer.

Consuming meat regularly can also be
detrimental to **gut health**.

Sources:

Messina et al (2022)

Clark et al (2019)

Lin (2023)

There isn't enough land to grow plant-based crops for everyone

MYTH



Sources:

Ritchie & Roser
(2019; 2021)

Eating plant-based foods is a more **efficient** way of feeding the world.

In fact, **77%** of agricultural land is used for **livestock** (i.e. meat and dairy production), which provides only **18%** of global calories.

In addition, **76%** of soy production is used to feed livestock, whereas only **20%** is used for human consumption.

⑥ The Research: Climate Change



Global consumption behaviours are causing **irreparable harm to the planet's climate and ecosystems.**

The climate emergency leads to higher probabilities of catastrophic weather events, resulting in worldwide poverty, displacement, hunger, malnutrition, reduced water and food availability, social unrest and species extinction (Hoegh-Guldberg et al., 2019).

One consumption behaviour that strongly contributes to the climate crisis is **what we choose to eat**. Clark et al (2020) found that emissions from the food sector alone will cause a global temperature rise of at least 1.5°C by **2051 – 2063**.

Limiting the impact of the climate crisis is still possible with direct, immediate action. For example, food sector emissions can be reduced significantly through decreased food waste, production efficiency and widespread dietary changes, i.e. reduced meat consumption (Willett et al., 2020).

The Research: Shifting Diets



Despite a growing awareness of the negative impacts of current dietary practices, many consumers are **reluctant to reduce their meat intake** for environmental reasons (Bryant, 2019). In fact, the consumption of specifically plant-based dishes among omnivores is typically infrequent (Dagevos, 2021).

Research has shown that the main challenges for adopting a more sustainable diet are **poor expectations of plant-based food enjoyment, negative social stereotypes** with being perceived as a vegetarian or vegan, and **problems with plant-based availability, affordability and healthiness** within common food environments (Wehbe et al., 2022; Wehbe et al, 2023). Can you think of any others?

8

The Research: Food Talk

Recent findings show that typically, meat foods are labelled with **more language related to rewarding eating experiences** than plant-based foods, both in commercial settings (Papies et al., 2020) and on social media (Davis & Papies, 2022).

Davis et al (2023) also found that vegans think about plant-based foods in terms of rewarding consumption, i.e. **in the same way** that omnivores think about meat foods.

This means that both vegans and omnivores associate **foods they frequently consume** with reward. However, plant-based foods should be more commonly described in terms of enjoyment (e.g. 'tasty') to make sustainable food choices **appealing** to the public (Papies et al., 2022; 2023).

Research carried out by the Healthy Cognition Lab at the University of Glasgow has found that there are some important differences in the way that people **think and talk** about meat and plant-based foods.



The Research: ⑨ Taking Action

In October 2021, **75%** of adults in Great Britain said they were either very worried or somewhat worried about the impact of climate change (ONS, 2021).

This was commonly attributed to concern for family and future generations, anxiety and helplessness and the expense of making eco-friendly changes.



Nonetheless, changing individual consumption behaviour and influencing supply and demand is a **powerful means of climate action**. For example, up to 40% cuts in greenhouse gas (GHG) emissions from Western diets are reasonably achievable by consumers substituting meat and dairy with plant-based foods (Green et al., 2015; IPCC, 2019; Poore & Nemecek, 2018).

This is because shifting towards more sustainable dietary habits in particular is a **long-term lifestyle change** that can shape the practices of the food system, private institutions, government and those around you (Nielsen et al., 2020).

10

Top 10 Tips

1. Progress, not perfection

Set realistic goals for your diet, and don't be too hard on yourself if you don't meet them perfectly.

Even eating plant-based just one day or one meal a week will help reduce the pressure on our environment from meat and dairy consumption.

Celebrate each plant-based meal as a triumph –
they all count!



Challenge 1:

Eat a plant-based meal this week



Challenge 2:

Try out a new plant-based recipe this month (see p. 15 - 18)



2. Get your household involved

Show them how good plant-based food can be! Try out substitutes for meat and cheese products, and look for **vegan versions** of classic recipes.

Don't fancy buying lots of processed products? Anything made with mince can be replaced with tinned lentils, for example - and makes easy family meals much **cheaper** and **healthier** too.

Top 10 Tips

11

3. Find your favourite plant milk

One of the easiest steps towards following a more plant-based diet is using **plant-based milks** in your hot drinks.

Oat milk is a popular choice – it has advantages over soya for not curdling in coffee, and uses less water to produce than almond milk.



Challenge 4:

Make a plant-based meal this month just using what you can find in your kitchen



Challenge 3:

Try out a new plant-based milk this week



4. Go back to basics

Most food is plant-based, and likely already in your kitchen!

Think fruits and vegetables, seeds and nuts, proteinous tins of chickpeas, beans and lentils, and grains like pasta, rice, noodles, couscous and bread.

Don't forget, **lots of flavour** comes from spices, herbs, oils, stock cubes and other seasonings. Also, many ready-made sauces like pesto now come in **vegan versions**.

12

Top 10 Tips

5. Plan for plant-based

Planning a couple of **simple** and **quick** plant-based meals each week can help you to eat more sustainably.

Cooking in bulk and **freezing** plant-based meals can also keep you on track.

Buying nuts, dried fruit and cereal bars in bulk can help if you live, work or commute in an area without many vegan options.

6. Try new things

Buy and try **one new plant-based food** a fortnight.

Give some vegetables a go that are new to you, like bok choy, celeriac or jackfruit, or pick up a new meat or dairy alternative in the supermarket.

Variety will help you discover new favourite foods, or even rediscover a familiar food but **prepared in a different way**.



Challenge 5:

Make plant-based leftovers within the next week



Challenge 6:

Try a new plant-based food within the next fortnight



Top 10 Tips

13

7. Make veggies the main event

Rather than planning your meals around meat, poultry or fish, **make vegetables the centerpiece.**

For example, baked cauliflower or grilled asparagus can take the center of the plate with a smaller piece of chicken on the side, or try roasted aubergine with tomatoes, surrounded by goat cheese and a piece of crusty bread.



Challenge 7:

Create a meal that is centred around a vegetable of your choice within the next 2 weeks

Challenge 8:

Follow the 50% Veg rule for one day this week

8. Follow the 50% Veg rule

In line with the Eat-Lancet Planetary Health Diet (see p. 19), try to cover **half of your plate** with vegetables for lunch and dinner.

Make sure to choose **plenty of colours** when buying your veggies for the week.



10. Boost your breakfast

Breakfast is an **easy, simple** way to go meatless or dairy free.

With so many delicious options, and considering a majority of cafes now include **plant-based options on their breakfast menus**, you won't be missing out.

Try a warming bowl of porridge topped with berries, or a stack of banana pancakes. Want something more filling? Have a vegan Scottish breakfast!

Top 10 Tips

9. Get inspired

In the last 10 years, plant-based consumption has grown in popularity, and as a result, there is a **wealth of resources** online to help you follow a more climate-friendly diet.

Search for plant-based **social media** accounts to inspire you, find plant-based **recipes** from your favourite chefs and look-up product reviews for any **plant-based products** you'd like to try.

Challenge 9:

Find a new plant-based recipe online or on social media in the next fortnight

Challenge 10:

Have a plant-based breakfast this week



Recipe Guide: Bean Jambalaya

BBC Good Food

15

INGREDIENTS

2 tbsp olive oil
1 large onion (180g), finely chopped
4 celery sticks, finely chopped
1 yellow pepper, chopped
2 tsp smoked paprika
½ tsp chilli flakes
½ tsp dried oregano
115g brown basmati rice
400g can chopped tomatoes
2 garlic cloves, finely grated
400g butter beans, drained
2 tsp vegetable bouillon powder
handful of parsley, chopped



METHOD

STEP 1

Heat the oil in a large pan set over a high heat and fry the onion, celery and pepper, stirring occasionally, for 5 mins until starting to soften and colour.

STEP 2

Stir in the spices and rice, then tip in the tomatoes and a can of water. Stir in the garlic, beans and bouillon. Bring to a simmer, then cover and cook for 25 mins until the rice is tender and has absorbed most of the liquid. Keep an eye on the pan towards the end of the cooking time to make sure it doesn't boil dry – if it starts to catch, add a little more water. Stir in the parsley and serve hot.

Serves 2 | 18g Protein | 547 kcals

Recipe Guide:

Mac & Cheese

MOB Kitchen



INGREDIENTS

500g Macaroni	2 Tbsp Plain Flour
200ml Oat Milk	1 Tsp Smoked Paprika
1 Butternut Squash	4 Tbsp Nutritional Yeast
2 Tbsp Vegan Butter	1 Tsp Marmite
4 Cloves of Garlic	1 Tsp Dijon Mustard

METHOD

STEP 1

Preheat your oven to 180°C. Place your chopped butternut squash onto a baking tray. Add 4 garlic cloves (skin on). Drizzle olive oil, salt and pepper over the top. Mix it all together and place it in the oven for 45 minutes. Meanwhile, cook the macaroni in boiling water until al dente.

STEP 2

For the roux, melt the butter in a large pan and melt with the smoked paprika. Whisk in the flour and cook for 2 mins. Slowly drizzle in your oat milk, whisking constantly to form a thick sauce. Add in the nutritional yeast, mustard and marmite.

STEP 3

Once roasted, add the butternut squash to a blender. Squeeze out the garlic from the skins and add that too. Finally, add 200ml water and blend until smooth. Pour the blended butternut squash into the roux and mix well. Season with salt and pepper. Add the cooked macaroni to the pan and mix together well. Spoon your creamy mac and cheese onto a plate and enjoy.

Serves 4 | 22g Protein
524 kcals

Recipe Guide:

17

Coronation Chickpea Sandwich

Veganuary PlantBased Magazine

INGREDIENTS

400g Chickpeas	40g Sultanas
1 Tbsp Vegetable Oil	115g Vegan Mayonnaise
1 Red Onion	1 Tbsp Mango Chutney
1 Clove of Garlic	Fresh, Crusty Bread
2 Tsp Mild Curry Powder	Lettuce Leaves
	Sliced Red Onion

Serves 6 | 8g Protein
552 kcals



METHOD

STEP 1

Heat the oil in a frying pan and add the chickpeas, onions (diced) and garlic (crushed) with some seasoning. Gently cook for a few minutes until the onions begin to soften, before adding the sultanas and curry powder. Continue to cook, stirring, until the spices are fragrant. Leave to cool.

STEP 2

Once cooled, lightly mash the chickpeas so that some still remain whole. Stir in the mango chutney, mayonnaise and season to taste.

STEP 3

Spread the mixture liberally over the bread, adding lettuce and onion. Serve immediately.

18

Recipe Guide

Tangy Vegetable Pad Thai

Gousto

Serves 2 | 15g Protein

559 kcals

INGREDIENTS

200g Rice Noodles
8ml Sriracha
2 Garlic Cloves
30ml Soy Sauce
160g Butternut Squash

1 Red Pepper
25g Roasted Peanuts
15g Tamarind Paste
1 Courgette

5g Basil
15ml Mirin
5g Coriander
1 Lime

METHOD

STEP 1

Roast the butternut squash (cubed) in the oven for 20-25 mins at 200°C/ 180°C (fan).

STEP 2

Cut the pepper into strips and fry over a medium heat for 3-4 mins. Peel the courgette into ribbons and add to the pan with the sliced garlic for 1-2 mins, then remove from the heat. Meanwhile, cook the rice noodles on a high heat for 4-5 mins, drizzle with oil and set aside.

STEP 3

To create the pad thai sauce, add the tamarind paste to a bowl with the soy sauce, mirin, sriracha, the juice of 1/2 lime and 1 tsp sugar and give it a good mix. Crush the peanuts with a rolling pin, chop the basil and coriander and cut the remaining lime into 2 wedges.

STEP 4

Return the pan to a medium-high heat and add the drained noodles, butternut squash and pad Thai sauce. To serve, sprinkle the chopped herbs and peanuts over the noodles and garnish with a lime wedge.



Further Resources

Meat-Free Mondays

The Meat-Free Mondays website has extensive resources including recipes, news and even an individual impact calculator to measure how even a small dietary change can make a big difference to the environment.



EAT-Lancet Planetary Health Diet

The EAT-Lancet Commission has developed a global diet that is optimal for both human health and environmental sustainability. It emphasizes a plant-forward diet where fruit and vegetables constitute 50% of food consumed. Meat and dairy still constitute important parts of the diet, but in significantly smaller proportions than the main food groups: whole grains, fruits, vegetables, nuts and legumes.

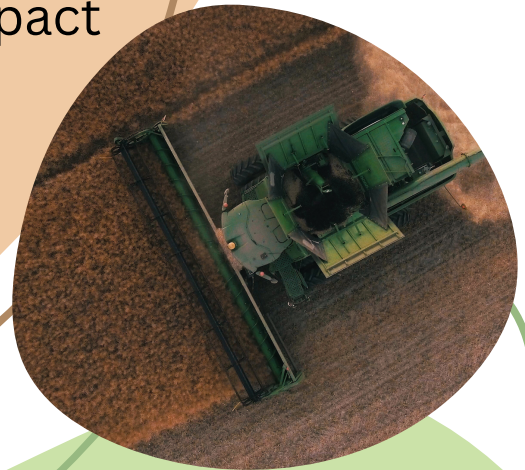
Find out more at:
www.eatforum.org/eat-lancet-commission/

20

Further Resources

www.ourworldindata.org

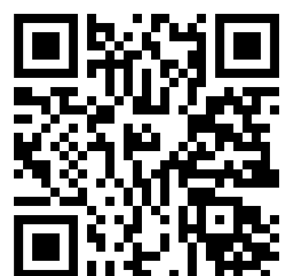
A catalogue of research that highlights the biggest global challenges. Check out the 'Energy and Environment' and 'Food and Agriculture' topics for more information about the impact of eating behaviour on climate change.



World Health
Organisation
General Public
Call to Action

Take the Jump
Six Shifts
Initiative

Citizen's
Climate
Assembly UK
Resources



Calendar

21

Follow this simple schedule to incorporate more sustainable meals into your diet:



Eat what you like!



Meat-Free Meal (Lunch or Dinner)



Meat-Free Day

	M	T	W	T	F	S	S
Week 1	▲						
Week 2	▲						
Week 3	●						
Week 4	●						
Week 5	●		▲				
Week 6	●		▲				
Week 7	●		▲		▲		
Week 8	●		▲		▲		
Week 9	●		●		▲		
Week 10	●		●		▲		

Calendar

Follow this simple schedule to incorporate more sustainable meals into your diet:



Eat what you like!



Meat-Free Meal (Lunch or Dinner)



Meat-Free Day

	M	T	W	T	F	S	S
Week 11	●	▲	●		▲		
Week 12	●	▲	●		▲		
Week 13	●	●	●		▲		
Week 14	●	●	●		▲		
Week 15	●	●	●	▲	▲		
Week 16	●	●	●	▲	▲		
Week 17	●	●	●	▲	▲	▲	
Week 18	●	●	●	▲	▲	▲	
Week 19	●	●	●	▲	▲	▲	▲
Week 20	●	●	●	▲	▲	▲	▲

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ABOUT US

This booklet was created by members of the Healthy Cognition Lab led by Esther K Papies in the School of Health and Wellbeing at the University of Glasgow

The lab's research addresses the psychological processes underlying pro-environmental consumption behaviours and behaviour change in the transition towards a healthier, more sustainable and more equitable society

You can find out more about the lab and the research they do at:
www.healthycognitionlab.org

You can follow the lab for news, updates and announcements on Twitter/X at:
[@HealthyCogLab](https://twitter.com/HealthyCogLab)

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