# Climate Conscious Cooking Practical Vegetarianism

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### Objectives

Understand the climate impact of a meat based diet.

Develop simple practical techniques to introduce vegetarian options into your everyday diet.

# Why Vegetarian?

### God is a great marketer



#### Energy efficiency

"producing 1 calorie of animal protein requires 10 (or more) times the amount of fossil fuel required to produce 1 calorie of plant protein."

'Food for the Brain' Charles S. Zuker, Cell Volume 161, Issue 1, 26 March 2015

#### Global resource disparity

# Vegetarian Definitions

**Meat Eater** 

White Meat Eater

Pescatarian

Flexitarian or Semi-vegetarian

Ovo-Lactarian Vegetarian

Vegan

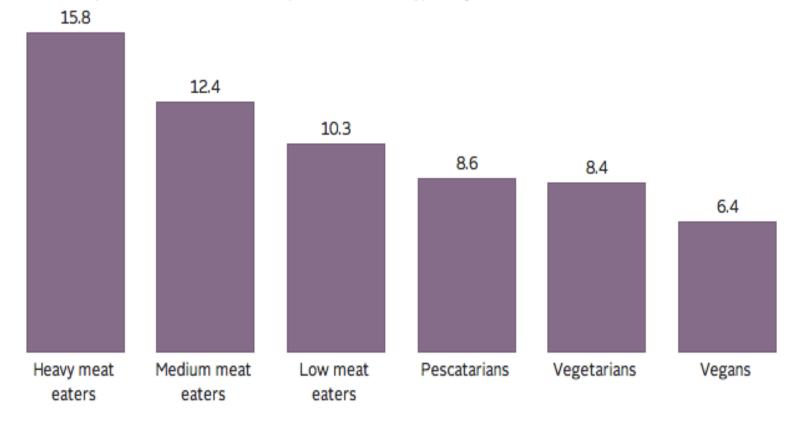
Raw Food Vegetarian

### Climate Impact

# Carbon Footprint for Diets

### Less meat, fewer emissions

Carbon footprint of various UK diets, in pounds of CO2-eq per day



Source: Scarborough et. al. (2014).



### Climate Impact

Carbon
Footprint for
Diets

"The study of British people's diets was conducted by University of Oxford scientists and found that meat-rich diets - defined as more than 100g per day - resulted in 7.2kg of carbon dioxide emissions. In contrast, both vegetarian and fish-eating diets caused about 3.8kg of CO2 per day, while vegan diets produced only 2.9kg. The research analyzed the food eaten by 30,000 meat eaters, 16,000 vegetarians. 8.000 fish eaters and 2.000 vegans. "

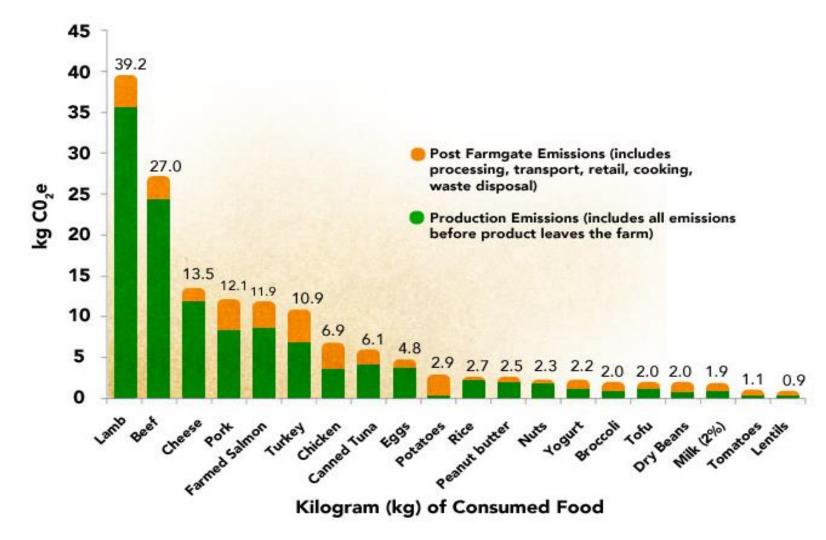
	Kg CO2	Decrease
Meat rich	7.2	
Pescatarian	3.8	48%
Vegetarian	3.8	48%
Vegan	2.9	60%

Giving up beef will reduce carbon footprint more than cars, says expert Damian Carrington Mon 21 Jul 2014 The Guardian

# Climate Impact

Carbon
Footprint for
Foods

Figure 1. Full Lifecycle Greenhouse Gas Emissions from Common Proteins and Vegetables



Study: Going vegetarian can cut your food carbon footprint in half By Brad Plumer@bradplumerbrad@vox.com Updated Jun 13, 2016

### Climate Impact

Overall Environmental Impact

"Our planet cannot easily keep up with the anticipated demand for meat. "We're running out of good land," says Davis. Thirty per cent of Earth's land surface is already devoted to livestock production, a practice that accounts for nearly 15% of global greenhouse-gas emissions. Cows are the worst culprits, not only because they emit a lot of methane, but also because the production of beef uses vast quantities of water — 15,415 litres for a kilogram of beef — as well as land."

Sustainability: A meaty issue, Olive Heffernan, Nature Published: 26 April 2017

### Protein Requirements

You should get at least 10% of your daily calories, but not more than 35%, from protein, according to the Institute of Medicine.

	Protein Requirement Grams/Day	
Baby	10	
School-age kids	19-34	
Teenage boys	Up to 52	
Teenage girls	46	
Adult men	56	
Adult women	46 (71 if pregnant or breastfeeding)	

### Protein Sources

In general, 2 Tablespoons (Tbsp) or a portion the size of 1/3 of a deck of cards of would equal 1 ounce (oz).

Туре	Portion Size	Grams Protein
Beef, Pork, Poultry, Fish	1 oz	7 grams
Egg	1 oz	6 grams
Tofu	1 oz	3 grams
Lentils	½ cup	9 grams
Kidney, Black, Navy, Cannellini beans	½ cup	8 grams
Peanut butter	2 Tbsp	7 grams
Nuts	1 oz	4-6 grams
Milk, skim, 1%, or Fat free Lactaid	8 oz	8 grams
Greek yogurt, plain, nonfat, light	5 oz	12-18 grams
Cheese, hard (low-fat)	1 oz	7 grams
Quinoa	1/3 cup	6 grams

## Vegetarian Practical Tips

Be reasonable – Live in the real world

Tofu - Press out water

Beans – Canned okay

Utilize vegetable broth

Alter meat based recipes

'Fake Meat'

### Tofu

- Extra firm tofu: Tofu nut balls
- Soft tofu: Tofu cheesecake, whipped topping, mango tofu whip
- Prepackaged: Vegetarian beef and noodles, main course and sandwiches
- Prepackaged cubes: Salads, fried rice
- Tofu hot dogs, sandwich slices

Beans

- Chickpeas: 'tuna fish', hummus
- Cannellini: pasta, soup, hummus
- Black bean: tacos, hummus
- Lentils: Sweet and sour lentils
- •All: chili

'Fake' Meat

- Morningstar Farms; Gardein
- Chicken: nuggets, patties, burgers
- Burgers: grillers
- Breakfast: Bacon, sausage
- Other: Meatballs, turkey fillets

### Holidays

#### Tofu nut balls

Mollie Katzen, Moosewood Cookbook

#### Vegan mushroom make ahead gravy Melissa Clark, NY Times

#### Nut meat pate in brioche

Anna Thomas, The Vegetarian Epicure

#### Stuffed squash

Michael Anthony, V is for Vegetables

### Roasted Portobella Mushroom Wellington

The Washington Post

### Vegetarian Resources

Vegetarian Epicures Anna Thomas

NY Times New Natural Foods Cookbook Jean Hewitt

Moosewoods Mollie Katzen

The New Vegetarian Cooking Deborah Madison

V is for Vegetables Michael Anthony

