## 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.

## God is a great marketer

## Why Vegetarian?



## 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

# Meat Eater <br> White Meat Eater <br> Pescatarian 

Flexitarian or Semi-vegetarian
Ovo-Lactarian Vegetarian
Vegan
Raw Food Vegetarian

## Less meat, fewer emissions

## Climate Impact

## Carbon Footprint for Diets

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


[^0]"The study of British people's diets was conducted by University of Oxford scientists and found that meat-rich diets - defined as more than 100 g per day - resulted in

## Climate Impact

## Carbon Footprint for Diets

 7.2 kg of carbon dioxide emissions. In contrast, both vegetarian and fish-eating diets caused about 3.8 kg of CO2 per day, while vegan diets produced only 2.9 kg . 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 | $60 \%$ |

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

## Climate Impact

## Carbon

 Footprint for Foods

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."

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

## Protein Requirements

|  | 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) |

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

## Protein Sources

| Type | Portion Size | Grams Protein |
| :--- | :--- | :--- |
| Beef, Pork, Poultry, Fish | 1 oz | 7 grams |
| Egg | 1 oz | 6 grams |
| Tofu | 1 oz | 3 grams |
| Lentils | $1 / 2$ cup | 9 grams |
| Kidney, Black, Navy, Cannellini <br> beans | $1 / 2$ 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'

## Vegetarian Options

## 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


## Vegetarian Options

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

## Vegetarian Options

## 'Fake' Meat

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


## Vegetarian Options

## 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 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



[^0]:    Source: Scarborough et. al. (2014)

