Plant-centered Diet for Human & Planetary Health

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What’s a plant-based diet?

Mostly or entirely of foods derived from plants and with few or no animal products.

90% of your calories come from plants.

Diets:
Whole-food Plant-based Diet, The Ornish Diet, Macrobiotic Diet, The Bluezones Diet, Mediterranean Diet, Okinawan Diet, Flexitarian Diet
Immune Response (total IgG) (after patients injected with pneumonia vaccines)

60% higher immune response!
#40plantsaweek

From 30 vegetables a week to faecal transplants: Keeping your gut microbiome happy is the key to healthy eating

‘There isn’t one size fits all and some of these ideas that we’ve been led into by industry or government are patently nonsense,’ Tim Spector, author of ‘The Diet Myth’, tells Julia Platt Leonard
Balanced Immune System

Good Microbes
- Firmicutes
- Bifidobacterium
- Lactobacillus
- Saccharomyces
- Butyricicoccus

Imbalanced immune system

Bad Microbes
- Bacteroides fragilis
- E. Coli
- Salmonella
- Clostridium
- Difficile
- Staphylococcus

Figure 1: Immunological dysregulation associated with dysbiosis of the microbiota.
Many patients with COVID-19 showed gut dysbiosis with decreased probiotics, *Lactobacillus* and *Bifidobacterium*. Nutritional and gastrointestinal function should be assessed for all patients. Nutritional support and application of prebiotics or probiotics were suggested to regulate the balance of gut microbiota and reduce the risk of secondary infection due to bacterial translocation.
Lessons from Covid-19 Pandemic

- 63% of agricultural lands are used for livestock

- Meat-centric diet is one of the top 3 primary causes of climate change (18% greenhouse gas emissions)

- 70% world’s fresh water go to livestock

- 70% of antibiotics production in the world is used for livestock
Only 40% of the protein from the field land on our plate.

2015
Farm
525 mio t primary proteins

2015
Fork
7.4 billion people

2050
Farm
+265 mio t +50%

2050
Fork
+2.3 billion

How to transition to a planetary health diet?

No expansion of arable land

Adequate supply of protein
OKINAWA LONGEVITY DIET

- 70% Sweet potatoes (carbs)
- 12% Rice
- 7% Grains & Wheat
- 6% Soy & legumes
- 4% Additional vegetables
- 3% Fruit
- 2% Oils
- 1% Nuts (Protein)
- 1% Other potatoes
- 1% Seaweed
- 1% Sugars
- 1% Fish
- 1% Dairy
- 1% Eggs
- 1% Pork-Meat
- 1% Flavorings & Alcohol

85% carbs
09% Protein
06% Fat
85-10-5
1785 Calories

96% Vegan Diet
98% Vegetarian
99% PescaVeg
<4% Animal Prod
<1% Fish
<1% Meat-Pork

Note: These are the Actual Food Measurements of the Centenarians, not the diet of All island Okinawans or the ones who died, but the ones who lived.
Hunza: The Longest Living Population

Secret #1: You Are What You Eat

The first and most critical secret of Hunza longevity and youthfulness is diet.

1. **Starchy vegetables**: potato, carrot, radish, pumpkin
2. **Leafy greens**: spinach, lettuce
3. **Fruits**: apricot, peach, blackberry, cherry, pear, apple
4. **Beans**: green peas, long beans
5. **Nuts**: walnut, hazelnut, chestnut, and almond
6. **Grains**: barley, millet, buckwheat, whole wheat, mostly in a form of chapatti
7. **Very little animal protein**: homemade milk & cheese, naturally-raised meat
Foodprints by Diet Type: t CO₂e/person

Note: All estimates based on average food production emissions for the US. Footprints include emissions from supply chain losses, consumer waste and consumption. Each of the four example diets is based on 2,600 kcal of food consumed per day, which in the US equates to around 3,900 kcal of supplied food.

Sources: ERS/USDA, various LCA and EIO-LCA data
How can we feed a future population of 10 billion people a healthy diet within planetary boundaries?

Plant-centered Diet
A PLANT-BASED DIET IS A WIN-WIN FOR HEALTH AND THE PLANET