EATING FOR THE PLANET: THE ROLE OF THE INTEGRATIVE RDN

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DISCLOSURES & AFFILIATIONS OF PRESENTER:
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LEARNING OBJECTIVES

- Identify three ways the food system and climate change are interconnected
- Describe three possible shifts in the food system that have the potential to better support the environment and mitigate climate change
- Implement three strategies to help institutions/organizations reduce their carbon footprint, or "food print"
- Describe resources for further education on and participation in sustainable food systems and climate change
Scientists Agree: Global Warming is Happening and Humans are the Primary Cause

Climate Change Threatens the World’s Food Supply, United Nations Warns

Countries must triple climate emission cut targets to limit global heating to 2C

United in Science report ahead of UN summit says climate is changing faster than forecast, and current plans would lead to ‘catastrophic’ global temperature rise
Global emissions are reaching record levels
The last four years: hottest on record
Sea levels rising
Coral reefs dying
Air pollution, heatwaves, floods and risks to food security
Human Influence established

“The coming years will be a vital period to save the planet and to achieve sustainable, inclusive human development.”

— António Guterres
Secretary-General, United Nations
“Human wellbeing depends on reducing social inequity and protecting the environment.”

United Nations Development Program. Sustainable Development Goals. 2015
QUICK REALITY CHECK ON CLIMATE CHANGE

The Goal
Intergovernmental Panel on Climate Change (IPCC): limiting global warming to 1.5°C would have clear benefits to people and natural ecosystems ensuring a more sustainable and equitable society

Impact is Disproportionate

• Affecting lower income communities, elders, children, communities of color, Indigenous communities developing countries

• Poverty reduces resilience and increases vulnerability

INTEGRATIVE & FUNCTIONAL PRACTITIONERS

- Connection between mind - body - spirit - environment
- Appreciation for and inclusion of nature as part of the healing process
- Embracing & Integrating different cultures/traditions/world views and acknowledging racial inequities
- Focus on prevention and whole person
- Bringing functionality back into the food system – Systems Approach!
- Opportunity and responsibility to educate and guide patients/clients/communities/institutions
CLIMATE CHANGE & HEALTHCARE

Healthcare contributes 9% to overall greenhouse gas emissions ¹

Integrative practitioners provide people with tools to reduce their impact
- Food
- Stress reduction
- Preventative measures to keep people healthy → less environmental impact from the healthcare system
- Spirituality and modalities that connect us to culture, community and nature

¹ Francis, D et al: How healthcare can help heal communities and the planet
Seeking out the root causes of disease and imbalance in the body beyond genetics

Healthy Human. We must consider:

- Nutrition
- Sleep & Stress
- Culture
- Environment
- Supplements & botanicals
- Body work
- Spirituality & Nature
- Physical Activity
- Access

Redesigning healthcare to be more inclusive and integrative
Healthy Food System. We must consider:

- Land Use
- Food Waste
- Types of crops
- Soil Health
- Agricultural practices
- Food Sovereignty & Racial equity
- Labor practices
- Chemical Inputs
- Animal Welfare

Food System = ¼ of greenhouse gases

Industrial Agriculture has had an impact on our environment and ultimately on climate change.

Agroecology: redesigning the agricultural system
PRIMER: SOME QUICK DEFINITIONS

• **Biodiversity** – all the different kinds of life found in one area; the variety of animals, plants, fungi and microorganisms that make up the natural world ¹

• **Agroecology** – farming that centers on food production that makes the best use of nature’s goods and services, while not damaging those resources ² Also: respect for food culture and food governance by local populations and indigenous peoples ³

• **Permaculture** – systems that are ecologically sound and economically viable, that provide for their own needs, do not exploit or pollute, and are therefore sustainable in the long term ⁴

• **Biodynamics** – a holistic, ecological and ethical approach to farming, gardening, food and nutrition. Views the farm as a living organism that should be self-contained and self-sustaining ⁵

• **Sustainable Food System** – delivers food security and nutrition for all in such a way that the economic, social and environmental bases to generate food security and nutrition for future generations are not compromised ⁶

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Integrative Medicine Is a Good Prescription for Patients and Planet

Aterah Z. Nusrat, MSc, DIC¹ Iman Majd, MD, MS, EAMP/LAc² and Peter M. Wayne, PhD¹
ECO-ANXIETY & MENTAL HEALTH EFFECTS

• Climate change-related natural disasters have had a profound negative impact on the mental health of survivors

• Suicides have increased, as have depression, anxiety, stress, grief, anger and PTSD

• Patients may be concerned and anxious and seeking support

• Think of how empowering it may be for them to know there is something they can do

• Think of how empowered YOU might feel if you knew all YOU could do.

CLIMATE CHANGE AFFECTS THE FOOD SYSTEM → HUMAN HEALTH
CONNECTING THE DOTS:

The impact of Climate Change on the health of our food system affects health of our patients

- Flooding & Drought affect soil health
- Heat and fire destroy crops and land
- Loss of farmland due to development
- Pesticide use/need is increased
- Soil degradation = less nutritious

OUR SOIL HAS CHANGED BECAUSE OF CLIMATE CHANGE AND CURRENT FOOD SYSTEM

• Less healthy & nutrient depleted
• Less resilient
• Half of the Earth’s topsoil has been lost
• Carbon sequestering power diminished
• 60 years of farming left if soil degradation continues
• Supporting regenerative agricultural practices is key
• Connection

**Sustainable Soil Management**

Diverse farming approaches promote the sustainable management of soils

**Agroecology**

Is a systems approach based on a variety of technologies, practices and innovations, including local and traditional knowledge and modern science.

**Agroforestry**

Includes both traditional and modern land-use systems where trees are managed together with crops and/or animal production systems in agricultural settings.

**Organic farming**

Is agricultural production without the use of synthetic chemicals or genetically modified organisms, growth regulators, and livestock feed additives.

**Zero tillage**

Is a technique used in conservation agriculture to maintain a permanent or semi-permanent organic soil cover that protects the soil allowing soil microorganisms and fauna to take on the task of "tilling" and soil nutrient balancing.

**Conservation agriculture**

Follows three principles (minimal soil disturbance, permanent soil cover and crop rotations) to improve soil conditions, reduce land degradation and boost yields.

*Sustainable soil management could produce up to 58% more food*
FOOD SYSTEM = ¼ OF GREENHOUSE GASES

Most GHG emissions result from land use change
  • Deforestation for biofuels and livestock

Farm stage emissions include:
  • Application of fertilizers (organic & inorganic)
  • Production of methane from cows

**Combined, land use and farm stage emissions account for 80% of the footprint of most foods**

Food transport is only a small contributor to emissions
  • Accounts for less than 10% for most foods, less for high GHG emitters
  • Beef cattle = 0.5% emissions from transport
Food System = ¼ of greenhouse gases

Unsustainable Practices

**Food Production**
- Biodiversity loss
- Freshwater use
  - 80% of consumptive water use
- Land-system change & deforestation
  - Accounts for over 50% of US land use
- Energy
  - 16% of energy use
- Interference with global nitrogen and phosphorus cycles
- Chemical pollution
- Disregard for food sovereignty and indigenous practices

**Food Consumption/Waste**
- What we eat or don’t eat
- Where we purchase, who we support
- The food itself – carbon footprint
- Packaging
- Transportation
- What we waste
- Our “Food Print”

RDN’S CAN BE PART OF REIMAGINING OUR AGRICULTURAL FOOD SYSTEM

- **We need a shift in how we farm**
  - The way food is produced, processed, packaged, transported, traded, sold, consumed and wasted has a major negative impact on the Earth
    - Climate
    - Soil
    - Biodiversity
    - Human Health
    - Rural Livelihoods

- **Our system is unsustainable**
  - Insatiable use of finite resources
  - Countless adverse impacts on human health and ecosystem health
  - Dependence on fossil fuels and chemical inputs
  - Mistreatment and underutilization of traditional farming communities and indigenous knowledge

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**What are the environmental impacts of food and agriculture?**

<table>
<thead>
<tr>
<th>Greenhouse Gases</th>
<th>Land Use</th>
<th>Freshwater Use</th>
<th>Eutrophication</th>
<th>Biodiversity</th>
</tr>
</thead>
<tbody>
<tr>
<td>39% of global greenhouse gas emissions</td>
<td>50% of global habitable ice and desert-free land</td>
<td>70% of global ocean &amp; freshwater withdrawal</td>
<td>76% of global ocean &amp; freshwater pollution</td>
<td>94% of global human and non-human biodiversity</td>
</tr>
</tbody>
</table>

- **Non-food**
  - 30 million tons CO₂eq, 74% global emissions

- **Food**
  - 53.1 billion tons CO₂eq, 90% global emissions

- **Agriculture**
  - 51 million km², 50% global habitable land

For more information, visit: [https://ourworldindata.org/environmental-impacts-of-food](https://ourworldindata.org/environmental-impacts-of-food)
An imbalance exists between what we recommend people eat and what we actually produce

- Globally, the supply of cereals is 154% of what the population needs for a healthy diet. Red meat is at 568%.
- If the entire US population wanted to meet dietary guidelines, our agricultural system would fall short, especially in fruits, vegetables, legumes and tree nuts.
- **Policy/Legislation/Systemic change is needed and necessary**
**AGROECOLOGY: ADDRESSING THE ROOT CAUSE**

**Agroecology**: the application of ecological concepts and principles to optimize interactions between plants, animals, humans and the environment – FAO

- Holistic thinking about agronomy, ecology and biology
- Producing food in harmony with nature, not against it

**FAO’s 10 Elements of Agroecology**
- Core elements: diversity, recycling, synergies, resilience and efficiency
- Also emphasizes respect, co-learning, food culture and governance
**INDUSTRIAL AGRICULTURE VS. AGROECOLOGY:**
**RDNS CAN OFFER EVIDENCE FOR THESE CHANGES IN FOOD SYSTEM**

<table>
<thead>
<tr>
<th>What ISN’T agroecology?</th>
<th>What could agroecology look like?</th>
</tr>
</thead>
</table>
| Use of synthetic pesticides | • Approaches like integrated pest management  
• Farm designs maximizing the presence of natural enemies |
| Dependence on external mineral fertilizers | • Long-cycle crop rotation  
• Soil cover  
• **Nitrogen fixing crops (Pulses – save $$ and improve soil health & mitigate climate change)**  
• Application of local manure & compost |
| Vast areas with one single crop (monocultures) | • Diversity at the both the individual field and whole farm levels |

1. 10 Elements of Agroecology, FAO
Plant-based diets reduce risk of food-related chronic diseases and are more environmentally-friendly¹

- “Healthier” plant-based eating habits reduced the relative risk of coronary heart disease, colorectal cancer and type 2 diabetes and reduced greenhouse gas emissions and other environmental pollutants.² ³
- Replacing 50% of all animal-based foods with plant-based foods would reduce our greenhouse gas emissions in the US by about 35% ⁴

INDUSTRIAL BEEF & MEAT PRODUCTION

There are huge differences in greenhouse gas emissions from different foods

<table>
<thead>
<tr>
<th>1 kg beef</th>
<th>1 kg peas</th>
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</thead>
<tbody>
<tr>
<td>60 kg GHG</td>
<td>1 kg GHG</td>
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</tbody>
</table>

Animal-based foods have a bigger footprint than plant-based foods

<table>
<thead>
<tr>
<th>1 kg lamb or cheese</th>
<th>1 kg pork</th>
<th>1 kg poultry</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 kg GHG</td>
<td>7 kg GHG</td>
<td>6 kg GHG</td>
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Beef Creates a Huge Environmental Footprint

If cattle were their own nation, they would be the world’s 3rd-largest GHG emitter

Beef uses 33% of all water for farm animal production

25% of Earth’s land area is pasturized (excluding Antarctica)

Beef demand projected to grow by 95% by 2050.

wri.org/shiftingdiets
Animal foods are more resource intensive than plant-based foods \(^1\)

Emissions per gram of protein for beef and lamb are about 250 times those of legumes \(^2\)

Twenty servings of vegetables have fewer greenhouse gas emissions than one serving of beef \(^2\)
INDUSTRIAL ANIMAL AGRICULTURE

Livestock = 15% of GHG = same amount generated by our transportation system

- Cattle: milk and meat = 65% of that
- Methane gas from cow emissions
- Manure Lagoons from concentrated animal feeding operations (CAFOs)
- 70% of the deforestation of the Amazon is to provide land for cattle ranches (lost ability to sequester carbon)
- Habitat destruction due to land clearing for agriculture around the world

If this continues as is:
- 80% increase in global greenhouse gas emissions from food production

1. Tackling climate change through livestock, FAO (2013)
Concentrated Animal Feeding Lot – CAFO

- Inhumane environment for animals
- CAFOs accumulate massive amounts of manure and other untreated waste
- Waste is often stored and disposed of in a way that pollutes the air, surface and groundwaters
- Risk to human health – especially for CAFO workers and local residents

Why are CAFOs used?

- Retail prices for meat are kept artificially low
- Environmental and health effects are shifted from the producer onto the individual and community

The American Public Health Association has called for a precautionary moratorium on the establishment and expansion of CAFOs

1. Precautionary Moratorium, American Public Health Association (2019)
People Are Eating More Protein than They Need—Especially in Wealthy Regions

Average daily protein requirement
Food System is also a solution

Eat less meat: UN climate-change report calls for change to human diet

The report on global land use and agriculture comes amid accelerating deforestation in the Amazon.

- 100 experts, many from developing countries
- Deforestation:
  - Releasing over 50 billion tons of carbon into the atmosphere in 30 to 50 years
  - “Plant-based diets as a major opportunity for mitigating and adapting to climate change”
  - Policy recommendation to reduce meat consumption

EAT-Lancet Commission

- 37 world-leading scientists from 16 countries
- Healthy dietary patterns
- Large reductions in food loss and waste
- Major improvements in sustainable food production practices

1. The EAT-Lancet Commission on Food, Planet, Health, 2017. 2. Schiermeier, 2019
“Red meat and sugar will need to decrease by 50% while consumption of nuts, fruits, vegetables and legumes must double”

- Currently 216 lbs of meat per person per year
- ½ lb of meat per day

ESTIMATE:

- Changes in food production practices could reduce agricultural GHG emissions in 2050 by about 10%
- Increased consumption of plant-based diets could reduce emissions by up to 80%

DON’T TAKE MY BACON!
Climate-Friendlier Diets

The average drop in food-related emissions when people switch from a typical Western diet to lower-impact ones:

-50%  -40  -30  -20  -10  0

- Reduction range
- Average reduction
- Vegan
- Vegetarian

Partly replace meat and dairy with plants
Replace beef and lamb with other meat

Source: Aleksandrowicz et al, PLoS One
ANIMAL AGRICULTURE CAN PLAY A POSITIVE ROLE

“BETTER” MEAT IS KEY FOR A HEALTHIER PLANET


Well managed farms with Humane practices, certified grass-fed, and organic has benefits for the well-being of animals & land

Crop/Livestock system: Manure → nourishment for soil and crop byproducts = livestock feed

Healthier soil = better water absorption & holding capacity

Healthy system = habitat for other wildlife and pollinators

More resilient to the severe droughts and flooding created by climate change

Consider food and land sovereignty of indigenous and other communities who may practice sustainably – Regional and cultural variation
THE BUSINESS CASE: THE FOOD INDUSTRY IS RESPONDING

The popularity of plant-based foods is increasing

- Vegan packaged foods represented $9.7 billion in global retail sales in 2016
  - Projected to reach $11.8 billion by 2021
- Sales of meat substitutes in the US will reach $1 billion by 2021
- Plant-based protein may represent up to one-third of the entire protein sector by 2054

Plant-based protein sales increased by 14.7% in 2014

Animal-based protein sales increased by 7.5%
CONSUMER DEMAND CAN DRIVE CHANGE
The popularity of plant-based foods is increasing 2

• Half of consumers aged 18-34 want to swap plant proteins for animal proteins 3
• 60% of millennials consume plant-based meat alternatives 4
• 36% of consumers buy plant-based meat alternatives 5
• Increasing demand for dairy alternatives
  • US sales of almond milk reached $1 billion in 2014 7
    • Not necessarily sustainable
Meatless Mondays can be a great place to start!

Global Platform for Health Practitioners:
https://meatless-monday.hivebrite.com/topics/10685/feed
<table>
<thead>
<tr>
<th></th>
<th>(GHG emissions per gram of protein)</th>
<th>(Retail price per gram of protein)</th>
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<tbody>
<tr>
<td>Wheat</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Corn</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Beans, chickpeas, lentils</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Rice</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Fish</td>
<td>$$</td>
<td>$$</td>
</tr>
<tr>
<td>Soy</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Nuts</td>
<td>$$$</td>
<td>$$$</td>
</tr>
<tr>
<td>Eggs</td>
<td>$</td>
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</tbody>
</table>

**LOW**

**MEDIUM**

- Poultry: $$
- Pork: $$
- Dairy (milk, cheese): $$

**HIGH**

- Beef: $$$
- Lamb & goat: $$$

[Lighter shade shows emissions from agricultural production, darker shade shows emissions from land-use change.](https://www.wri.org/resources/data-visualizations/protein-scorecard)
1/3 of the food produced = lost or wasted

8% of greenhouse gases come from food waste

1. United Nations Food and Agriculture Organization, 2019
RECOMMENDATIONS AND SOLUTIONS

RDNs are the perfect bridge to help connect the dots between human health and environmental health and climate change.
ROLES THAT RDN CAN PLAY IN ADVOCATING FOR CHANGE IN THE FOOD SYSTEM TO MITIGATE CLIMATE CHANGE

Supporting Plant-Based Eating
- Working with restaurants & chefs
- Working with individuals
- Working with institutions
  - Cool Food Pledge: https://www.wri.org/our-work/project/cool-food-pledge

Advocating for Farmers and Local Food Systems
- Encouraging eating locally
- Working with restaurants & chefs
- Working with individuals
- Working with institutions
- Promoting farmers markets
- Connecting farmers with organizations

Promoting Organic and Sustainably-Grown Foods
- Advocate against unnecessary agricultural inputs
- Working with restaurants & chefs
- Working with individuals
- Working with institutions
SUPPORT & ADVOCATE FOR FARMERS – BLACK AND BROWN FARMERS USING ENVIRONMENTALLY FRIENDLY PRACTICES “LEAH PENNIMAN” OF SOUL FIRE FARM
ROLES THAT RDN CAN PLAY IN ADVOCATING FOR CHANGE IN THE FOOD SYSTEM TO MITIGATE CLIMATE CHANGE

Reducing Waste & Packaging
- Food brands & Grocery Stores
- Working with restaurants & chefs
- Working with individuals
- Working with institutions (Compost)

Miscellaneous
- Helping people grow food
- Advocate for policy change
- Supporting Indigenous farming practices & Agroecology
- Ensure access to food
- Community or Institutional gardens

Educating Other RDNs and Health Practitioners
- Webinars
- Creating handouts
- Including in classrooms
- Writing papers, articles, blogs, etc.
- Social media

Working with Food Brands
- Fair-trade certification (coffee, chocolate, tea)
EXAMPLE: WORKING WITH BRANDS

• Help them source more sustainable ingredients
• Focus on more plant-based options/ingredients
• Work on more sustainable packaging
• Help create connection between how eco-friendly = healthier
• Explore palatability of ingredients and flavor – using clinical knowledge and client interaction experience
• Trusted voice of the RDN in marketing and communications about health benefits and sustainability of the brand
NOTE: Behavior changes during COVID happened FAST!
Food safety, food preparation, practices around grocery shopping shifted and will likely change profoundly and permanently.
FOR RDN’S IN CLINICAL PRACTICE
“Dietary choices are a personal matter, but many American consumers are motivated by a concern for the environment and would welcome sound advice from credentialed nutrition professionals.”

Rose, D. 2019
INCORPORATE CLIMATE CHANGE ISSUES INTO YOUR INTAKE FORM

How has climate change affected you?

What connections do you see between what is going on for you medically and climate change?

Let me know if you are interested at all in hearing about how some of the recommendations we talk about around your health can also be beneficial for the environment.

Normalize
EATING FOR PLANETARY HEALTH GUIDELINES FROM THE EAT-LANCET COMMISSION

Proteins should primarily be sourced from plants where possible
- Fish or other Omega-3 sources 3X/week
  - 6oz/week
  - Note: fish – sustainable? (More later)
- Modest amounts of eggs and chicken
  - 6 oz chicken/week
- Very little red meat: 3 oz/week

Nuts: 1/3 - 1/2 cup/day
Beans: At least ½ cup/day

Carbohydrates:
- Grains - mostly whole grains
  - 1 cup of grains/day
- <5 % added sugar
  - Tubers or starchy vegetables
    - ½ cup to 1 cup

> 5 servings of fruits and vegetables/day

Dairy: moderate and optional
- 0 – 16oz

Adaptability and flexibility are key for cultural and access purposes
INDIVIDUAL (AND INSTITUTIONAL) CHANGES

Increasing fresh produce and reducing processed foods

- Replace chips with nuts and seeds
- Replace sweets with fruit
- Add vegetables to soups and other dishes
- Note: Encourage food brands to shift ingredients

Note: we don’t produce enough fruits and vegetables to meet the guidelines put out by the USDA

- Agribusinesses profit from monocultures → corn/wheat/soy etc. → processed foods
PROTEIN: REALISTICALLY, WHAT DOES THIS LOOK LIKE?

- ½ cup beans/lentils = 7-9 grams of protein
- ½ cup nuts/seeds = 10 grams of protein
- 1 oz meat/fish = 7 grams of protein
- 3 oz tofu = 10 grams of protein

- **Breakfast:** 1 cup oatmeal with 1/3 cup nuts/seeds = 12 grams protein
- **Lunch:** 1 cup lentil soup = 18 grams of protein
- **Snack:** ½ cup hummus and veggies = 5 grams protein
- **Dinner:** 3 oz fish = 21 grams of protein
- Other foods throughout the day = 5-10 grams

- **TOTAL** = 55-65 grams of protein
WHY IS IT HARD TO CHANGE DIET?

THE HOW OF CHANGE
RELATIONSHIP WITH FOOD

- Food is emotional
- Food is personal
- Food can be comfort
- Food choices may be dictated by: Stress, busy lifestyle, convenience, food access, finances, environment, lack of education, culture
CREATIVE WAYS TO INCORPORATE BEANS

• Chili
• Bean burgers
• Lentil soup
• Black bean
• Hummus & bean dips
• Add to salads
• Combine with meaty flavors
YES, YOU CAN HAVE LENTILS/BEANS FOR BREAKFAST AND DESSERT!

**BREAKFAST**
- Lentil muffins
- Lentil and egg quiche
- Beans in smoothie
- Lentil nut balls
- [10 prep ahead breakfasts to make this month](https://ohsheglows.com/)

**DESSERTS**
- Black bean brownies
- White bean blondies
- Garbanzo bean “cookie dough”
- [https://ohsheglows.com/](https://ohsheglows.com/)
Recipes for Beans and Legumes
https://pulses.org/recipes/
EASE INTO TRANSITIONS:
NO NEED TO GO “WHOLE HOG” (WHOLE CHICKPEA?)

START WITH ADDING!

• Bacon WITH Greens
• Meatloaf or Burgers WITH more vegetables or ½ mushroom
• Sandwiches WITH more vegetables
• Scrambled Eggs or Omelette WITH vegetables
• ADD beans to soups

COMBINE FOODS & COMBINE FLAVORS THEY ENJOY

• Soups and stews with meat AND beans
• Tacos and burritos with chicken and beans
• Curry using tofu in place of meat or chicken
HAVE RESOURCES AND VISUAL AIDS FOR PATIENTS ON YOUR WALL AND IN YOUR WAITING ROOM

https://www.usapulses.org/consumers/resources
HAVE RESOURCES AND VISUAL AIDS FOR PATIENTS

PROMOTE POSITIVE ASSOCIATIONS WITH IMAGES ON WALL OR WAITING ROOM
FARMERS MARKETS
RECYCLING

https://www.freepik.com/free-photos-vectors/reduce-reuse-recycle
REDUCE FOOD WASTE WITH EDUCATION

“Best before” is the date by which a food company estimates that a food will taste its best – it’s not about safety!
SUPPORT AND ENCOURAGE ORGANIC AND REGENERATIVE AGRICULTURAL FARMING WHEN POSSIBLE

• Healthier for humans
• Improves soil microbial population
• Fewer pesticides
• Fewer energy needs
• Less pollution
• Less water usage
• Stores more carbon
• Improves bio-diversity
• More resilient to climate change

1. Food and Agriculture Organization of the United Nations. “Organic Agriculture and Climate Change”
CERTIFICATIONS
ADD VALUE FOR
CUSTOMER AND
FOOD BRAND

Graphic: https://homestead.motherearthnews.com/sustainablecertificationsthataddvalue/
Regenerative Organic Certification

• Coming to stores in 2020
• Addresses practices that go beyond USDA Organic Certification

Label covers three primary domains:

• Soil Health
• Social Equality
• Animal Welfare

Goals:

• Improve soil and ecosystem health while producing nutritious foods
• Address the inequalities that exist among farm workers
• Promote pasture-raised animal agriculture
ENCOURAGE COOKING & MEAL PREP: THE GREAT CONNECTOR

- Better for health & environment
- Relationship with and connection to food
  - Purchase an herb plant if possible
- Connection to community
- Connection to culture and tradition
- Way to slow down and be mindful
- Saves money
- Reduces waste
- *How can they ENJOY it?*
ENCOURAGE GARDENING; FINDING COMMUNITY
GARDEN, FARMER’S MARKETS
HEALTHCARE CONTRIBUTES TO 9% OF OVERALL GHG

If the U.S. health care sector were its own country, it would rank 13th among the world’s largest greenhouse gas emitters.

“HEALTHCARE WITHOUT HARM” IS PAVING THE WAY

- FOOD SERVED
- SUPPORTING LOCAL AND SUSTAINABLE AGRICULTURE

RESOURCES FOR HEALTHCARE WORKERS

FOR HEALTHCARE WORKERS
https://eatforum.org/lancet.../healthcare-professionals/

FOR CULINARY PROFESSIONALS
https://eatforum.org/lancet.../food-service-professionals/

HANDBOUTS FOR PATIENTS ON CLIMATE CHANGE
https://noharm-uscanada.org/content/us-canada/patient-education
WHAT CAN YOU DO PROFESSIONALLY?
SPEAK UP!

- **University & Institution Connections**
  - Promote these concepts both in the classroom and the institutional level
  - Recycling? Compost? Plant based foods in cafeteria?
  - Encourage Academy and other Dietetic Associations to include sustainability discussions/webinar/articles

- **Social Media Platforms**
  - Promote plant food, organic, sustainable practices
  - Educate on Eco-Friendly Diets and Agriculture
  - Keep the messages positive

- **Conferences where food is served**
  - More Vegetarian options
  - Modify menus –ask what customers may want to reduce waste
  - Less styrofoam, plastic water bottles
  - Let participants know this is an initiative so they make different choices
  - Support LOCAL food producers

**GOAL:**
These practices become the norm!
WHAT YOU CAN DO PERSONALLY

- Buy local and organic/regenerative
- Support indigenous farming practices
- Add in more plant-based foods
- Bring containers to coffee shops/restaurants
- Ask restaurants and chefs to serve more plant-based options
- Have these conversations with friends and colleagues
- Plant a garden
- Contact your local and state representatives
- Keep an eye on the “Farm Bill”
QUESTIONS TO ASK YOURSELF

1. What are you already doing?
2. What have you thought about doing that you aren’t doing but could do?
3. How could you see yourself as an agent for change both in personal and professional life?
4. What is one thing you commit to doing this week?
DO YOU HAVE IDEAS ABOUT WAYS RDN’S CAN PARTICIPATE IN A MORE SUSTAINABLE FOOD SYSTEM?

EMAIL ME AT MARY@MARYPURDY.CO
RESOURCES FOR FURTHER EDUCATION

Academic Institutions & Government Agencies

- Food and Agriculture Organization
- Johns Hopkins Center for a Livable Future
- Planetary Health Alliance
- The International Panel on Climate Change
- The World Resources Institute

Certificates & Education

- Harvard Extension Sustainable Food Systems Certificate
- Portland State University Graduate Certificate in Sustainable Food Systems
- Sustainable Food Systems Certificate of Training Program
- Sustainable, Resilient, and Healthy Food and Water Systems
- Environmental Health: An Integrative Approach
RESOURCES FOR FURTHER EDUCATION

Specific Papers, Helpful Articles & Fact Sheets

• JAND: Cultivating Sustainable, Resilient, and Healthy Food and Water Systems: A Nutrition-Focused Framework for Action

• Catering to the Climate: How Earth-Friendly Menus at Events Can Help Save the Planet

• Center for Sustainable Systems Factsheets

• Environmental Impacts of Food Production

• Future 50 Foods

• How Our Food System Affects Climate Change

• Implications of Future US Diet Scenarios on Greenhouse Gas Emissions

• Integrative Medicine Is a Good Prescription for Patients and Planet

• Sustainable Diets: What You Need to Know in 12 Charts
RESOURCES FOR FURTHER EDUCATION

Food Focused Organizations

- 50by40
- Alliance of Nurses for Healthy Environments
- Barilla Center for Food and Nutrition Foundation
- Brighter Green
- Center for Biological Diversity
- Clinicians for Planetary Health
- Earth Day Network
- EAT
- Eat for the Earth
- Food and Climate
- Food and Water Watch
- Food Tank

- Friends of the Earth
- Global Alliance for the Future of Food
- Global Forest Coalition
- Marion Nestle
- Meatless Monday
- Monday Campaigns
- Natural Resources Defense Council
- One Health
- One Meal a Day for the Planet
- Rodale Institute
- World Wildlife Fund
RESOURCES FOR FURTHER EDUCATION

Documentaries

- Grow Food
- The Biggest Little Farm
- The Need to Grow

Videos

- Farming While Black: Uprooting Racism, Seeding Sovereignty
- EAT-Lancet Commission videos

Podcasts

- EAT Podcast
- Food Sleuth Radio
- Food Talk
- Sustainable Dish

Groups to Join Online

- Meatless Mondays Campaign Group
- Planetary Health Alliance FB Group
RESOURCES FOR PATIENTS & INSTITUTIONS

Sustainability Resources

- Plate and the Planet – learn about the planetary health diet, with 7-day sample meal plan
- Green Restaurant Association – find restaurants using sustainable practices
- Green Eatz – learn about the carbon footprint of different foods
- American Community Garden Association – connect with a community garden in your neighborhood

Resources for Reducing Food Waste

- 15 Tips for Reducing Food Waste
- Store It – learn how to keep food fresh for as long as possible
- Composting 101
- Food Bank Locator – donate extra food to a local food bank in your area
- Guide to growing fruits and vegetables from food scraps
- Imperfect Produce
- Misfits Market
- Wallly Shop – purchase bulk foods with reusable, returnable packaging
RESOURCES FOR PATIENTS & INSTITUTIONS

Plant-Based Eating Resources

• **AND Vegetarian Practice Group** – articles, nutrition information, recipes
• **Vegetarian Society** – resources for building a balanced vegetarian diet

Vegetarian Recipes

• [https://pulses.org/recipes/](https://pulses.org/recipes/)
• [https://ohsheglows.com/](https://ohsheglows.com/)
• [https://www.whitneyerd.com/category/recipes](https://www.whitneyerd.com/category/recipes)
• [https://sharonpalmer.com/recipes/](https://sharonpalmer.com/recipes/)
• [https://minimalistbaker.com/](https://minimalistbaker.com/)

Sourcing Sustainable Animal-Based Foods

• **Monterey Bay Aquarium Seafood Watch** – guide to sustainably produced seafood
• **Organic Egg & Dairy Scorecards** - search your favorite brand and learn about their sustainability practices
• **Guide to Food Labels** – learn how to make more informed choices when buying food
Seasonal Eating Resources

• Local Seasonal Food Guide – find out what’s in season in your area
• Seasonal Produce – nutrition info and recipes for seasonal fruits and vegetables, sorted by season
• Farmers Market Directory – search for a farmers market near you
• CSA Directory – search for a CSA program in your area

Documentaries

• The Need to Grow
• The Biggest Little Farm
• Grow Food
• Blue
• In Our Hands
• Sacred Cow: The Case for Better Meat
• Kiss the Ground
• WASTED! The Story of Food Waste
• Sustainable

The Cool Food Pledge:
https://www.wri.org/our-work/project/cool-food-pledge
QUESTIONS?

Podcast/Webseries: “The Nutrition Show”
Available on iTunes

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Twitter: @marypurdyhere

https://marypurdy.co/sustainable-food-systems-educational-resources/


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- Intergovernmental Report on Climate Change. SPECIAL REPORT: Global Warming of 1.5. Website: https://www.ipcc.ch/sr15/ Accessed October 2019
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