

Science News

from research organizations

Do you know the carbon footprint of your food choices?

Date: December 17, 2018

Source: University of Technology Sydney

Summary: Consumers greatly underestimate the energy consumption and greenhouse gas emissions associated with their food choices, but they'll favor items with a lower carbon footprint if they're given clear information on the label, according to new research.

Share: [!\[\]\(17413706fd4997a1a4bdf85c6864eee1_img.jpg\)](#) [!\[\]\(f419710cbe076aa30a9c6c031b5cbe84_img.jpg\)](#) [!\[\]\(2726020a4107bdc9042b257034f90eb3_img.jpg\)](#) [!\[\]\(9459655bf14a84f4d775e8d814cca8c9_img.jpg\)](#) [!\[\]\(de47dbdca34225b222a4a87ac0e499b3_img.jpg\)](#) [!\[\]\(96827f7759894bde432c5e841bd43777_img.jpg\)](#)

FULL STORY

Shoppers greatly underestimate the difference their food choices can make to climate change, but they'll favour items with a lower carbon footprint if they're given clear information on the label, according to new research from the University of Technology Sydney and Duke University.

Between 19% and 29% of global greenhouse gas emissions come from food production, with beef and lamb the biggest contributors, so shifting diets towards greater fruit and vegetable intake is a promising strategy for reducing climate change.

Lead author Dr Adrian Camilleri wanted to know how well consumers understood the carbon consequences of their food choices, as previous research had shown people significantly underestimate the carbon emissions from electrical appliances.

"With an appliance such as a heater you can feel the energy used and see an electricity bill at the end of the month, so the impact is quite salient, whereas the impact of food production is largely invisible," says Dr Camilleri.

The study, published in the journal *Nature Climate Change*, asked more than 1000 people to estimate the energy embedded in 19 foods and 18 appliances, and the amount of greenhouse gas emissions associated with those appliances and foods.

The researchers found participants significantly underestimated energy consumption and greenhouse gas emissions for both electrical appliances and foods -- but food was more severely underestimated.

"If you ask people to guess the difference between items such as beef and vegetable soup on the environment they assume there is not much difference, but beef soup creates more than 10 times the amount of greenhouse gases than vegetable soup," says Dr Camilleri.

"This is a bit of a blind spot because if someone wants to reduce their greenhouse gas emissions, they might think to turn off the heater, drive less or fly less. Very few people think to eat less beef."

The researchers also looked at whether they could improve people's perception of the environmental impact of their food choices through the use of labelling, in the same way that a five-star rating system for electrical appliances conveys energy use.

They presented 120 participants with a choice of soups to buy. When the soups had a carbon footprint label, participants bought fewer beef soups and more vegetable soups than when there was no label provided.

The research suggests that the introduction of carbon footprint labels on food items could be a simple intervention to increase understanding of energy use and greenhouse gas emissions from food production, and so reduce environmental impacts.

Greenhouse gases emerging from beef and lamb production include those created in the production of fertilizer for feed, methane emitted from the animals, livestock transportation and the loss of trees to clear land for pasture.

A vegan diet based on fruits, vegetables and grains has the least impact on the environment, with pork, chicken and fish creating a moderate impact, and beef and lamb the greatest impact.

"The choices we make at the dinner table can have a significant impact on global challenges such as climate change, and our research shows consumers are keen to make that choice," says Dr Camilleri.

Story Source:

Materials provided by **University of Technology Sydney**. *Note: Content may be edited for style and length.*

Journal Reference:

1. Adrian R. Camilleri, Richard P. Larrick, Shajuti Hossain, Dalia Patino-Echeverri. **Consumers underestimate the emissions associated with food but are aided by labels.** *Nature Climate Change*, 2018; DOI: 10.1038/s41558-018-0354-z
-

Cite This Page:

MLA

APA

Chicago

University of Technology Sydney. "Do you know the carbon footprint of your food choices?." ScienceDaily. ScienceDaily, 17 December 2018. <www.sciencedaily.com/releases/2018/12/181217120027.htm>.

RELATED STORIES

Changing Cities' Food Systems to Help Reduce Carbon Emissions

May 2, 2018 — Many US cities and states are looking for ways to slash greenhouse gas emissions, including cap-and-trade programs, building-efficiency regulations, and boosting public transit and renewable energy ... [read more »](#)

What Is the Environmental Impact of Your Lunch-Time Sandwich?

Jan. 25, 2018 — The carbon footprint of your sandwich could be having a major impact on greenhouse gas emissions according to new research. Researchers have carried out the first ever study looking at the carbon ... [read more »](#)



Vegetarian and 'Healthy' Diets Could Be More Harmful to the Environment, Researchers Say

Dec. 14, 2015 — Following the USDA recommendations to consume more fruits, vegetables, dairy and seafood is more harmful to the environment because those foods have relatively high resource uses and greenhouse gas ... [read more »](#)

By Itself, Abundant Shale Gas Unlikely to Alter Climate Projections

May 14, 2014 — A policy analysis finds that if natural gas is abundant and less expensive, it will encourage greater consumption of gas and less of coal, renewables and nuclear power. The net effect on the climate ... [read more »](#)

FROM AROUND THE WEB

Below are relevant articles that may interest you. ScienceDaily shares links with scholarly publications in the TrendMD network and earns revenue from third-party advertisers, where indicated.

[What to eat after colonoscopy: 16 foods to eat](#)

Saurabh (Seth) Sethi et al., [Medical News Today](#)

[ACP: Aggressive Action Needed on Climate Change](#)

Joyce Frieden et al., [MedPage Today](#)

[Preventing the Negative Health Effects of Climate Change](#)

[MedPage Today](#)

What is carbon monoxide poisoning? What causes carbon monoxide poisoning?

Medical News Today

Ulcerative colitis diet: Foods to choose and avoid

Medical News Today

Not So Fast With the Biofuels

GenomeWeb

Ulcerative colitis diet: Foods to eat and avoid

Judith Marcin et al., Medical News Today

Tumor clonality and resistance mechanisms in EGFR mutation-positive non-small-cell lung cancer

Future Oncology

What to eat after colonoscopy: 16 foods to eat

Saurabh (Seth) Sethi et al., Medical News Today

ACP: Aggressive Action Needed on Climate Change

Joyce Frieden et al., MedPage Today

Preventing the Negative Health Effects of Climate Change

MedPage Today

What is carbon monoxide poisoning? What causes carbon monoxide poisoning?

Medical News Today

Ulcerative colitis diet: Foods to choose and avoid

Medical News Today

Not So Fast With the Biofuels

GenomeWeb

Ulcerative colitis diet: Foods to eat and avoid

Judith Marcin et al., Medical News Today

Tumor clonality and resistance mechanisms in EGFR mutation-positive non-small-cell lung cancer

Future Oncology

What to eat after colonoscopy: 16 foods to eat

Saurabh (Seth) Sethi et al., Medical News Today

ACP: Aggressive Action Needed on Climate Change

Joyce Frieden et al., MedPage Today

Preventing the Negative Health Effects of Climate Change

MedPage Today

What is carbon monoxide poisoning? What causes carbon monoxide poisoning?

Medical News Today

Ulcerative colitis diet: Foods to choose and avoid

Medical News Today

Not So Fast With the Biofuels

GenomeWeb

Ulcerative colitis diet: Foods to eat and avoid

Judith Marcin et al., Medical News Today

Tumor clonality and resistance mechanisms in EGFR mutation-positive non-small-cell lung cancer

Future Oncology

Powered by **TREND MD**



Free Subscriptions

Get the latest science news with ScienceDaily's free email newsletters, updated daily and weekly. Or view hourly updated newsfeeds in your RSS reader:

 [Email Newsletters](#)

 [RSS Feeds](#)

Follow Us

Keep up to date with the latest news from ScienceDaily via social networks:

 [Facebook](#)

 [Twitter](#)

 [Google+](#)

 [LinkedIn](#)

Have Feedback?

Tell us what you think of ScienceDaily -- we welcome both positive and negative comments. Have any problems using the site? Questions?

 [Leave Feedback](#)

 [Contact Us](#)

Copyright 2018 ScienceDaily or by other parties, where indicated. All rights controlled by their respective owners. Content on this website is for information only. It is not intended to provide medical or other professional advice. Views expressed here do not necessarily reflect those of ScienceDaily, its staff, its contributors, or its partners. Financial support for ScienceDaily comes from advertisements and referral programs, where indicated.