Hunger and Environmental Nutrition DPG

Webinar Series

Pesticides in our Food
The who, what, why Dietitians need to know

March 11, 2014

www.HENdpg.org
@HENdpg
Moderator

STACIA CLINTON, RD. LDN
HEN Past-Chair
Regional Director
Healthy Food in Health Care Program
Stacia.clinton@comcast.net
Thank You to Health Care Without Harm

This Webinar Series is brought to you in collaboration with Health Care Without Harm

www.healthyfoodinhealthcare.org
www.noharm.org
Thank You To Our Sponsor

This Webinar Series is brought to you with generous support of our ethical sponsors, Stonyfield, Organic Valley, and Clif Bar
Hunger and Environmental Nutrition (HEN)
Dietetic Practice Group

**HEN Vision**
Optimize the nation’s health by promoting access to nutritious food and clean water from a secure and sustainable food system.

**HEN Mission**
Empower members to be leaders in sustainable and accessible food and water systems.

**Sustainability**
HEN defines sustainability as: "A sustainable and resilient food system [that] conserves and renews natural resources, advances social justice and animal welfare, builds community wealth, and fulfills the food and nutrition needs of all eaters now and in the future."

*(Harmon A. & Tagtow A., 2008)*

@HENDPG
Hunger and Environmental Nutrition (HEN) Dietetic Practice Group

Member Benefits

• FREE Online access to the Journal of Hunger and Environmental Nutrition
• Quarterly newsletter and webinars with CPE opportunities
• Lively Electronic Mailing List (EML)
• Strategic network relationships
• Educational Resources on Food System Topics: Organic Talking Points, Antibiotic Use in Agriculture, and more...
• HEN awards and recognition
• Scholarship opportunities for international members

Reduced rate for student members!

@HENdpg

www.HENdpg.org
Introduction of Speakers

Mary Jo Forbord, RD.
Farmer
Prairie Horizons Farm

Melinda Hemmelgarn, MS. RD. LD.
Nutrition Communications Consultant
Food Sleuth Radio
Pesticides Defined:
AAP Policy Statement: Pesticide Exposure in Children

~1.1 billion lbs. / yr. in U.S.
> 20,000 pesticide products marketed.

www.cdc.gov/niosh/topics/pesticides/
How: Rhetoric
What: Risks & Realities
Why: Reason
Rhetoric

The “art of moving souls.”
-- Aristotle

• The art of persuasion through carefully crafted words.

• The study of rhetoric empowers us to decode and critically analyze messages.
Language Matters

• “Crop protection” or pesticides

• “Weed Control System” or “herbicides” “2,4-D- resistant” or “Agent Orange crops”

• “Co-existence” or “Contamination”
The Power of an Ad...

“Dr. Seuss’ cartoon campaign increased pesticide use tenfold for the nation’s families.”

-- Adelynne Whitaker

1. All media is constructed/scripted.  
   Who owns the messages we receive about pesticides?

2. Media messages are created for a specific purpose (power/profit).  
   What persuasive techniques are used to sell dietitians / farmers these products?

3. Media defines culture and shapes society.  
   What messages/images are included and missing?
He’s one of the busiest men in town. While his door may say Office Hours 2 to 4, he’s actually on call 24 hours a day.

The doctor is a scientist, a diplomat, and a friendly sympathetic human being all in one, no matter how long and hard his schedule.

According to a recent Nationwide survey:

More doctors smoke Camels than any other cigarette

Doctors in every branch of medicine—113,397 in all—were queried in this nationwide study of cigarette preference. Three leading research organizations made the survey. The gist of the query was—What cigarettes do you smoke, Doctor?

The brand named most was Camel.

The rich, full flavor and cool milhomo of Camel’s superb blend of costlier tobaccos seems to have the same appeal to the smoking tastes of doctors as to millions of other smokers. If you are a Camel smoker, this preference among doctors will hardly surprise you. If you’re not—well, try Camels now.

Camels Costlier Tobaccos
"If we fight nature, we lose in the end."
- Joan Dye Gussow, nutritionist
Who owns the message?
Produce for Better Health Foundation
“Pesticide Residues: What to Communicate to Consumers”

Donors and Sponsors include:
• Bayer Crop Science
• Monsanto Seeds
• Syngenta Corp.

• “Dose makes the poison?” ...sometimes.
• Are residue fears warranted?
"Big 6" Pesticide Corporations Are Biggest Opponents of Prop 37

- Monsanto: $7,100,500
- DuPont: $4,900,000
- Syngenta: $2,000,000
- Dow: $2,000,000
- Bayer: $2,000,000
- BASF: $2,000,000
- PepsiCo: $1,716,300
- Nestle: $1,169,400
- Coca-Cola: $1,164,400
- ConAgra: $1,076,700

VS.

Right to Know
Label Genetically Engineered Foods
GMO = herbicide resistance traits
“GE crops → responsible for an increase of >400 million lbs. herbicide use in the U.S.”
(1996-2011)
Mississippi River Watershed
USGS National Water-Quality Assessment (NAWQA) program
Risks & Realities:
Children have unique susceptibilities.
Diet may be most influential source.
Early life exposure → cancer, ADHD, Autism, ↓ I.Q.
Michael Hansen, Ph.D.
Inadequate Regulations / Unanswered Safety Questions

- ...pesticides associated with GM foods were found in maternal, fetal and non-pregnant women’s blood.

- potential toxicity of these environmental pollutants and fragility of the fetus; more studies are needed.


© Food Sleuth, LLC
Agrichemicals in surface water & birth defects in the U.S.

Birth defects ↑st among women conceiving in spring/summer, when pesticides in surface water are ↑st.
<table>
<thead>
<tr>
<th>Surveillance Year</th>
<th>Birth Year</th>
<th>Number of ADDM Sites Reporting</th>
<th>Prevalence per 1,000 Children (Range)</th>
<th>This is about 1 in X children...</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>1992</td>
<td>6</td>
<td>6.7 (4.5-9.9)</td>
<td>1 in 150</td>
</tr>
<tr>
<td>2002</td>
<td>1994</td>
<td>14</td>
<td>6.6 (3.3-10.6)</td>
<td>1 in 150</td>
</tr>
<tr>
<td>2004</td>
<td>1996</td>
<td>8</td>
<td>8.0 (4.6-9.8)</td>
<td>1 in 125</td>
</tr>
<tr>
<td>2006</td>
<td>1998</td>
<td>11</td>
<td>9.0 (4.2-12.1)</td>
<td>1 in 110</td>
</tr>
<tr>
<td>2008</td>
<td>2000</td>
<td>14</td>
<td>11.3 (4.8-21.2)</td>
<td>1 in 88</td>
</tr>
</tbody>
</table>

Heed Warnings: Developmental Disabilities
Autism Spectrum Disorders
AAP: “urgent public health concern”
- Lead
- Methylmercury
- Polychlorinated biphenyls
- Organophosphate pesticides
- Organochlorine pesticides
- *Endocrine disruptors*
- Automotive exhaust
- Polycyclic aromatic hydrocarbons
- Brominated flame retardants
- Perfluorinated compounds

April 2012
Fetal Origins of Adult Diseases

BodyBurden
The Pollution in Newborns
A benchmark investigation of industrial chemicals, pollutants, and pesticides in human umbilical cord blood

The Environmental Working Group found:
287 different chemicals in the umbilical cord of newborns
Of these:
- 180 cause cancer in humans or animals
- 217 are toxic to the brain & nervous system
- 208 cause birth defects or abnormal development in animal tests

MRC Lifecourse Epidemiology Unit
• Choose food grown w/out pesticides and chemical fertilizers.

• Eat free range meat raised w/out antibiotics and growth hormones.

• Filter tap and well water.

• Farmers, children: ↑ risk

• Become an active VOICE.
Benefits of Organic Diets

- ↓ exposure to pesticide residues.
- Children consuming conventional diets had pesticide residues 6X higher in urine compared to organic diets.

What are the Unknown and Unintended Consequences of our Food and Farming Choices?

“Everything that happens in our environment happens to us, even if we don’t know it yet.”

Celine Cousteau, APHA, Philadelphia, 11/09
Precautionary measures should be taken when an activity raises threats of harm to human or environmental health, even when cause and effect relationships have not been fully established scientifically.

2,4-D drift, central, MO
Pesticide drift damage
THE $11 TRILLION REWARD
How Simple Dietary Changes Can Save Lives and Money, and How We Get There

Union of Concerned Scientists
Citizens and Scientists for Environmental Solutions

© Food Sleuth, LLC
Additional Resources

• IATP A Generation in Jeopardy
  http://www.youtube.com/watch?v=OlpyeVRuyZY&feature=c4-overview-vl&list=PLcWFNNhgxVSxIrbgPv5fNk_qYaTefkBHK

• Beyond Pesticides

• Pesticide Action Network

• The Endocrine Disruption Exchange
Source: National Water-Quality Assessment (NAWQA) Program
https://water.usgs.gov
Source: National Water-Quality Assessment (NAWQA) Program
https://water.usgs.gov
Chlorpyrifos is moderately toxic to humans and chronic exposure has been linked to neurological effects, developmental disorders, and autoimmune disorders. Exposure during pregnancy retards the mental development of children. In agriculture, it remains one of the most widely used organophosphate insecticides.

Source: United States Environmental Protection Agency (EPA)
The Extermination of the American Bison to 1889

Dark numbers indicate number of bison as of January 1st, 1889.
Light numbers give the date of local extermination.

original range
range as of 1870
range as of 1889
with modern state
and province borders
Farming in Langhei Township, MN—early 1900s
WHAT'S NEW IN AGRICULTURE
Sustainable farming: Work within our site-specific and dynamic system to:

- Balance the economic, social and environmental aspects of farming.
- Consider the impact of farming decisions on future generations.
- Connect the health of farms, food, people and communities.
- Combine generational wisdom with scientific research and technology.
- Maximize biodiversity in crops, livestock, wildlife and other species as appropriate to the native ecosystem.
- Seek non-commodity, direct and emerging markets.
- Focus on energy and nutrient cycling, and stewardship of all on-farm resources.
Waking Up Joraan’s Orchard at Prairie Horizons Farm
“The reality is that well managed and profitable farm businesses are sustainable irrespective of production practice. And, the food is all the same from a nutrient quality and health standpoint.”

--Terry D. Etherton, PhD, Distinguished Professor of Animal Nutrition and Head of the Department of Dairy and Animal Science, Pennsylvania State University, in his blog on the International Food Information Council Foundation (IFIC) website. IFIC “is dedicated to the mission of effectively communicating science-based information on health, nutrition and food safety for the public good”.
“Since nature is full of emergent properties, sustainability is always an emerging concept. Sustainability is about maintaining something indefinitely into the future. Consequently, to be sustainable we have to anticipate and successfully adapt to the changes ahead. Sustainability is a process, not a prescription. This process always requires social, ecological, and economic dimensions. There is therefore, no simple definition. It is a journey we embark on together, not a formula we agree to.”

--Fred Kirschenmann, PhD, Farmer and Distinguished Fellow, Leopold Center for Sustainable Agriculture.
2051?
Tools & Resources

- **HEN DPG**
  - [www.HENdpg.org](http://www.HENdpg.org) Sustainable Food Systems Primer - includes opportunities for RDs to influence the food system
  - FNCE Farm Tours!
  - Organic Talking Points – under revision

- **Pesticide Regulation**
  - Environmental Protection Agency – Pesticide health impact statement and toxicology report [www.epa.gov/pesticides/regulating/registering/](http://www.epa.gov/pesticides/regulating/registering/)
Hunger and Environmental Nutrition Webinar Series

Pesticides in our Food: The who, what, why Dietitians need to know

Mary Jo Forbord, RD.
Farmer
Prairie Horizons Farm

Melinda Hemmelgarn, MS.RD.LD.
Nutrition Communications Consultant
Food Sleuth Radio

Q & A

All webinars archived at www.HENdpg.org, Continuing Education