

**Using Food and Nutrients to
Achieve
Healthy People 2020
Objectives**

Ingrid Kohlstadt, MD, MPH, FACN

Disclaimer:

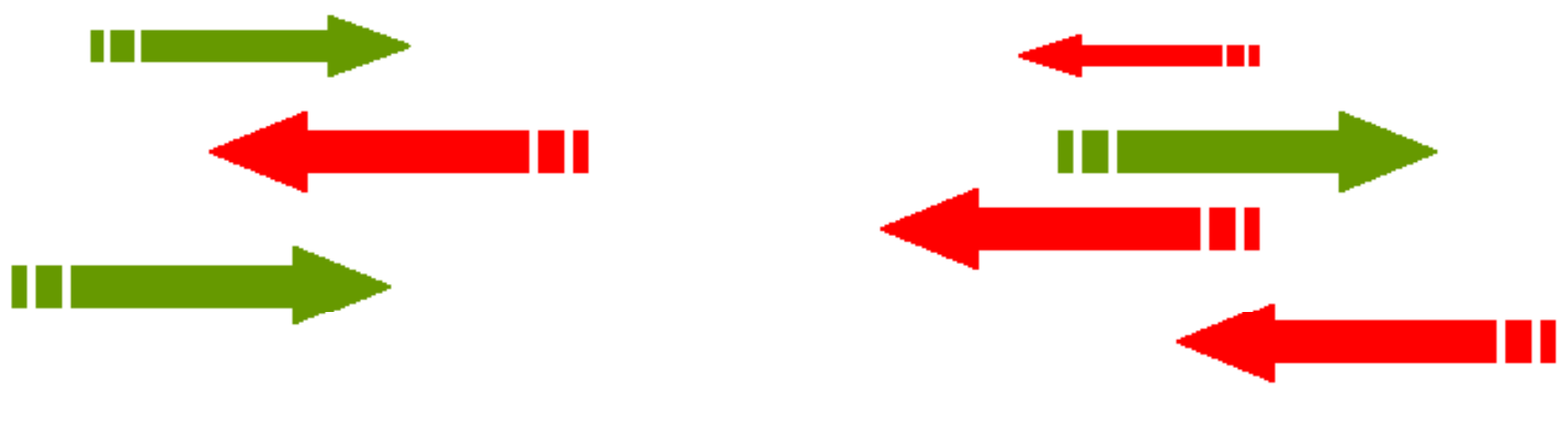
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No commercial interest or other conflict of interest exists between the author and pharmaceutical companies.

There are no financial disclosures.

Mental illness shortens lifespan
by 20-25 years, due primarily to
chronic diseases.

Food and nutrients can leverage both
mental and physical health...
...and defy statistics.



SICKNESS

HEALTH



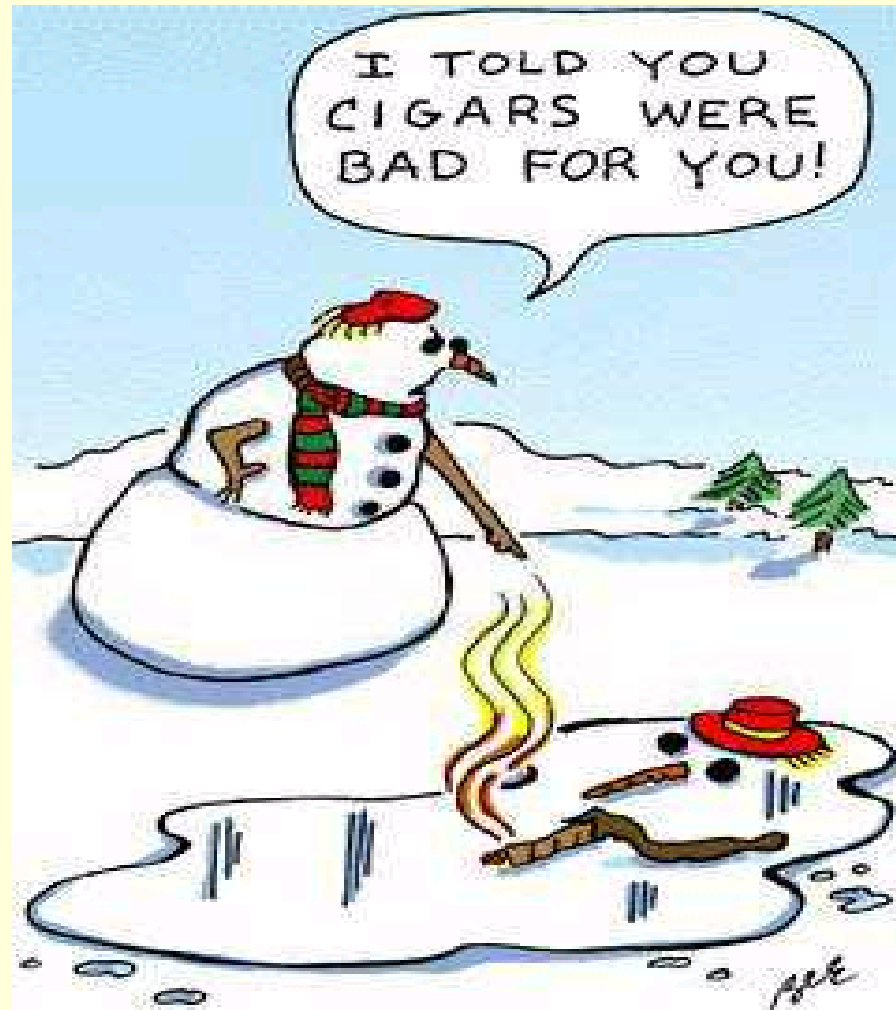
Challenges

Food and nutrients can help achieve the primary objective of Healthy People 2020 within the health system.

The challenge are:

1. Seldom lack of knowledge in nutrition.
2. The need for advocacy for putting into practice what we already know.
3. The need for innovation to overcome recurrent challenges.

“Prevention isn’t successful” is a common-held belief.



Prevention collides with freedom of choice.

"I DON'T
BELIEVE
IN
NATURAL
FOODS.
I WANT
ALL THE
PRESERVATIVES
I CAN GET."



It is often difficult to quantify successful prevention.



Prevention is often not prioritized.



Prevention has intense marketplace competition.



Prevention can have overlooked, unintended consequences.



Which of these 4 correct answers will help achieve Healthy People 2020 secondary objectives the most?

1. Therapeutic breakthroughs
2. Personalized medicine
3. Early disease detection
4. Clinical preventive services

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Special Considerations: Vitamin D

- Vitamin D status can be estimated from patient history and measured in the blood.
- Weight gain reduces vitamin D status.
- Optimizing vitamin D reduces chronic diseases.
- Optimizing vitamin D improves mood.

Several other nutrient deficiencies affect mental health.

Drug-induced Weight Gain

We eat when we are hungry and we choose the foods that taste good.

If patients are aware that their medication will make them hungry they can be more vigilant about calorie-intake to avoid weight gain.

Avoiding foods that contribute to inflammation may potentially reduce unfavorable metabolic effects of medication.

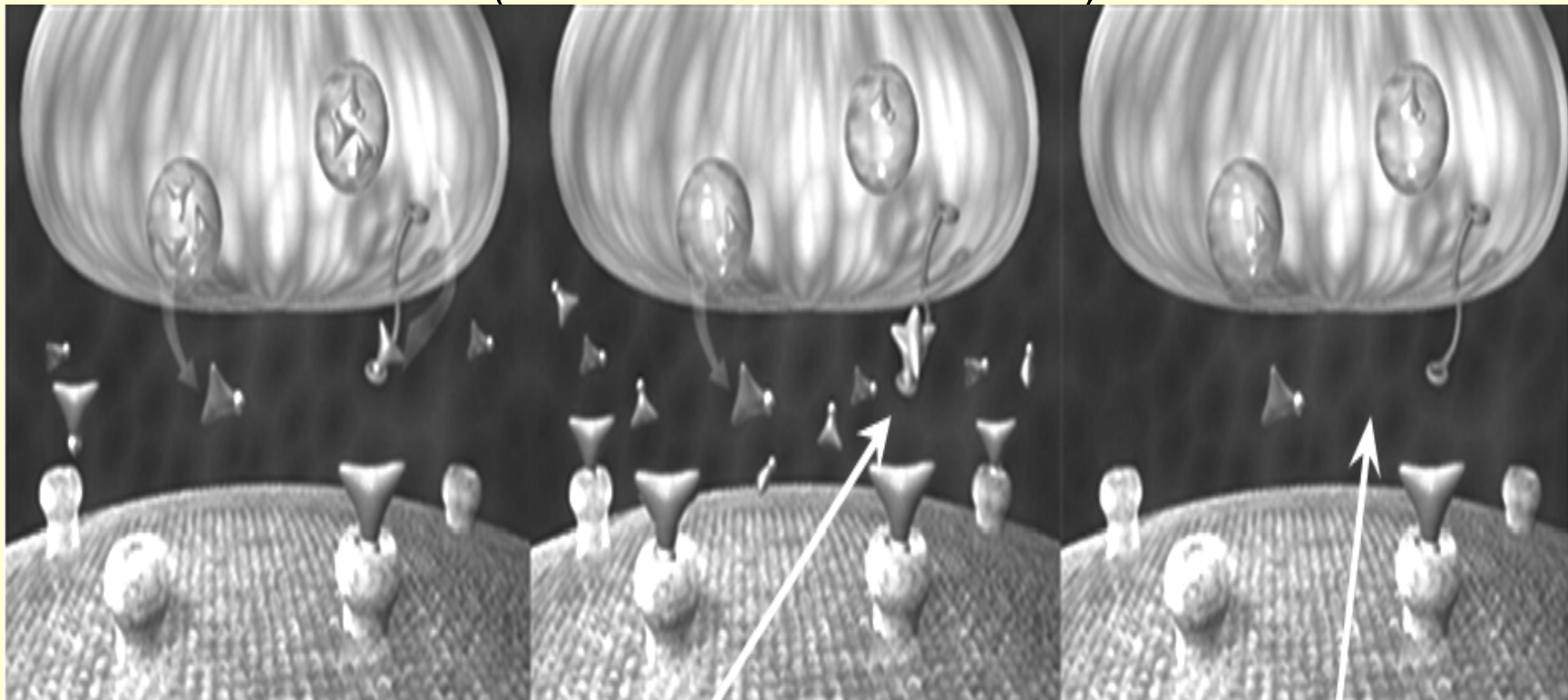
Side Effects of Drug-induced Weight Gain

Daytime sleepiness is a side effect of the medication and is also how sleep apnea secondary to weight gain manifests itself. Untreated sleep apnea worsens weight gain.

Missed menstrual periods in the absence of pregnancy suggests polycystic ovary syndrome (PCOS), a known drug side effect. Untreated PCOS worsens weight gain.

Inhibiting reuptake may influence the balance of neurotransmitters and their amino acid precursors.

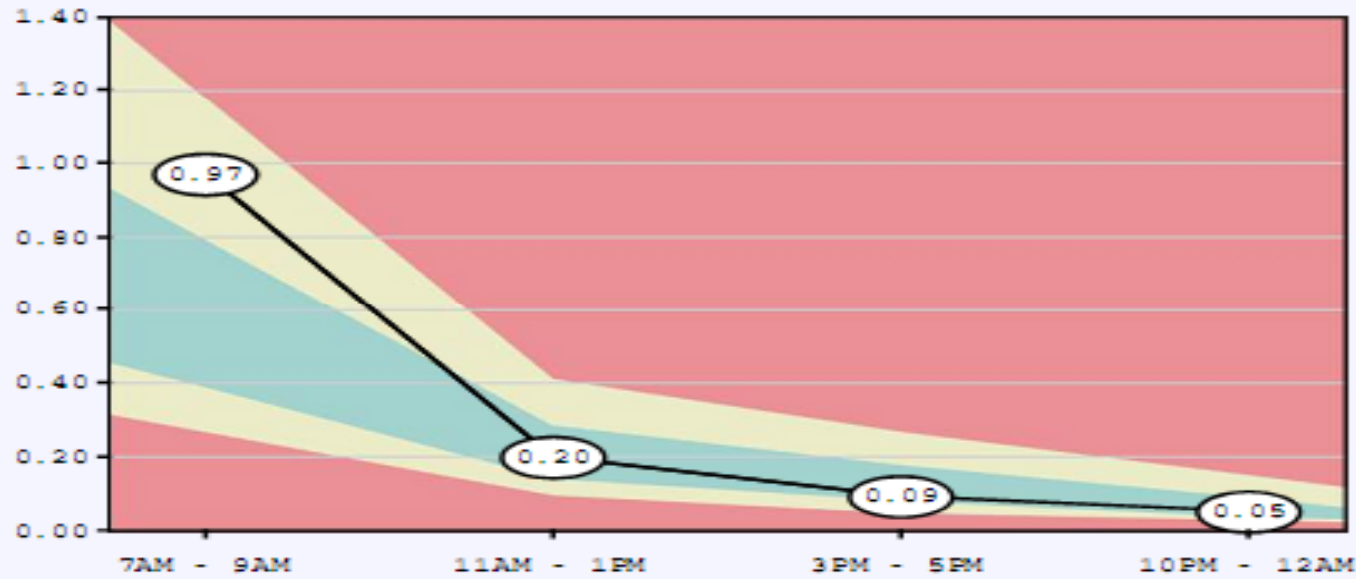
(Slide from NIAID.NIH.GOV)



Patient: **SAMPLE PATIENT**
 Age: 49
 Sex: M
 MRN:

Order Number:
 Completed: October 16, 2007
 Received: October 12, 2007
 Collected: October 09, 2007

Salivary Cortisol and DHEA



Cortisol*

Reference Range

- 1 Hour After Rising 7AM - 9AM: 0.27-1.18 mcg/dL
- 11AM - 1PM: 0.10-0.41 mcg/dL
- 3PM - 5PM: 0.05-0.27 mcg/dL
- 10PM - 12AM: 0.03-0.14 mcg/dL

Hormone	Reference Range	Reference Range
DHEA 7am - 9am	212	71-640 pg/mL
DHEA: Cortisol Ratio/10,000	219	115-1,188

Commentary

Please note that effective October 2007 reference ranges for the following analytes have changed. Cortisol: 1 Hour After Rising from 0.27-2.06 to 0.27-1.18 mcg/dL; 11AM-1PM from 0.03-0.77 to 0.10-0.41 mcg/dL; 3PM-5PM from 0.03-0.56 to 0.05-0.27 mcg/dL; 10PM-12AM from 0.03-0.50 to 0.03-0.14 mcg/dL. DHEA: 1 Hour After Rising from 14-277 to 71-640 pg/mL. DHEA/Cortisol Ratio (X10,000): from 35-435 to 115-1188.

The performance characteristics of all assays have been verified by Genova Diagnostics, Inc. Unless otherwise noted

For more than 100 years science has known that certain toxin exposures simultaneously impair both mental and physical health.

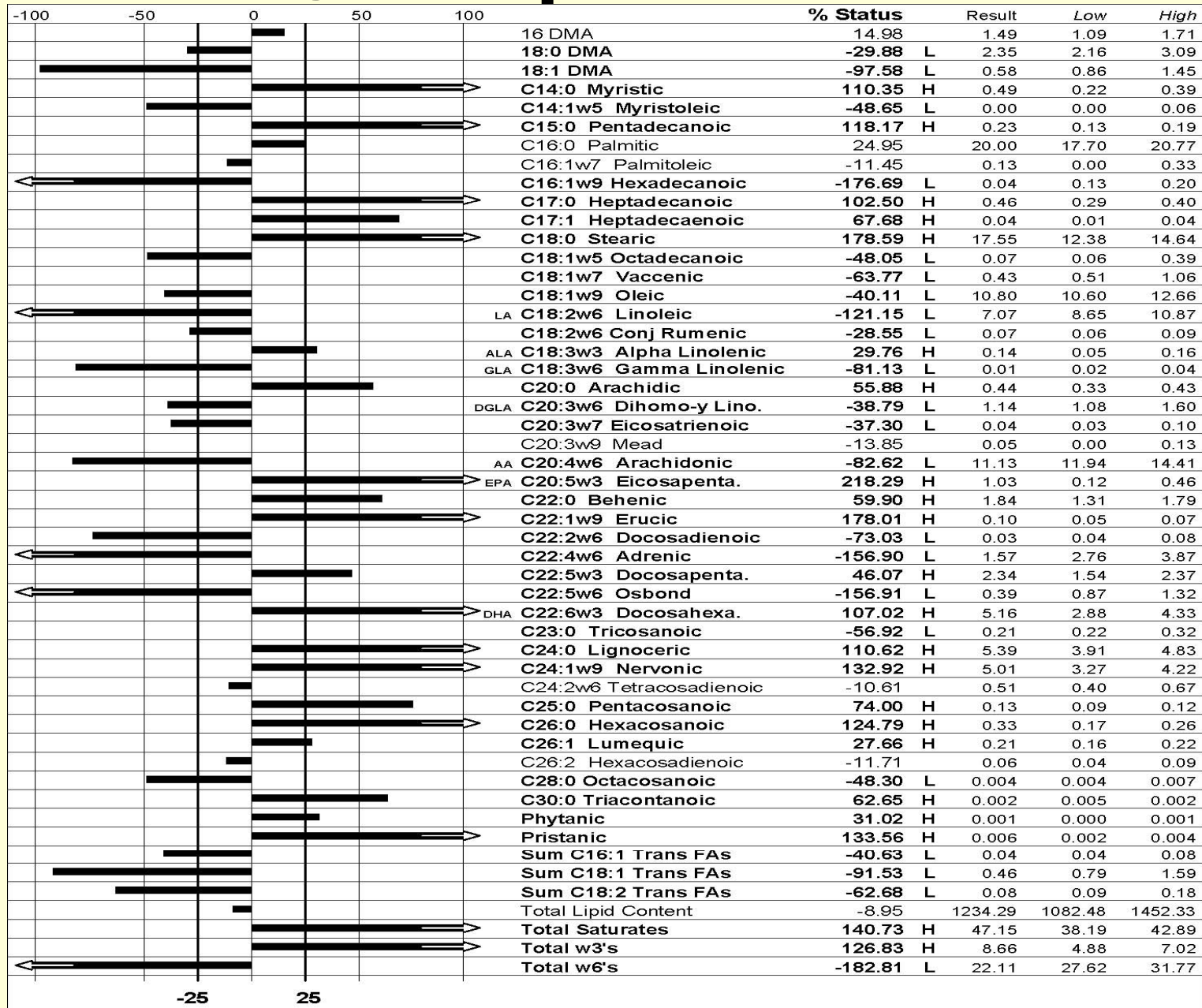
- Exposure can be identified by both medical history and diagnostic tests.
- Exposure can be removed and much damage repaired.

Fatty acids influence both mental and physical health.

- Our cell membranes and mitochondrial membranes exemplify “You are what you eat.”
- Medications and medical conditions unfavorably alter fatty acids.
- Toxin exposures and mineral deficiencies alter fatty acids.

Various treatments improve fatty acids.

Red Cell Lipid Biomarkers



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A special thanks to...

The FDA Office of Pediatric
Therapeutics

The authors of Food and
Nutrients in Disease
Management