

Paradigm Shift in the American Diet:

Changing Social Norms

According to Christopher Gardner
PhD – Nutrition Science

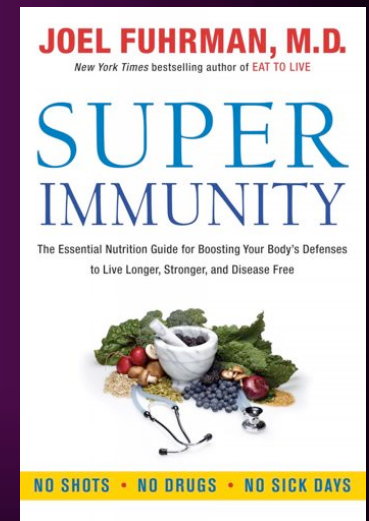
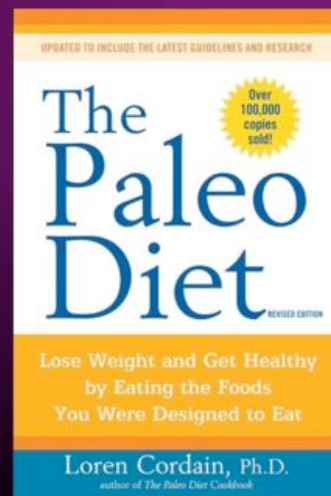
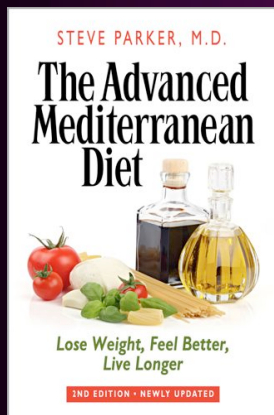
Professor of Medicine
Stanford University
Stanford Prevention Research Center

**NUTRIENTS → FOODS → FOOD
PATTERNS**

HEALTH → STEALTH

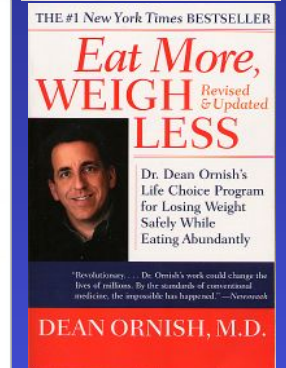
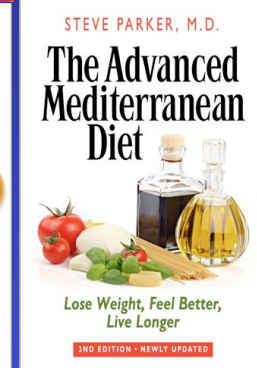
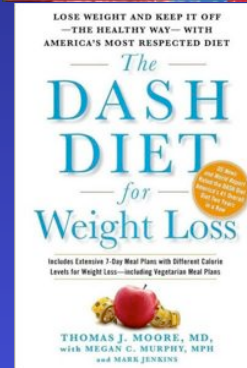
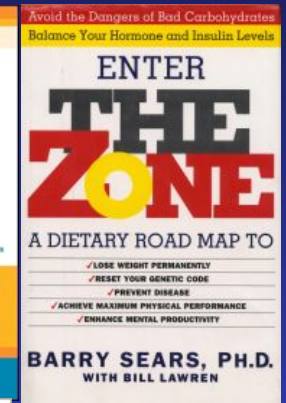
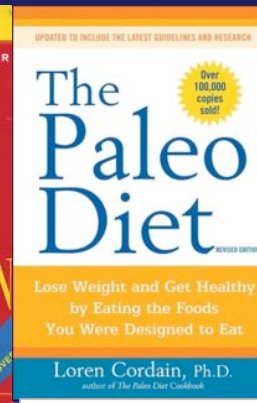
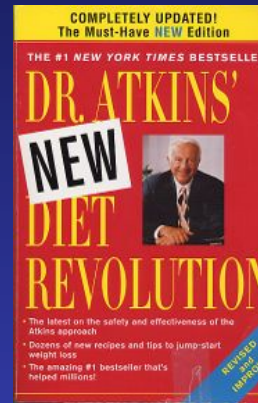
**FOOD SYSTEMS
APPROACH → UNIVERSITY FOOD
HOSPITAL FOOD
WORKSITE FOOD**

Institute of Functional Medicine 2014 – San Francisco

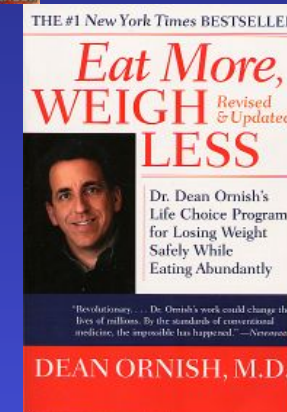
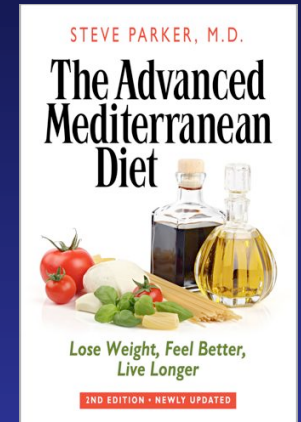
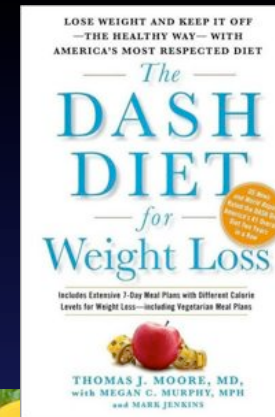
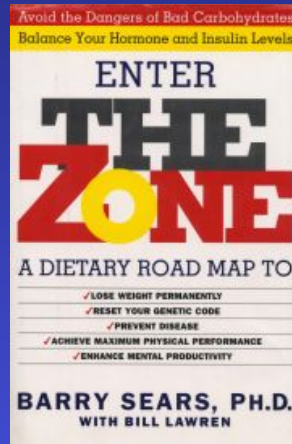
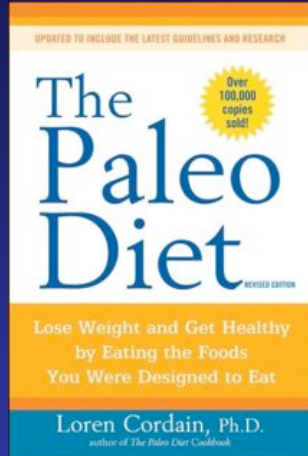
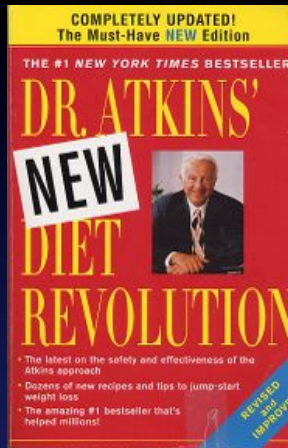


Common Ground

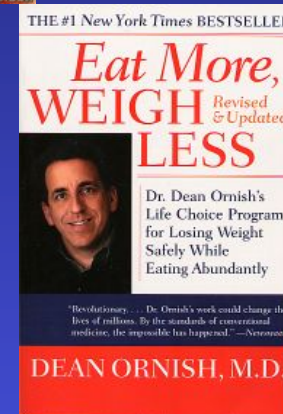
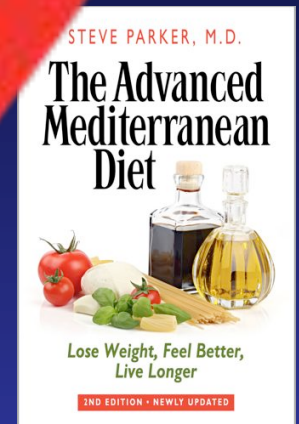
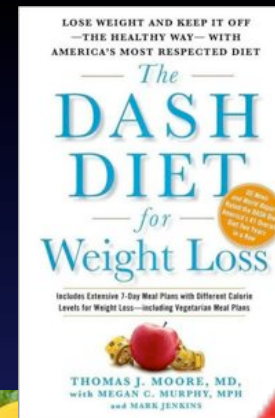
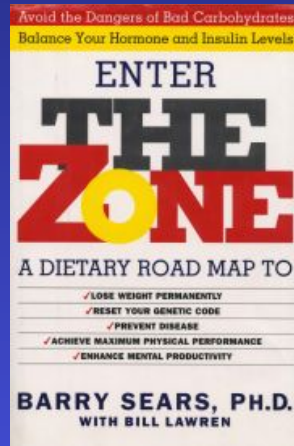
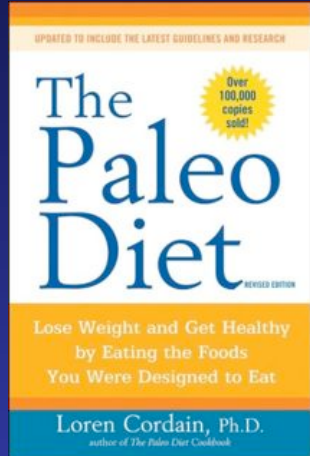
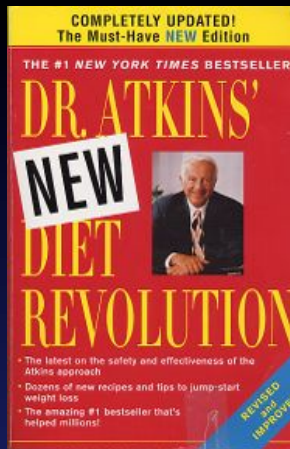
Diets

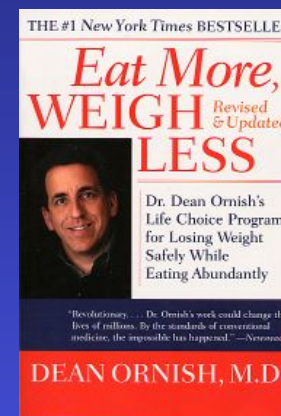
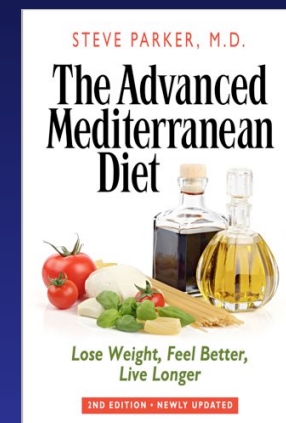
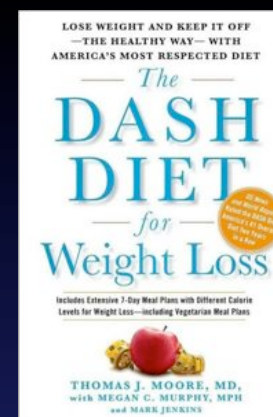
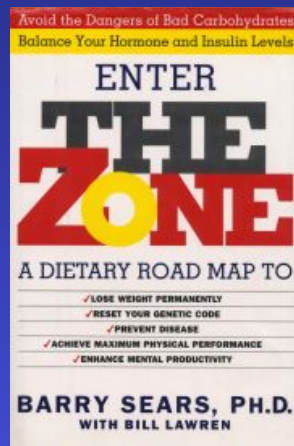
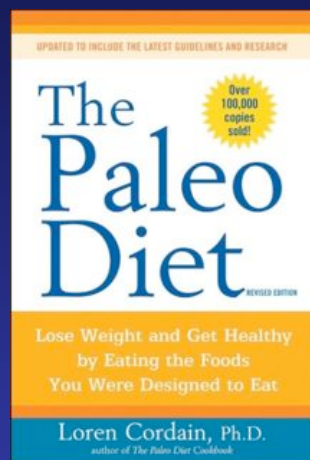
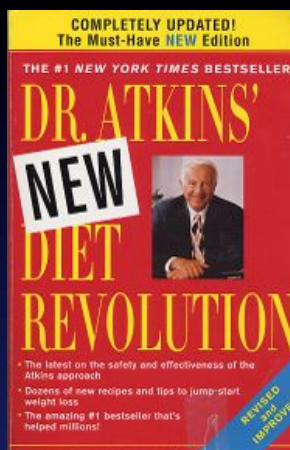


Veggies

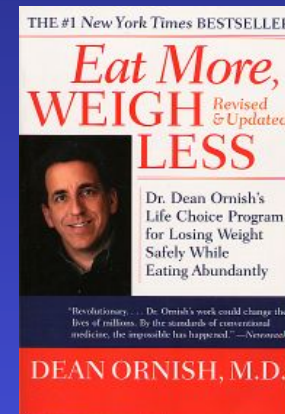
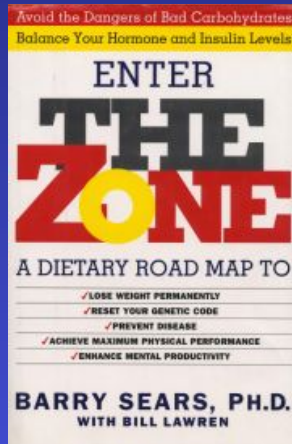
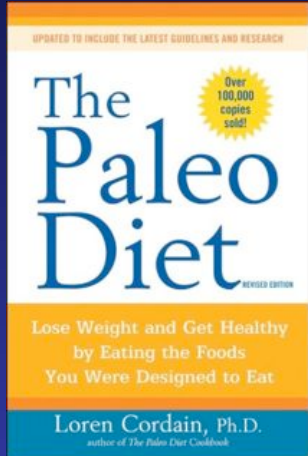
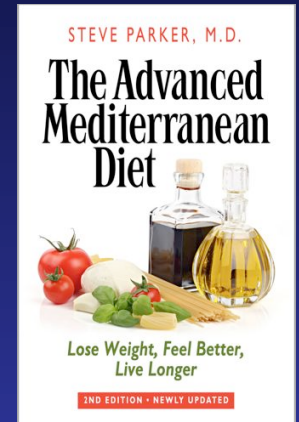
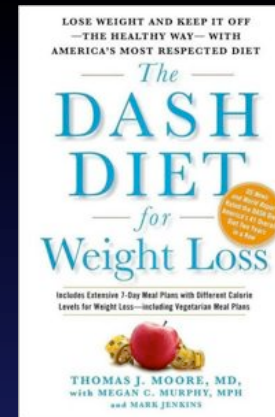
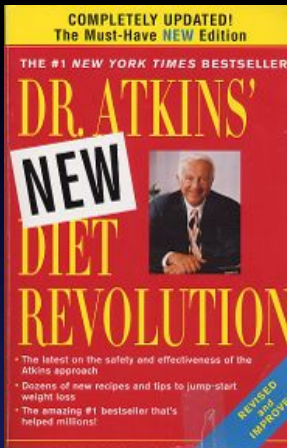
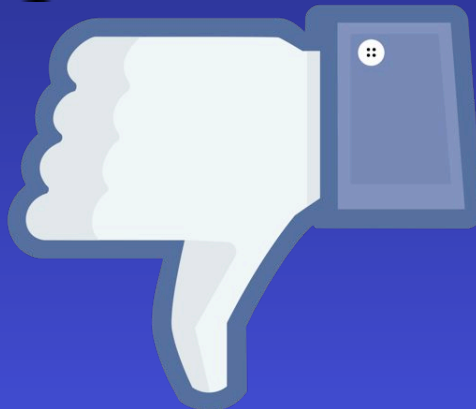


Veggies

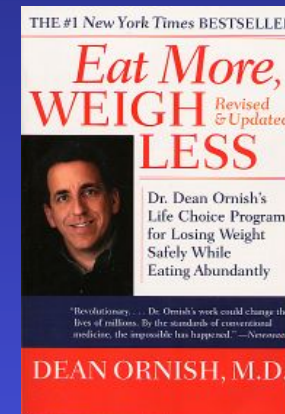
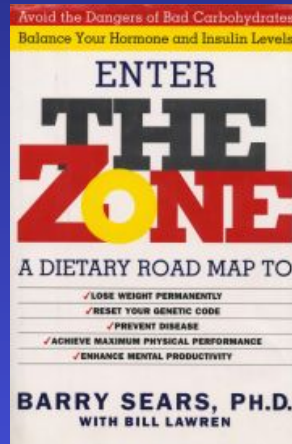
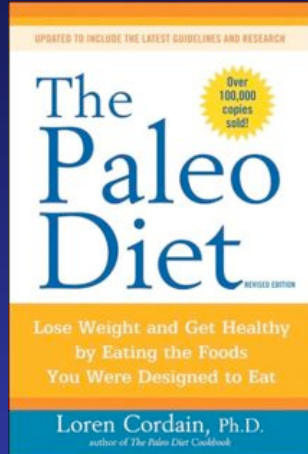
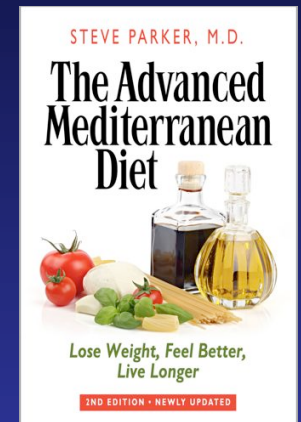
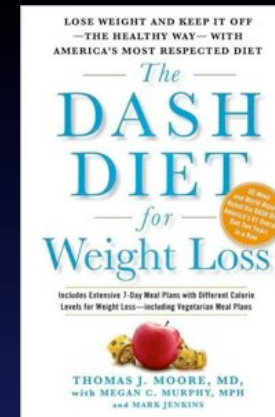
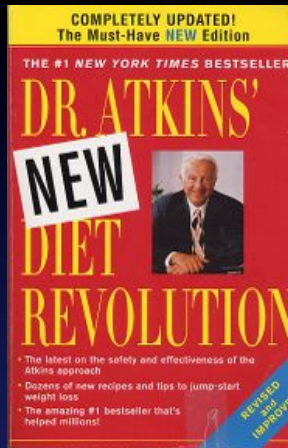




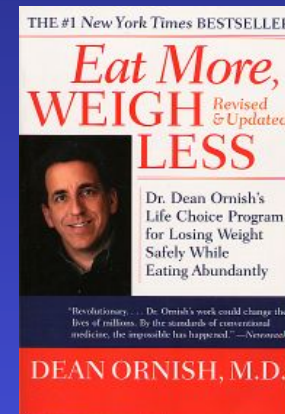
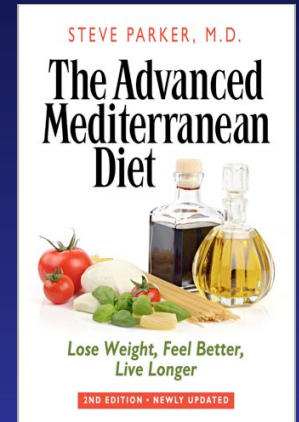
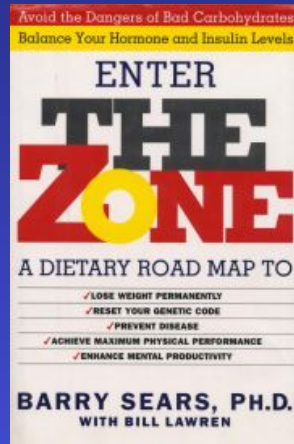
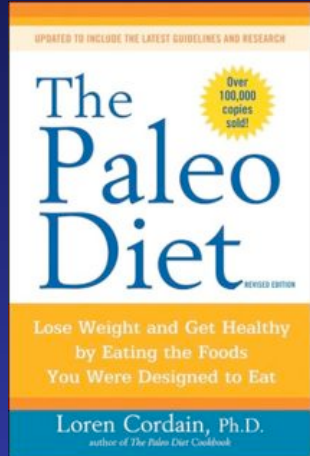
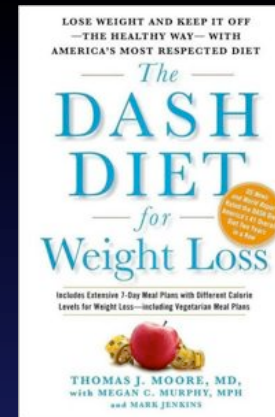
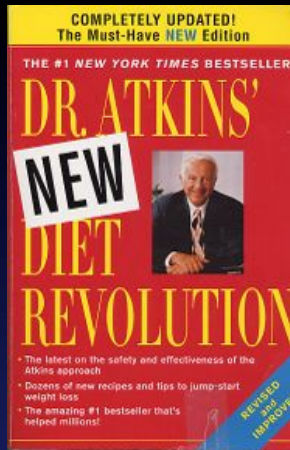
Sugar



White Wheat Flour

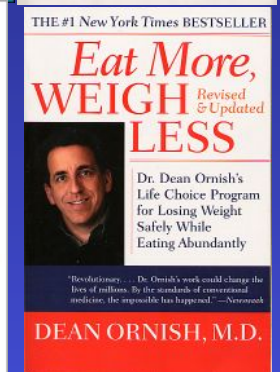
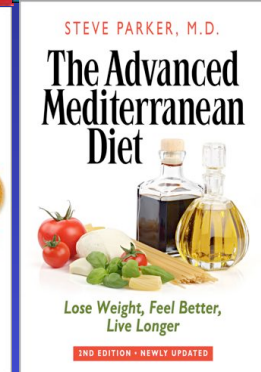
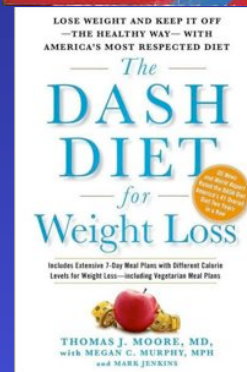
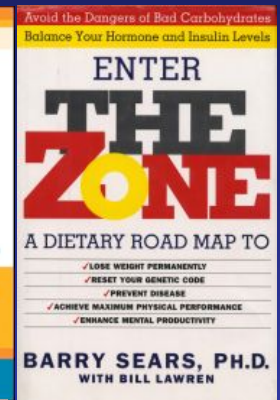
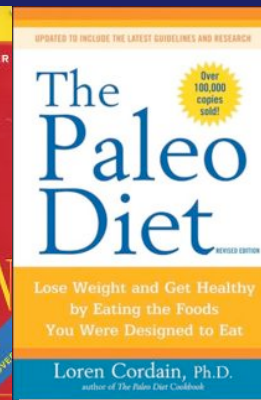
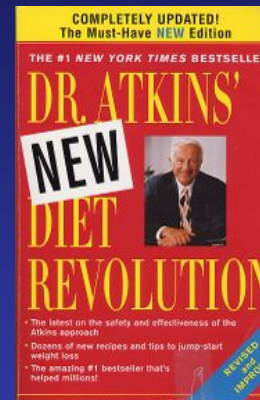


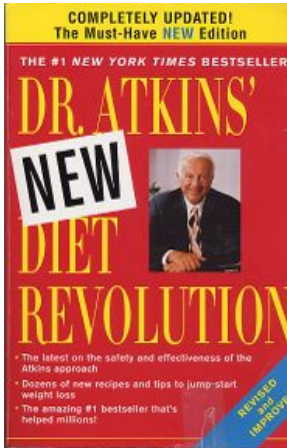
White Wheat Flour



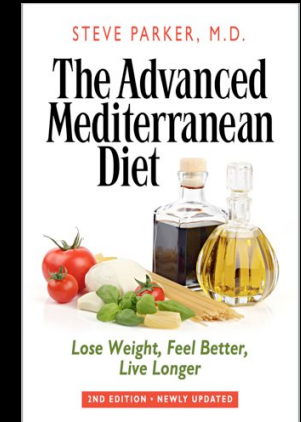
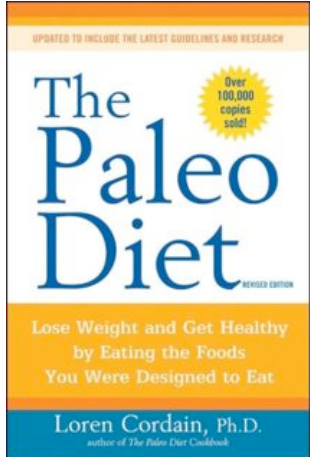
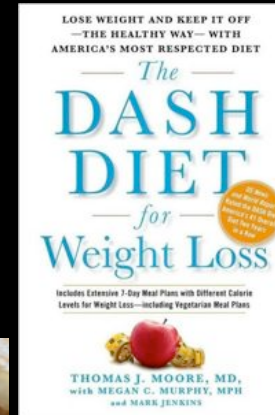
Variability

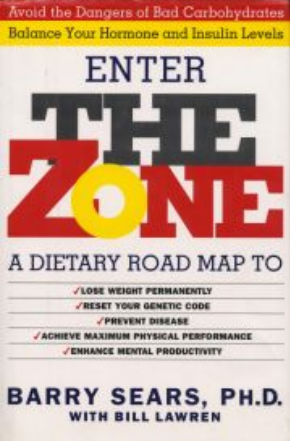
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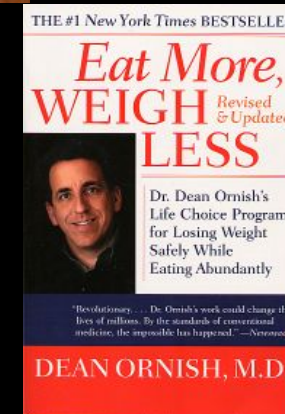


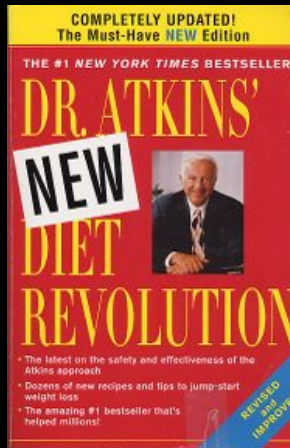
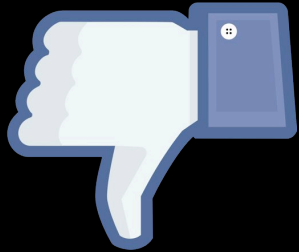
Bacon & Sausage



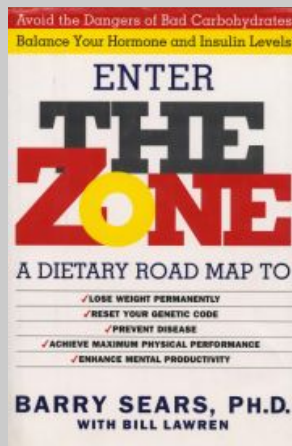
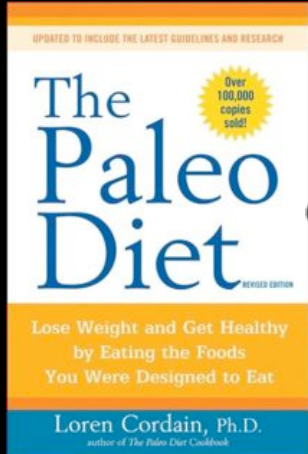
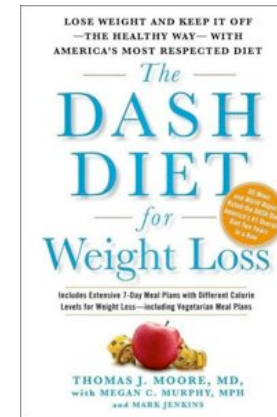


30% fat,
choose
healthy fats

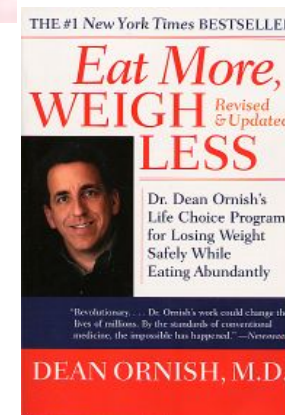


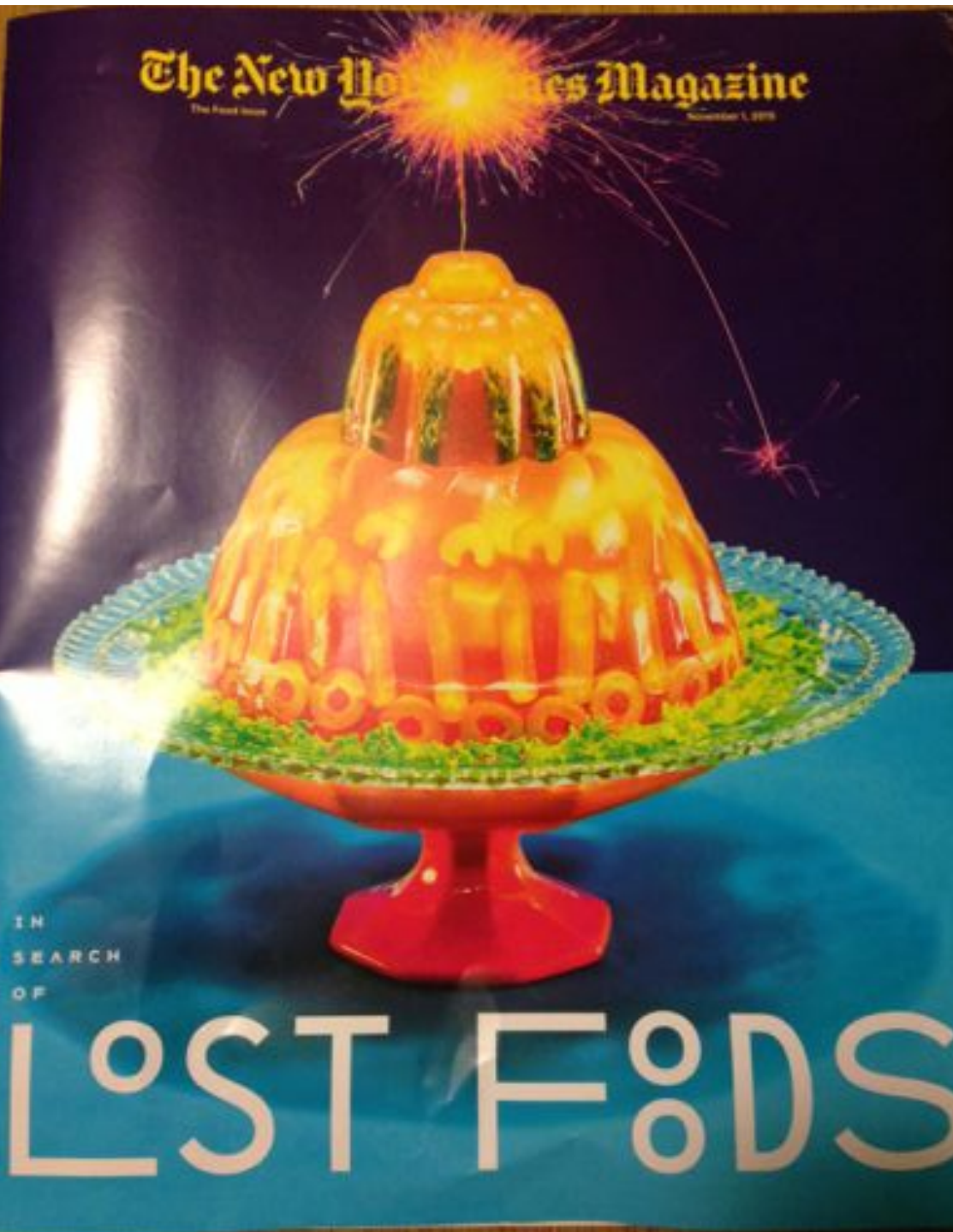


Whole grains (Wheatberries)



Consider grains as a condiment





**November 1
2015**

**INDUSTRIAL PRODUCTION DESTROYED BOTH THE TASTE
AND THE NUTRITIONAL VALUE OF WHEAT**

ONE SCIENTIST BELIEVES HE CAN UNDO THE DAMAGE

AGAINST THE GRAIN



Areas of Common Ground

- **Maximize Vegetable Intake**
- **Decrease Added Sugars**
- **Decrease Refined Grains**

Do Genotype Patterns Predict Weight Loss Success for Low Carb vs. Low Fat Diets? R01 DK091831 (2013-17) + NuSI

n=609

BMI 28-40 kg/m²
non-diabetic
generally healthy
adults 18-50 yrs
~55% women

Low Carbohydrate (n=305)

Low Fat (n=304)

Months

0

3

6

12

INTERVENTION:

22 group classes, 15-22 participants/group

WEIGHT (1° outcome)

X

X

X

X

Blood (DNA, lipids, glucose, insulin, OGTT, cytokines)

X

X (no OGTT)

X

X

Diet Assessment (NDS-R)

X

X

X

X

Psychosocial (Questionnaires)

X

X

X

X

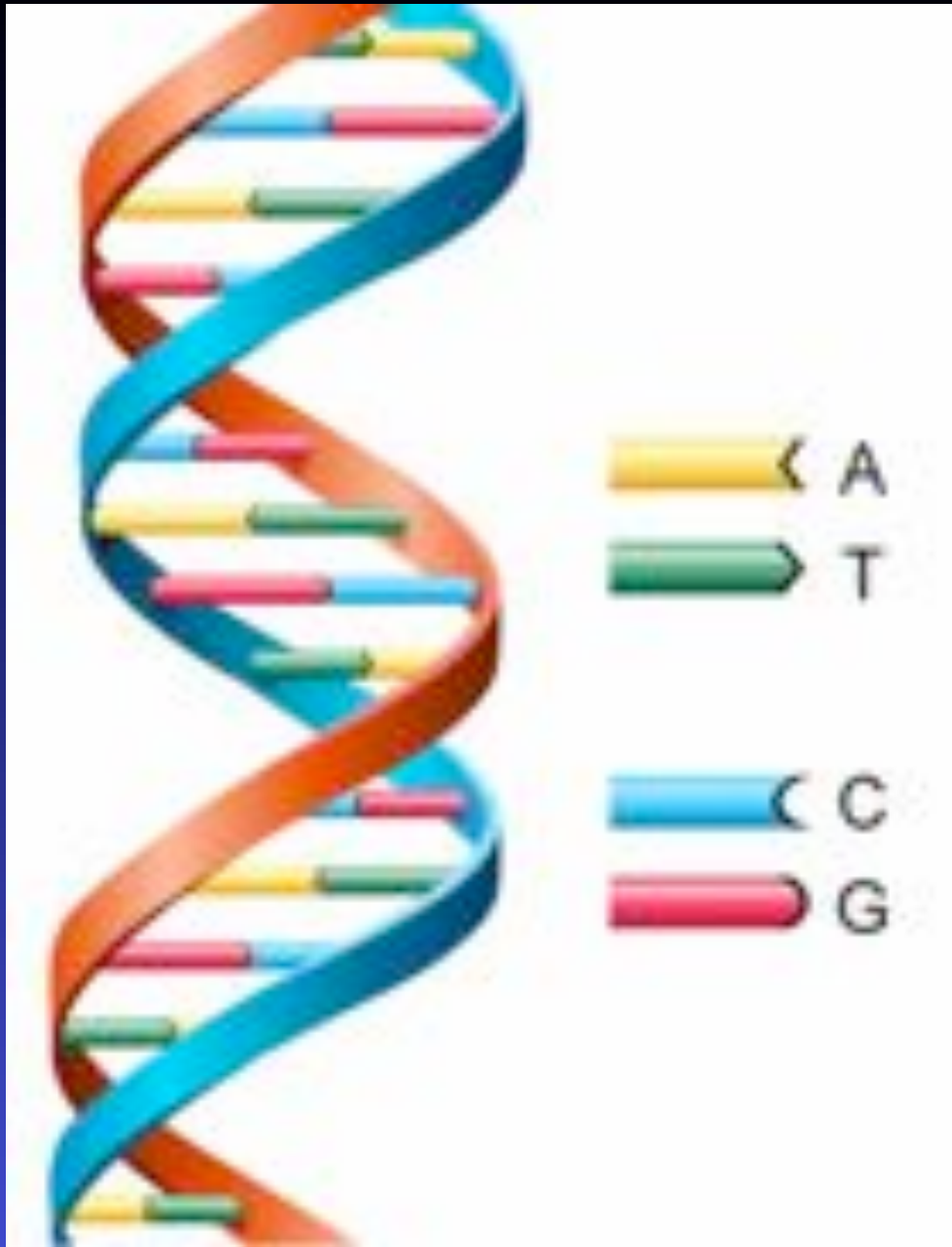
DEXA, REE (Metabolic cart)

X

X

X

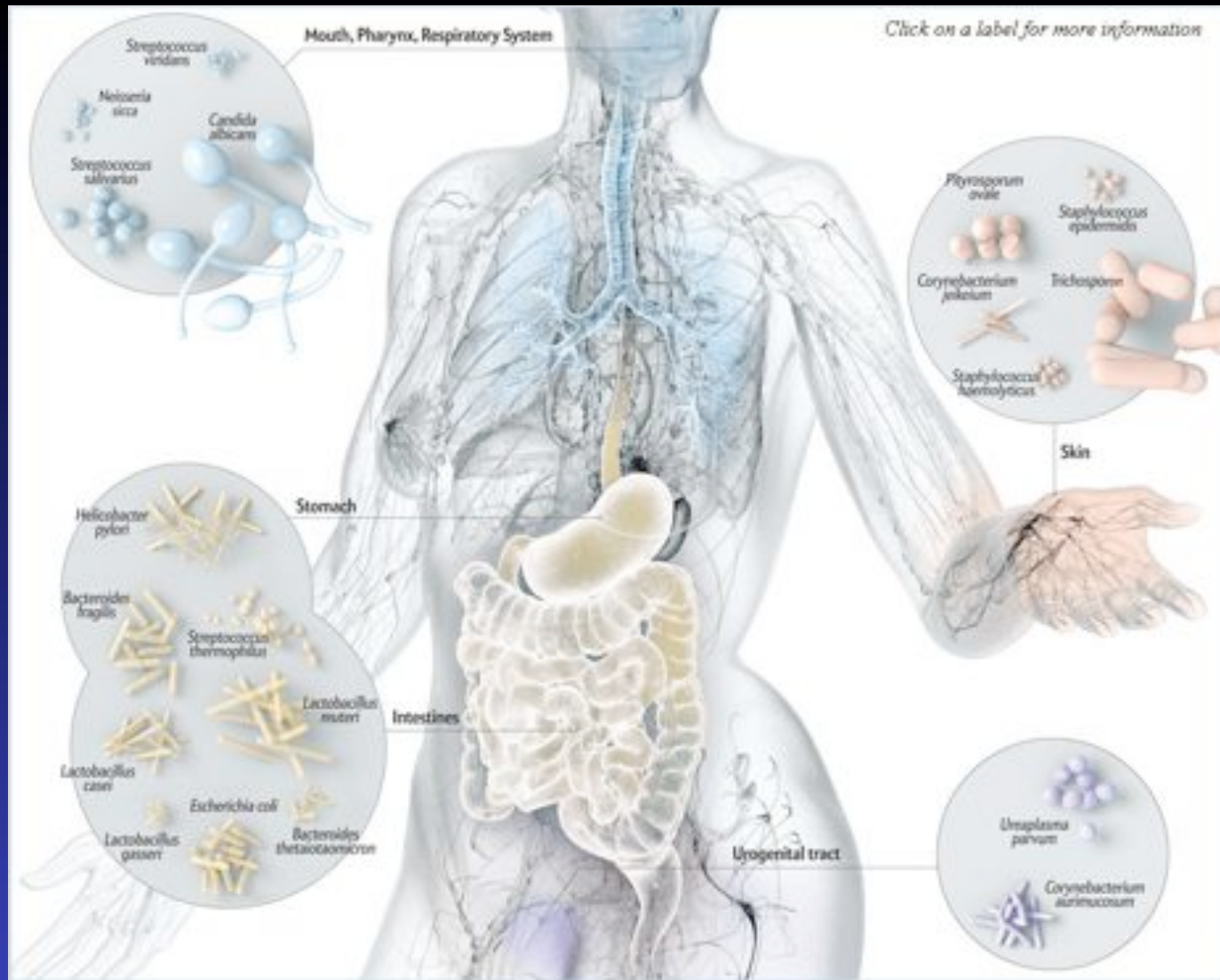
Other: Microbiome (fecal samples) Adipocytes (fat biopsies), Other – Various times points, specific cohorts



Genetic predisposition

Insulin Resistance

Metabolic
predisposition

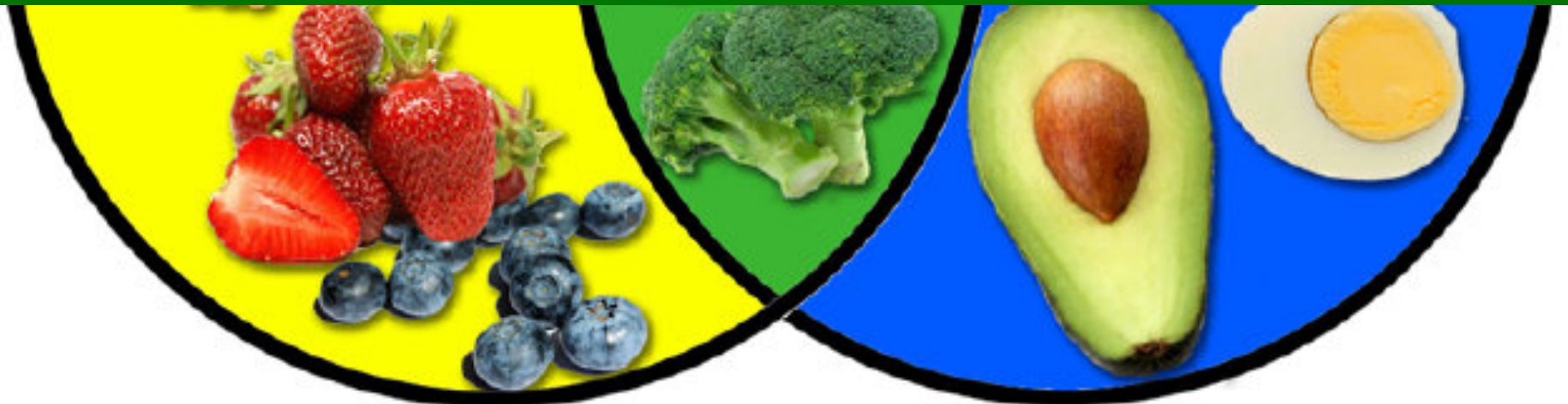


Microbiotic Predisposition

LOW-FAT vs. LOW-CARB



**ONE DIET DOES NOT
FIT ALL STUDY**



HEALTH → STEALTH

Food & Society

Hum Bio 166

Tom Robinson, MD

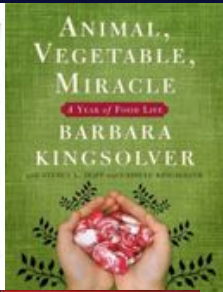
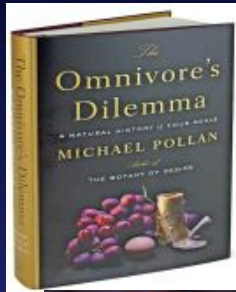


Eric Hekler, PhD

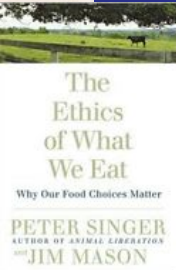
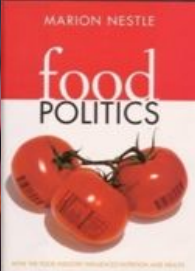
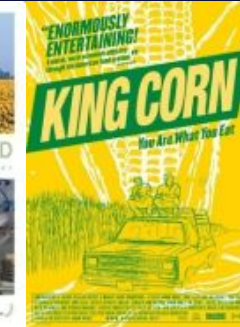
Books

Food & Society *Hum Bio 166*

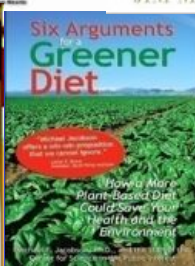
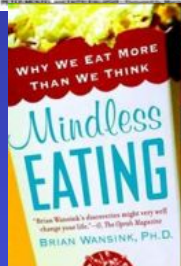
Films



Tom Robinson, MD



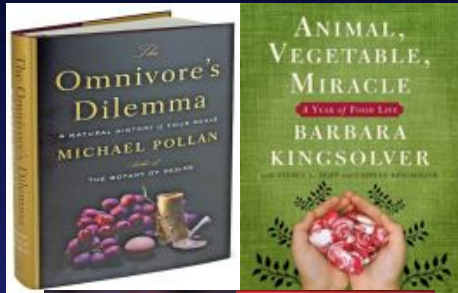
Eric Hekler, PhD



Books

Food & Society *Hum Bio 166*

Films

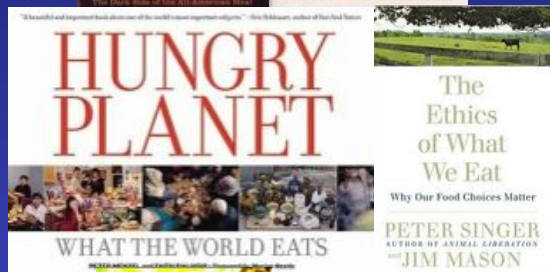


Tom Robinson, MD



Assignments

- Write an Op-Ed, try to publish
- You Tube – Behavior change for peers
- Blogging

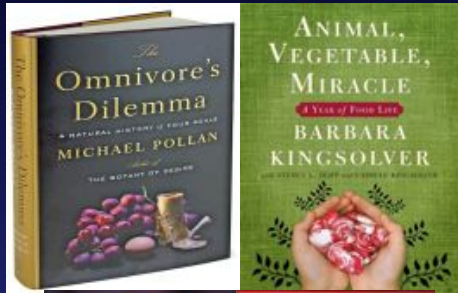


Eric Hekler, PhD

Books

Food & Society *Hum Bio 166*

Films

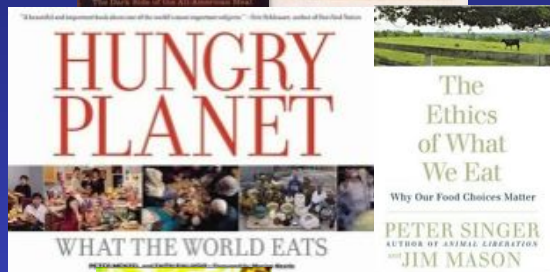


Tom Robinson, MD



Assignments

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- Blogging



Eric Hekler, PhD

Conducted a “stealth” study with students



American Journal of Preventive Medicine 2010;38(5)543–547



Effects of a College Course About Food and Society on Students' Eating Behaviors

Eric B. Hekler, PhD, Christopher D. Gardner, PhD, Thomas N. Robinson, MD, MPH

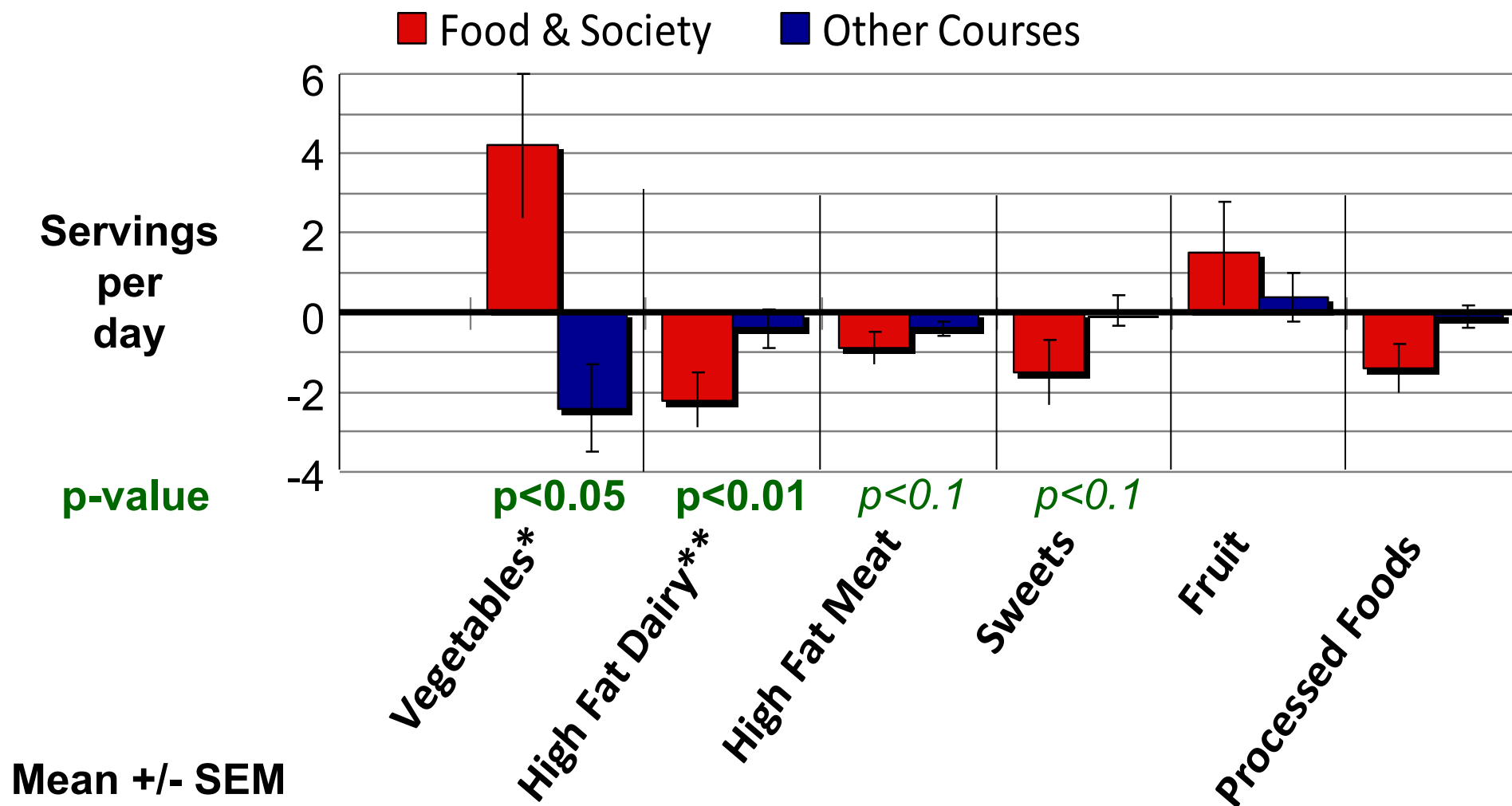
***Purpose:** This paper aims to examine whether an innovative educational course focused on societal-level issues related to food and food production (Food and Society) would promote healthful eating among college students.*

Results: The students who took the Food and Society course reported **significantly improving their healthful eating...**

Conclusions: *The results suggest that it may be possible to change dietary behaviors in college students by* **focusing on social, ethical, cultural, and environmental issues related to food and food production.**

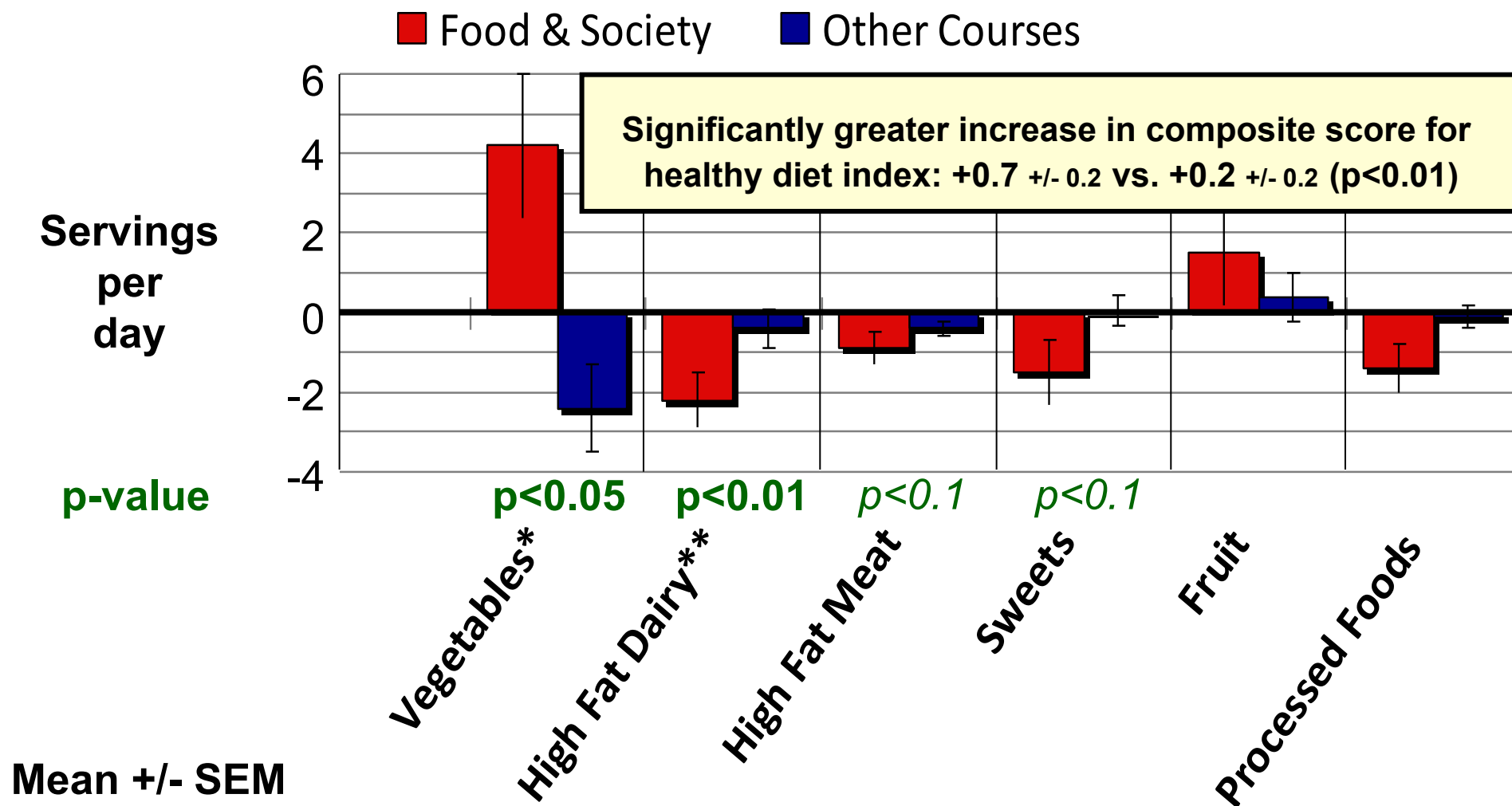
Changes in Reported Dietary Intake

(from beginning to end of winter quarter, 2009)



Changes in Reported Dietary Intake

(from beginning to end of winter quarter, 2009)



Jennifer Hartle, DrPH



**FOOD
SYSTEMS
&
FOOD
STUDIES
ACADEMIC
PROGRAMS**

**FOOD SYSTEMS
APPROACH**



**UNIVERSITY FOOD
HOSPITAL FOOD
WORKSITE FOOD**



MENUS^{of}CHANGE™

The Business of Healthy, Sustainable, Delicious Food Choices

2013 ANNUAL REPORT

CHARTING THE FUTURE OF FOOD & THE FOODSERVICE INDUSTRY



HARVARD SCHOOL OF PUBLIC HEALTH
Department of Nutrition

SUSTAINABLE
DELICIOUS
KNOWLEDGE



MENUS^{of} CHANGE™

The Business of Healthy, Sustainable, Delicious Food Choices

2014 ANNUAL REPORT

CHARTING THE FUTURE OF FOOD & THE FOODSERVICE INDUSTRY



HARVARD
SCHOOL OF PUBLIC HEALTH

Department of Nutrition

COMMUNITY RISK SERVICE SOLUTION
COLLABORATION COMMUNITY
FOOD HEALTH IMPROVE
OPPORTUNITY PARTNER

CONSUMER
SHIP MODEL MOV
ICE SOLUTION STRA
UNITY CONVERGE
VATION INTEGRATION
PRACTICAL RESP
CHANGE CHO
ONMENT
DATE NUTRITION
UNABLE TOMOR
IOUS DISRUPT EN
ERSHIP MODEL
ICE SOLUTION
UNITY CONVE
VATION INIT

CONSUMER
SHIP MODEL MOV
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MENUS^{of} CHANGE
The Business of Healthy, Sustainable, Delicious Food Choices

2015 ANNUAL REPORT



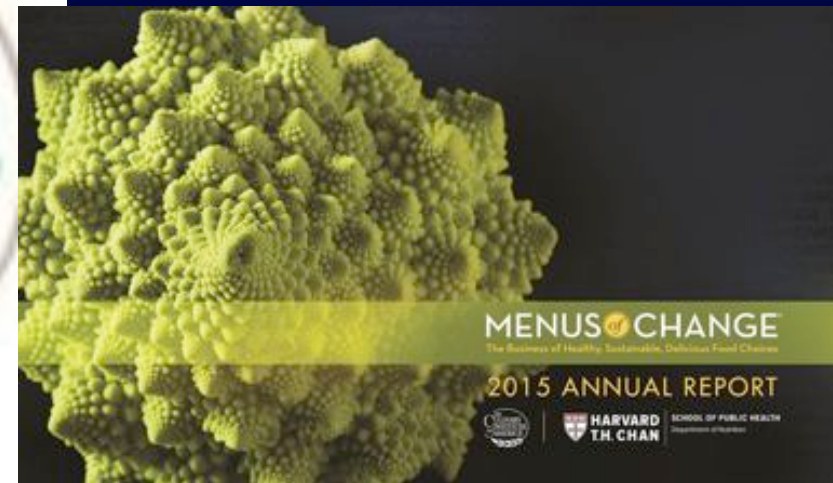
SCHOOL OF PUBLIC HEALTH
Department of Nutrition



Greg Drescher
Vice President
Strategic Initiatives



**UNAPOLOGETICALLY
DELICIOUS**



**SHIFT IN PROGRAM:
MORE EMPHASIS ON
HEALTH AND SUSTAINABILITY**



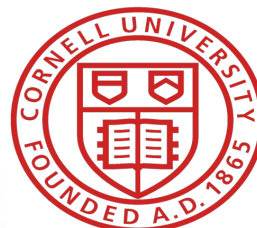
MCURC

THE MENUS OF CHANGE

UNIVERSITY RESEARCH COLLABORATIVE



The University of
Montana



Cornell



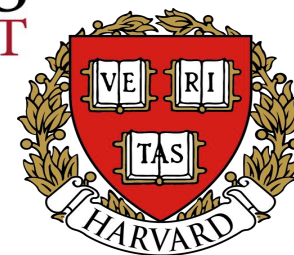
Northeastern



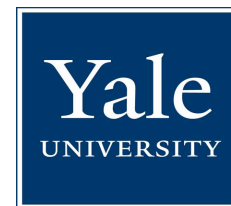
Boston
College



UMASS
AMHERST



Kansas State



Princeton



UCLA



USC



Duke
UNIVERSITY



MC-URC

Menus of Change
University Research Collaborative



Stanford

HEALTH CARE

STANFORD MEDICINE

Reimagining Nutrition Education At Stanford Medical School

Tim Dang
2nd year

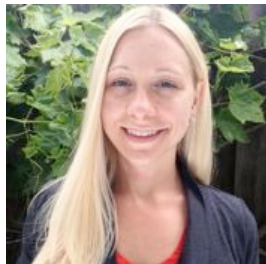


Tracy Rydel, MD



Maya Adam
MD

Michelle
Hauser
MD, Chef



Tina Cowan, PhD Steven Sloan, MSTP
Biochemistry



Christopher
Gardner
PhD

**Health and Sustainability
Guidelines for
Federal Concessions and
Vending Operations**



**Department of Health
and Human Services**

**Centers for Disease
Control and
Prevention**

**General Services
Administration**

2012

Concessions Sustainability Guidelines

General Operations

Standard Criteria

- Participate in waste reduction, recycling and composting programs, as available.
- Promote and incentivize the use of reusable beverage containers.
- Promote use of tap water over bottled water.
- Use green cleaning practices.³⁷
- Use Integrated pest management practices and green pest control alternatives to the maximum extent feasible.
- Provide materials for single-service items (e.g., trays, flatware, plates, and bowls) that are compostable and made from bio-based products.³⁸

General Food

Standard Criteria

- Offer 25%³⁹ of the product line to be organically,⁴⁰ locally,⁴¹ or documented sustainably grown (e.g., integrated pest management, pesticide free, other labeling programs).⁴²
- Offer seasonal varieties of fruits and vegetables.

Above Standard

- Offer 35% of the product line to be organically or locally or documented sustainably grown (e.g., integrated pest management, pesticide free, other labeling programs).

Sustainability Labeling⁴³

Standard Criteria

- Label Organic, local, or documented sustainably grown food items available in food service at the point of choice.

Above Standard

- Educate about the value of agricultural best practices that are ecologically sound, economically viable, and socially responsible in agency concessions services with signage, informational programs, or other means of communicating the benefits of the items that are labeled organic, local, and/or sustainable.
- For locally grown foods, include information that identifies the farms and sustainable practices used.

Animal Products⁴⁴

Standard Criteria

- Only offer fish/seafood identified as "Best Choices" or "Good Alternatives" on the Monterey Bay Aquarium's Seafood Watch list or certified by Marine Stewardship Council (or equivalent program).

Above Standard

- Offer Certified Organic or documented sustainably or locally produced milk and milk products.
- Offer Certified Organic or documented sustainably or locally produced eggs and meat (e.g., grass fed, free-range, pasture raised, grass finished, humanely raised and handled).

Beverages

Standard Criteria

- Offer drinking water, preferably chilled tap.

Above Standard

- If offering coffee or tea, include coffee or tea offerings that are Certified Organic, shade grown, and/or bird friendly.
- If composting is available, bottled water must be offered in compostable bottles.



Organic
Local
Seasonal
Sustainable
Integrated pest management
Pesticide free
Free Range
Pasture raised
Grass finished
Humanely raised

Whole
Consumer Attitudes

Always Whole Grains Council 2014

Consumer Demand:
Fresh and
Minimally Processed



JUNE JO LEE - HARTMAN GROUP



The New York Times

The Decline of 'Big Soda'

The drop in soda consumption represents the single largest change in the American diet in the last decade.

OCT. 2, 2015

Airport Food - Redefined



San Francisco International Terminal



Paradigm Shift in the American Diet:

Changing Social Norms

**NUTRIENTS → FOODS → FOOD
PATTERNS**

HEALTH → STEALTH

**FOOD SYSTEMS
APPROACH → UNIVERSITY FOOD
HOSPITAL FOOD
WORKSITE FOOD**