



Introduction to Culinary Medicine

AMA PRA Category 1 Credit™ – 9.75 hours

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Presenters



Joey Skelton, MD, MS, FAAP, FTOS

Director, Brenner FIT®
Brenner Children's Hospital

Professor of Pediatrics
Professor of Epidemiology and Prevention
Wake Forest School of Medicine

Associate Director
Program in Community Engaged Research
Clinical and Translational Science Institute

Editor-in-Chief, *Childhood Obesity*



Melissa Moses, MS, RD, LDN

Program Manager and Dietitian, Brenner FIT®
Brenner Children's Hospital

Objectives

- Learn about Culinary Medicine
- Understand how Culinary Medicine can be used to improve health
- Learn tips to apply Culinary Medicine to your clinical practice big and small

Culinary Medicine

- The utilization of a unique combination of nutrition and culinary knowledge to assist patients in achieving and maintaining optimal health.
 - AKA Teaching nutrition by teaching cooking skills
 - I.e. Teaching medical professionals about nutrition through the culinary arts, so they may better serve, and understand, their patients
- It is NOT*:
 - Nutrition, dietetics, integrative or preventive medicine
 - Culinary arts or food science
 - Made up of a single dietary philosophy
 - A rejection of conventional medicine
 - Simply about cooking good food

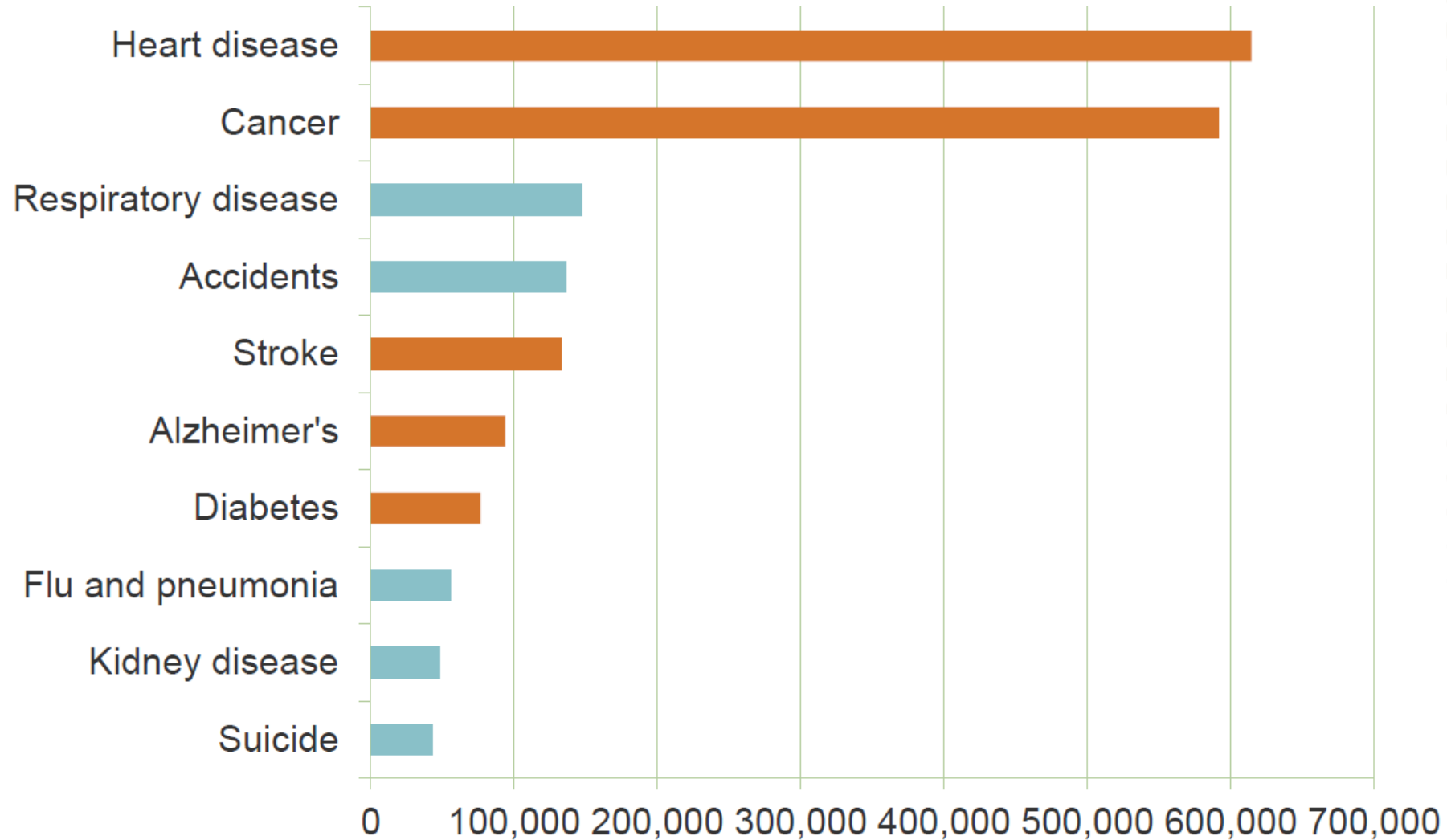
Culinary Medicine

- It IS*:
 - A field that blends the art of food and cooking with the science of medicine
 - Aimed at helping people access and eat high-quality meals that prevent and treat disease, and restore well-being
 - Concerned about patients' immediate needs, who asks "What do I eat for my condition?"
 - A way to understand and appreciate a patient's understanding of food and cooking as part of their health
 - Fun... and tastes good

Culinary Medicine

- SUNY-Upstate 2003: first cooking and nutrition elective in a US medical school
- Harvard School of Public Health 2007: led first *Healthy Kitchens, Healthy Lives* post-grad conference at the Culinary Institute of America
- Tulane University School of Medicine 2013: first culinary medicine center in a US medical school
 - Medical school elective
 - Service learning
 - Expanding to community programs
 - Spreading rapidly to other medical schools

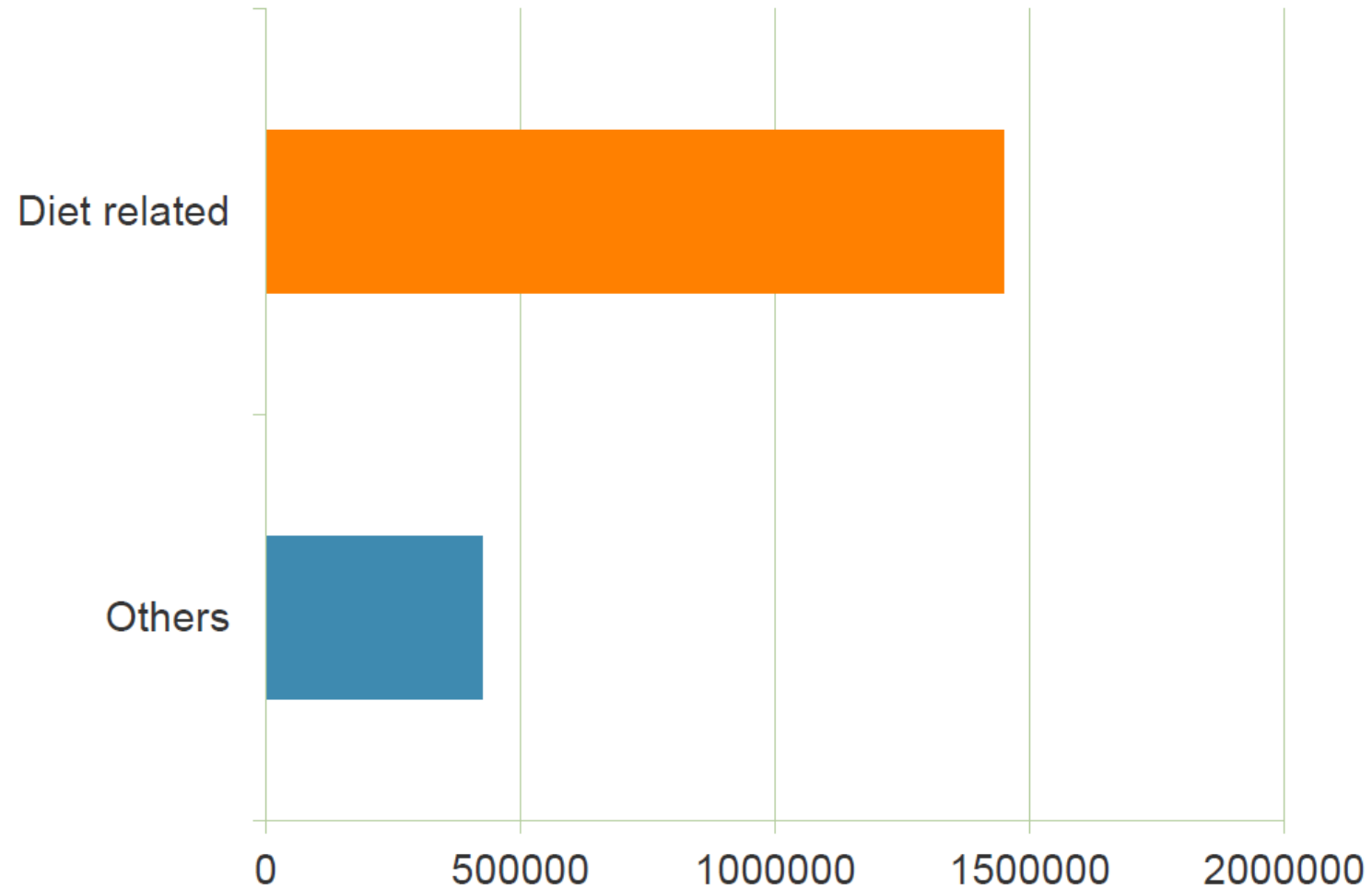
The Top Ten Causes of Death in the U.S. 2015 (CDC)



HARVARD

SCHOOL OF PUBLIC HEALTH

Diet-related vs. non-diet causes of death in the U.S. (2015)



Diet and Disease

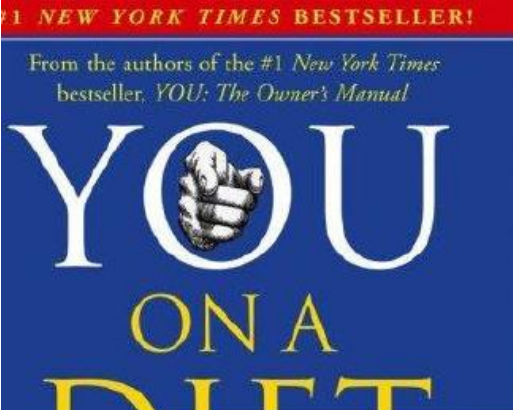
- The science is **done**...
 - Refined grains, processed meats, unprocessed red meats, sugar sweetened beverages, trans fat and sodium

=

- Higher risks of CVD events, diabetes and cancer
- The science is not **done**...
 - Exactly what diet is best... and for who
 - How to get us there

A Brief History of Diets

- **1830:** Graham's high-fiber diet (Graham crackers)
- **1863:** Englishman William Banting used a low-carb diet to lose weight
- **1903:** Chewing each bite of food 32 times, for better digestion and weight loss.
- **1917:** LA physician Lulu Hunt Peters invented calorie counting
- **1925:** The cigarette diet coincided with the ad campaign "Reach for a Lucky instead of a sweet."
- **1930:** The grapefruit diet, which resurfaced two decades later as the Hollywood diet
- **1950:** The cabbage soup diet (one of the oldest fad diets still in use)
- **1960:** The Zen macrobiotic diet, a grain-heavy approach created by a Japanese philosopher.
- **1961:** Weight Watchers launched, moving toward "eating management."
- **1975:** A doctor created a cookie containing "secret amino acid protein blend"
- **1976:** The Sleeping Beauty diet: Individuals were sedated as a way to promote weight loss.
- **1981:** The Beverly Hills diet
- **1990s:** Mediterranean diet — old as history — became part of the vernacular.
- **1994:** Atkins diet- fat is our friend.
- **1995:** "The Zone," by Barry Sears, ushered in the 40-30-30 ratio of carbs, fat and protein
- **1995:** The Sugar Busters diet: Sugar was declared Public Enemy No. 1.
- **1996:** "Eat Right for Your Type" by Peter J. D'Adamo paired diets with blood type.
- **2000:** The self-explanatory raw foods diet made an appearance.
- **2003:** "The South Beach Diet" -ditch the "white stuff," such as sugar, flour and baked potatoes.
- **2010s:** "The Paleo Diet"

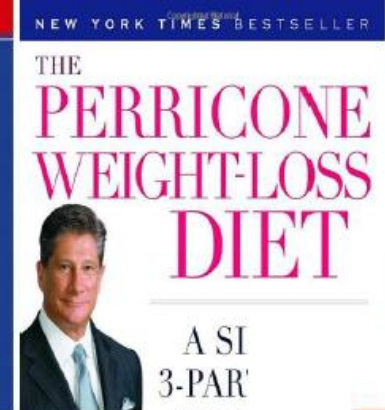


From the authors of the #1 New York Times bestseller, *YOU: The Owner's Manual*

YOU
ON A
DIET

Owner's Manual

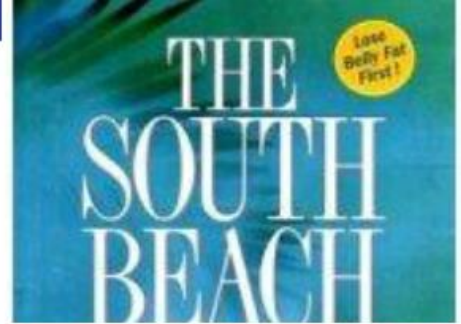
MICHAEL R. MEHLMAN



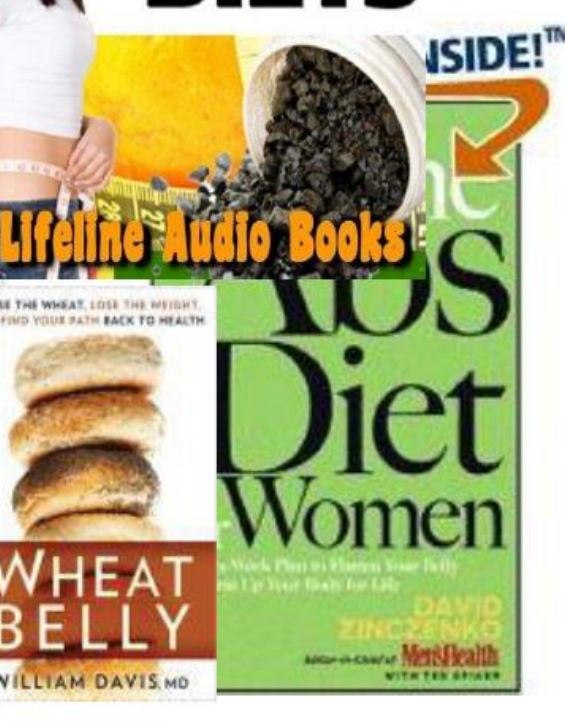
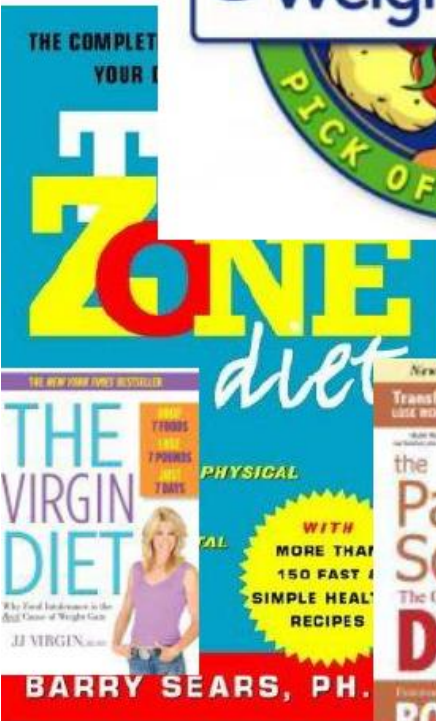
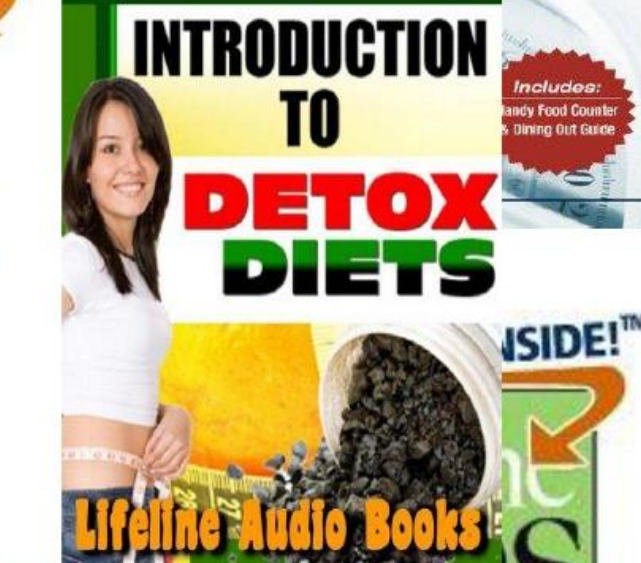
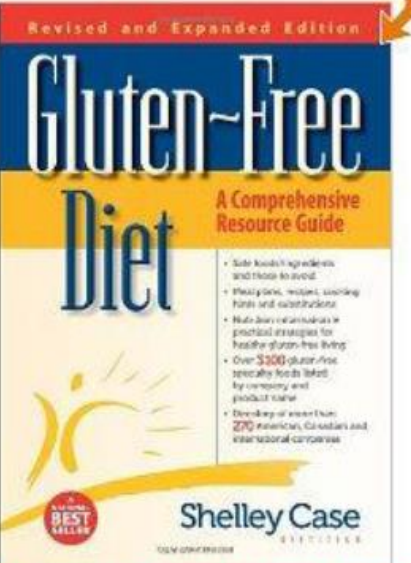
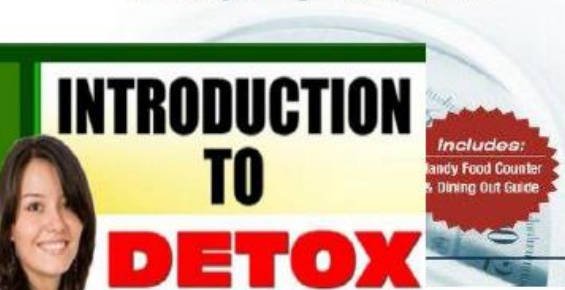
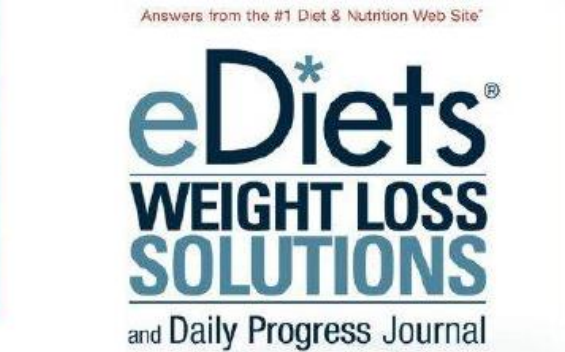
NEW YORK TIMES BESTSELLER

THE
PERRICONE
WEIGHT-LOSS
DIET

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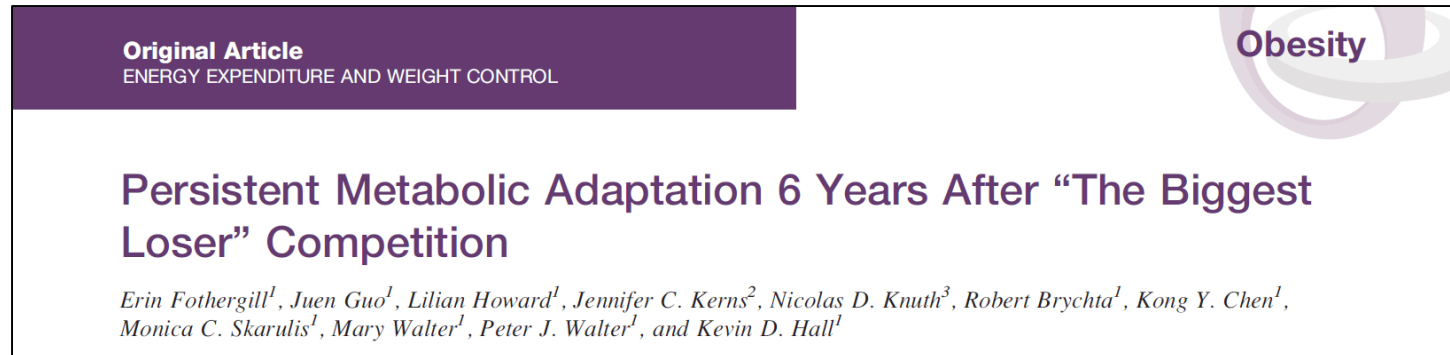


Click to **LOOK INSIDE!**



Weight loss and losing weight

- Majority of US trying to lose weight¹
 - 73% of women, 55% of men desired to weigh less
 - 57% of women, 40% of men actively trying to lose weight
- Weight loss is tough²



- What if half of adults were trying to eat “healthier”?
- Determining what is healthy can be hard

1 Yaemsiri, Int J Ob 2011

2 Loveman E, Health Tech Ass 2011

“Healthy” = “Tastes Bad”

- Eating healthy has always been about “forcing” ourselves to eat healthy, aka tasteless
- Why not make tasty food that is also healthy

RESEARCH ARTICLE

Consumption of Meals Prepared at Home and Risk of Type 2 Diabetes: An Analysis of Two Prospective Cohort Studies

Geng Zong¹, David M. Eisenberg¹, Frank B. Hu^{1,2,3}, Qi Sun^{1,3*}

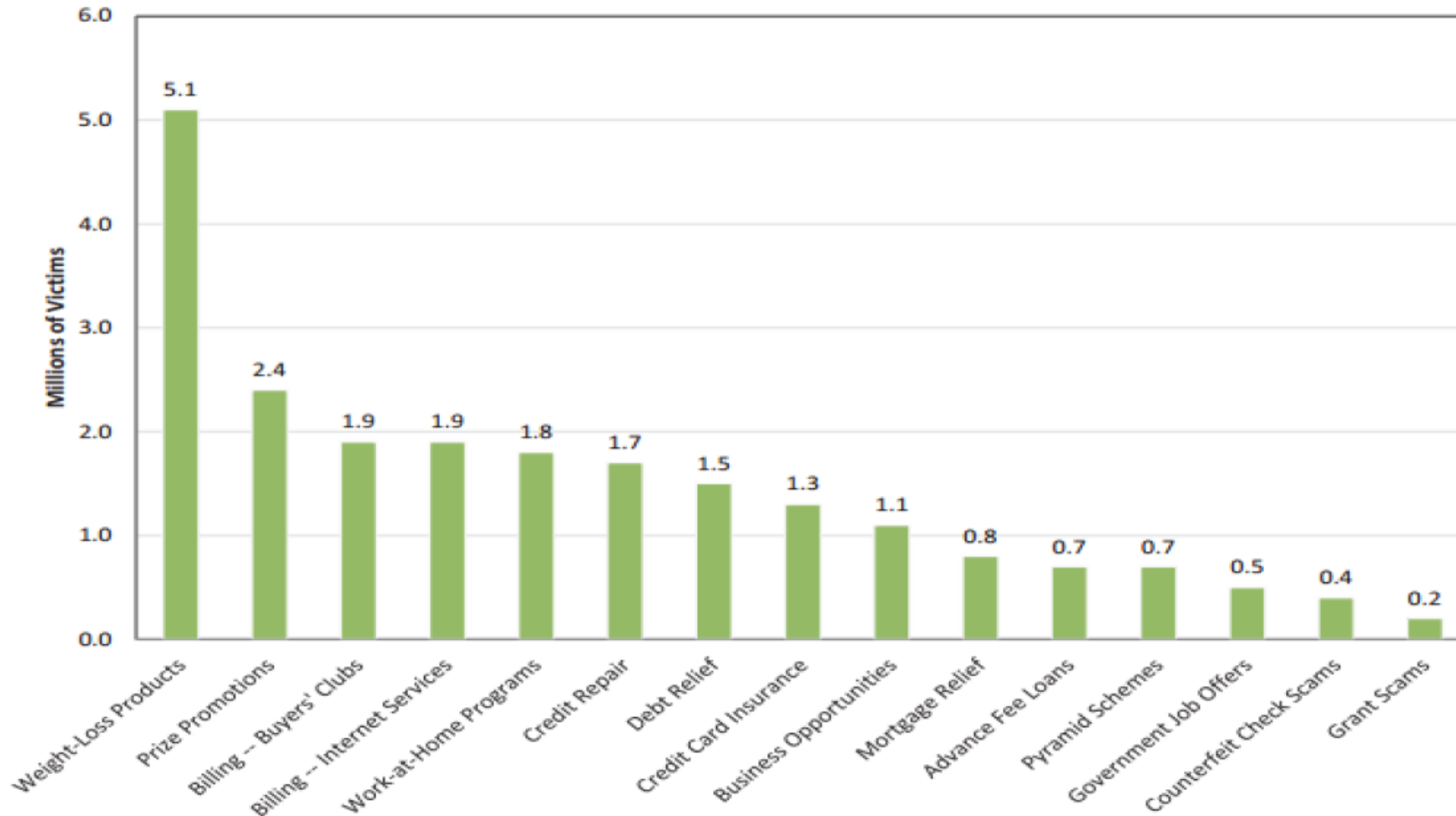
¹ Department of Nutrition, Harvard T.H. Chan School of Public Health, Boston, Massachusetts, United States of America, ² Department of Epidemiology, Harvard T.H. Chan School of Public Health, Boston, Massachusetts, United States of America, ³ Channing Division of Network Medicine, Department of Medicine, Brigham and Women's Hospital and Harvard Medical School, Boston, Massachusetts, United States of America

* qisun@hsph.harvard.edu



Abstract

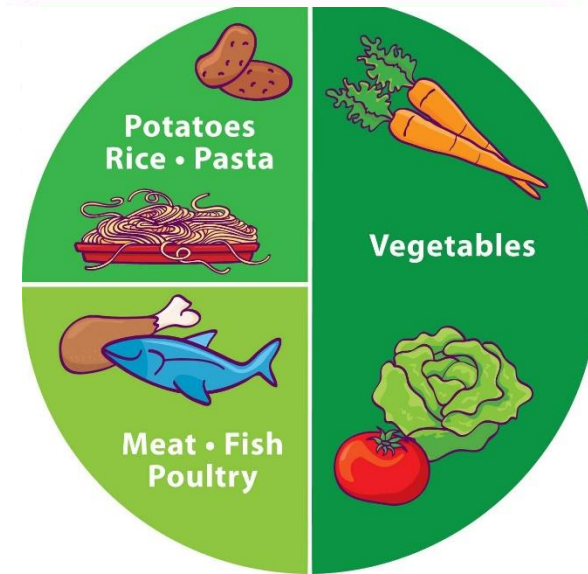
Figure 1. Specific Surveyed Frauds, by Number of Victims



Source: Consumer Fraud in the United States, 2011: The Third FTC Survey, Staff Report of the Bureau of Economics, Federal Trade Commission, April 2013



Academy of
Nutrition
and Dietetics



Nutrition in 2021

- As much research as ever
- As much confusion as ever

The Seminary Effect



Summary: credit to Eric B Rimm, ScD, Professor of Epidemiology and Nutrition, Harvard School of Public Health

- Large observational data sets with decade of follow-up
- CONFIRMED BY-
- Long-term randomized efficacy trials with at least 2 years of follow-up
- Most done in context of weight loss

Low-Fat Diets Summary

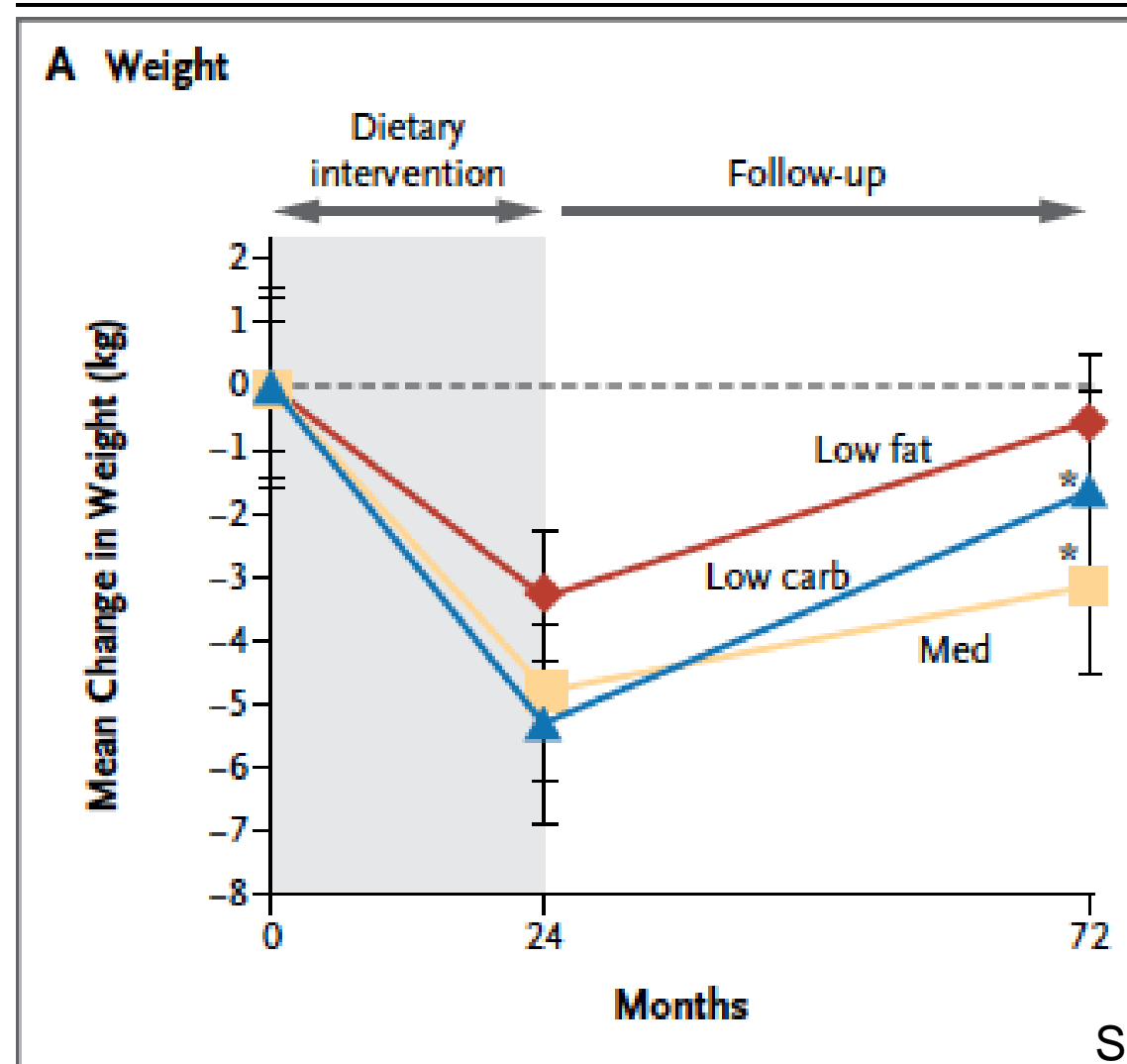
- Short-term trials
 - Modest weight loss
 - Moderate compliance
- Long-term trials
 - Little or no weight loss
 - Poor compliance
- Often fat is replaced with highly processed carbohydrates
- Overall: not a viable weight loss option for most

Others

- Low-carb diet/Atkins
- South Beach, The Zone, Sugar Busters, etc
- Paleo
- Gluten-free (for weight loss and health, not Celiac Disease or Gluten Intolerance)
- Caloric Restriction (for health and longevity)

NO solid, long-term data

Mediterranean Diet



Shai I, NEJM 2012

“South Med Diet”



UNC’s southern twist on Mediterranean diet keeps diners on track, earns \$3.8M grant

Fresh-caught Outer Banks fish don’t have to be fried to be tasty. Hatteras Island chef Sharon Peele Kennedy recommends the no-fat approach of poaching, seen here as a bluefish fillet cooks in tomatillo salsa. Photo credit: Thomas Goldsmith

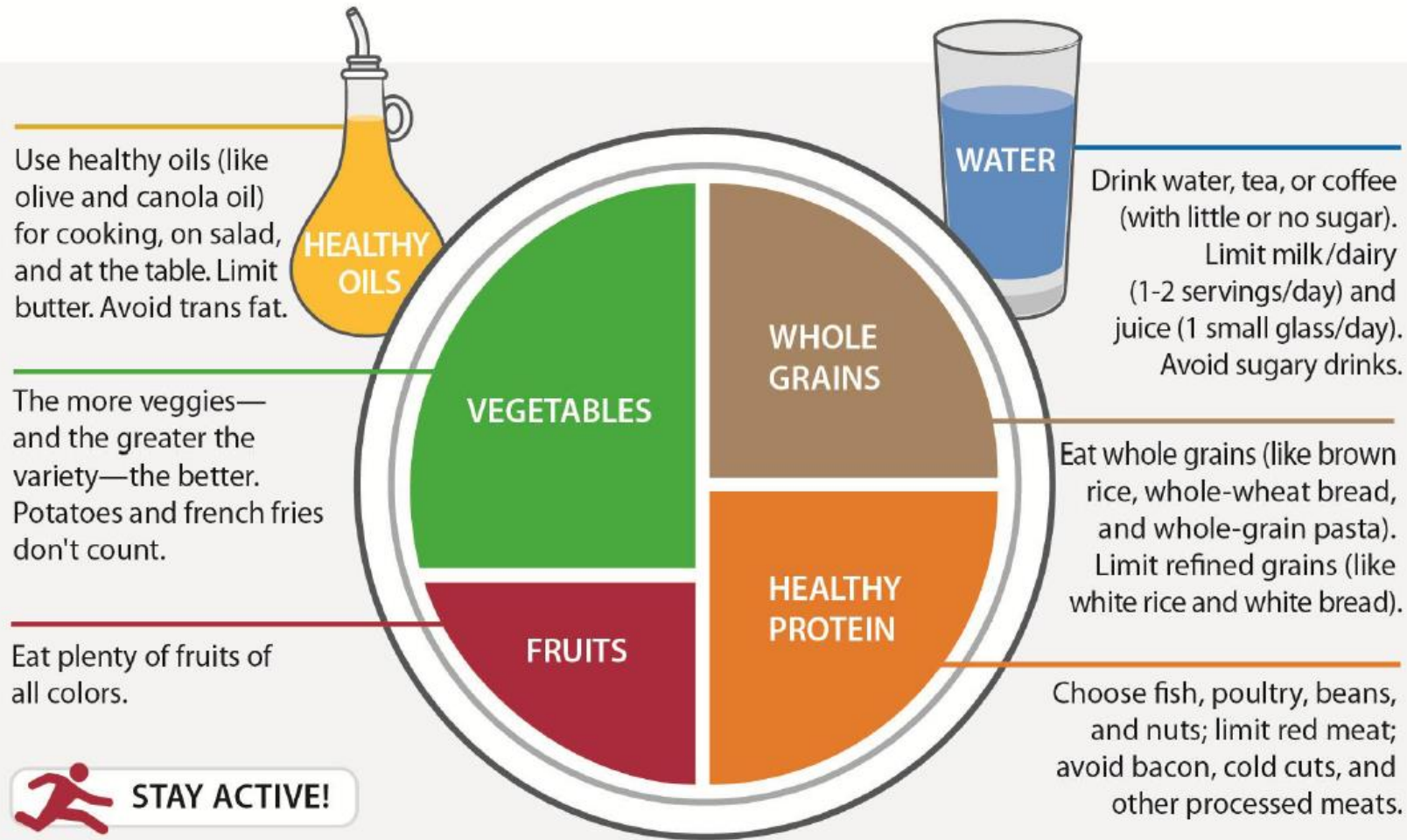
July 19, 2019 by [Thomas Goldsmith](#)



Occam's Razor

- *More things should not be used than are necessary.*
- *When faced with competing hypotheses, the one with the fewest assumptions (the simplest) should be chosen.*
- **KISS:** *Keep It Simple Stupid*

HEALTHY EATING PLATE



STAY ACTIVE!

© Harvard University



Harvard School of Public Health
The Nutrition Source
www.hsph.harvard.edu/nutritionsource

Harvard Medical School
Harvard Health Publications
www.health.harvard.edu



Eco Logic

- The Japanese eat very little fat and suffer fewer heart attacks than the British or Americans.
- The French eat a lot of fat and also suffer fewer heart attacks than the British or Americans.
- The Japanese drink very little red wine and suffer fewer heart attacks than the British or Americans.
- The Italians drink excessive amounts of red wine, and also suffer fewer heart attacks than the British or Americans.

Eco Logic

Eat and drink what you like.

It's speaking English that kills you.

Remember- The Toxic Environment

Impact of Media



- Marketing of calorically dense foods
- Impacts brand loyalty
- Impacts snacking habits

Jennifer L. Harris, John A. Bargh, Kelly D. Brownell. Priming Effects of Television Food Advertising on Eating Behavior. Health Psychol. 2009 July; 28(4): 404–413

The Drool Factor

- “When a baby drools, they look at their wet shirt and see a brand.”
Brand recognition in the crib.
 - James McNeal
- “If you own this child at an early age, you can own this child for years to come”
 - President, Kids-R-Us
- “They aren’t children so much as what I like to call ‘evolving consumers.’”
 - CEO, Prism Communications





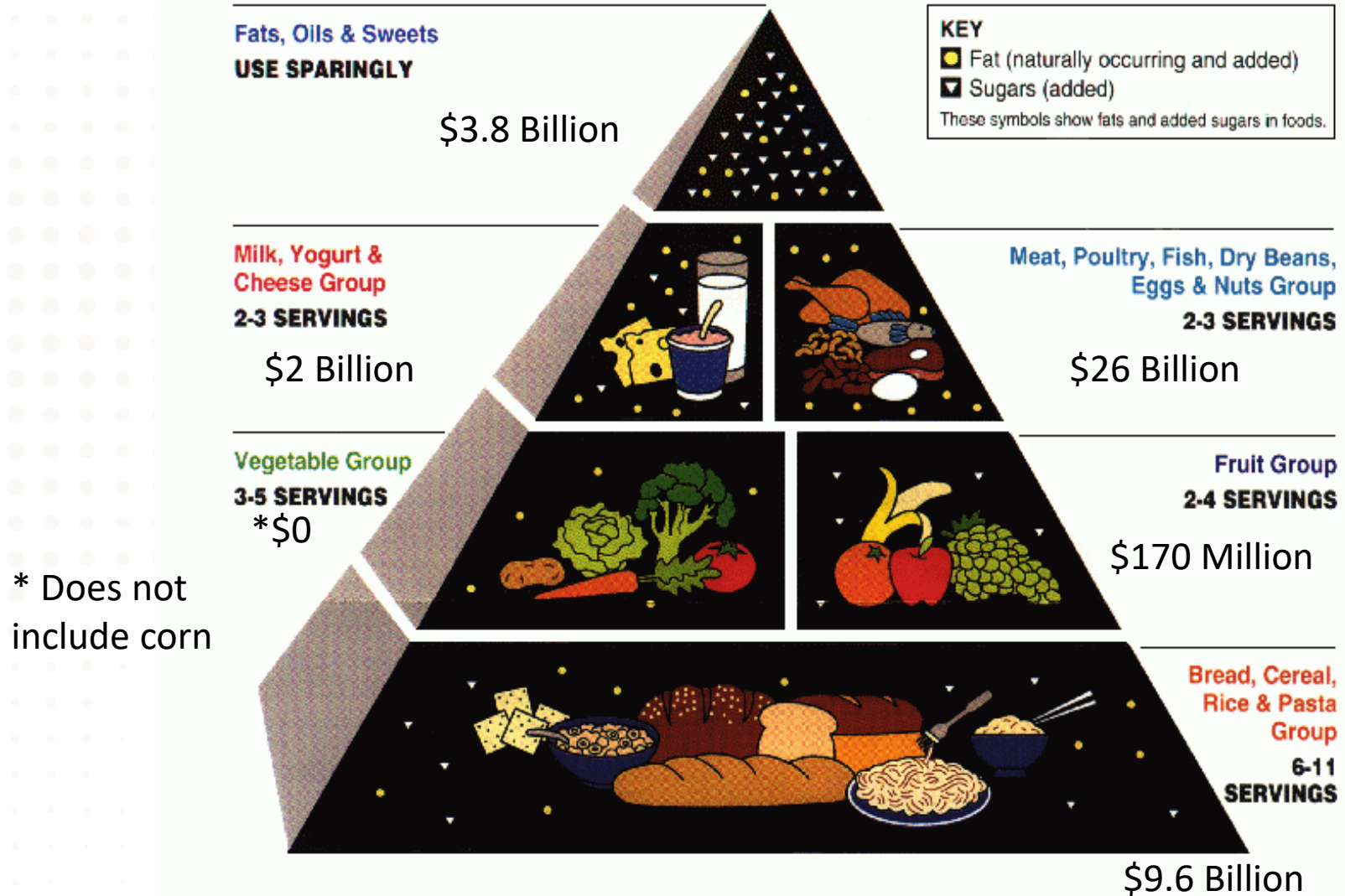
A: From: Avalaunch Media www.avalaunchmedia.com/old-school-ads-that-wouldnt-fly-in-2019/
 B: From: The Lunch Tray www.thelunchtray.com/vintage-ad-touts-7-up-as-a-beverage-for-babies/

Food Access



- Proliferation of fast food restaurants
- Fewer healthy options available in low income areas
- Food Insecurity
Paradox: association between hunger and obesity

Food Subsidies



Why do we need Culinary Medicine?

- Little nutrition education in medical training (medicine, nursing, pharmacy)
- Only 1/3 of medical schools have dedicated nutrition course*
 - Average of 24 contact hours (range 2-70)
 - 88% of instructors expressed need for additional education
 - UT Memphis (Skelton's alma mater): 2 hour course taught by biochemist
- Only half of graduating resident physicians feel trained to counsel on preventive health behaviors

ORIGINAL
ResearchSam Sugimoto, BS, Drew Recker, BS^{ID},
Elizabeth E. Halvorson, MD, MS,
and Joseph A. Skelton, MD, MS^{ID}Are Future Doctors Prepared
to Address Patients' Nutritional
Needs? Cooking and Nutritional
Knowledge and Habits in
Medical Students

Abstract: Background. Many diseases are linked to lifestyle in the United States, yet physicians receive little training in nutrition. Medical students' prior knowledge of nutrition and cooking is unknown. Objective. To determine incoming medical students' prior nutrition knowledge, culinary skills, and nutrition habits. Methods. A dual-methods study of first-year medical students. Cross-sectional survey assessing prior knowledge, self-efficacy, and previous education of cooking and nutrition. Interviews of second-year medical students explored cooking and nutrition in greater depth. Results. A total of 142 first-year medical students participated; 16% had taken a nutrition course, with majority (66%) learning outside classroom settings. Students had a mean score of 8.7% on the Nutritional Knowledge Questionnaire versus comparison group (64.9%). Mean cooking and food skills score were lower than comparison scores. Overall, students did not meet guidelines for fiber, fruit, vegetables, and whole grains. Interviews with second-year

students revealed most learned to cook from their families; all believed it important for physicians to have this knowledge. Conclusions. Medical students were knowledgeable about nutrition, but typically self-taught. They were not as confident or skilled in cooking, and mostly learned from

adults is up to 39.8%, and 18.5% in children aged 2 to 19 years.¹ Furthermore, 30.3 million Americans or 9.4% of the US population are diabetic²; and 47% of adults in the United States are at risk for cardiovascular disease (CVD),³ which kills 1 out of 4 Americans⁴ and is one of the leading

It is crucial that physicians be equipped with the right tools and knowledge to provide the highest level of care, . . .

their family. They expressed interest in learning more about nutrition and cooking.

Keywords: student; nutrition; cooking; education; medical

The United States continues to struggle with preventable cardiometabolic diseases linked to lifestyle. The prevalence of obesity in

causes of death for both men and women.⁴ Not only are these diseases devastating to those affected by them, but managing these conditions is exorbitantly expensive. Every year the United States spends \$3.2 trillion on health care, averaging roughly \$10 000 per person, with much of this cost directly going to the management and treatment of CVD, diabetes, and cancer.⁵ The average medical spending among patients diagnosed with diabetes

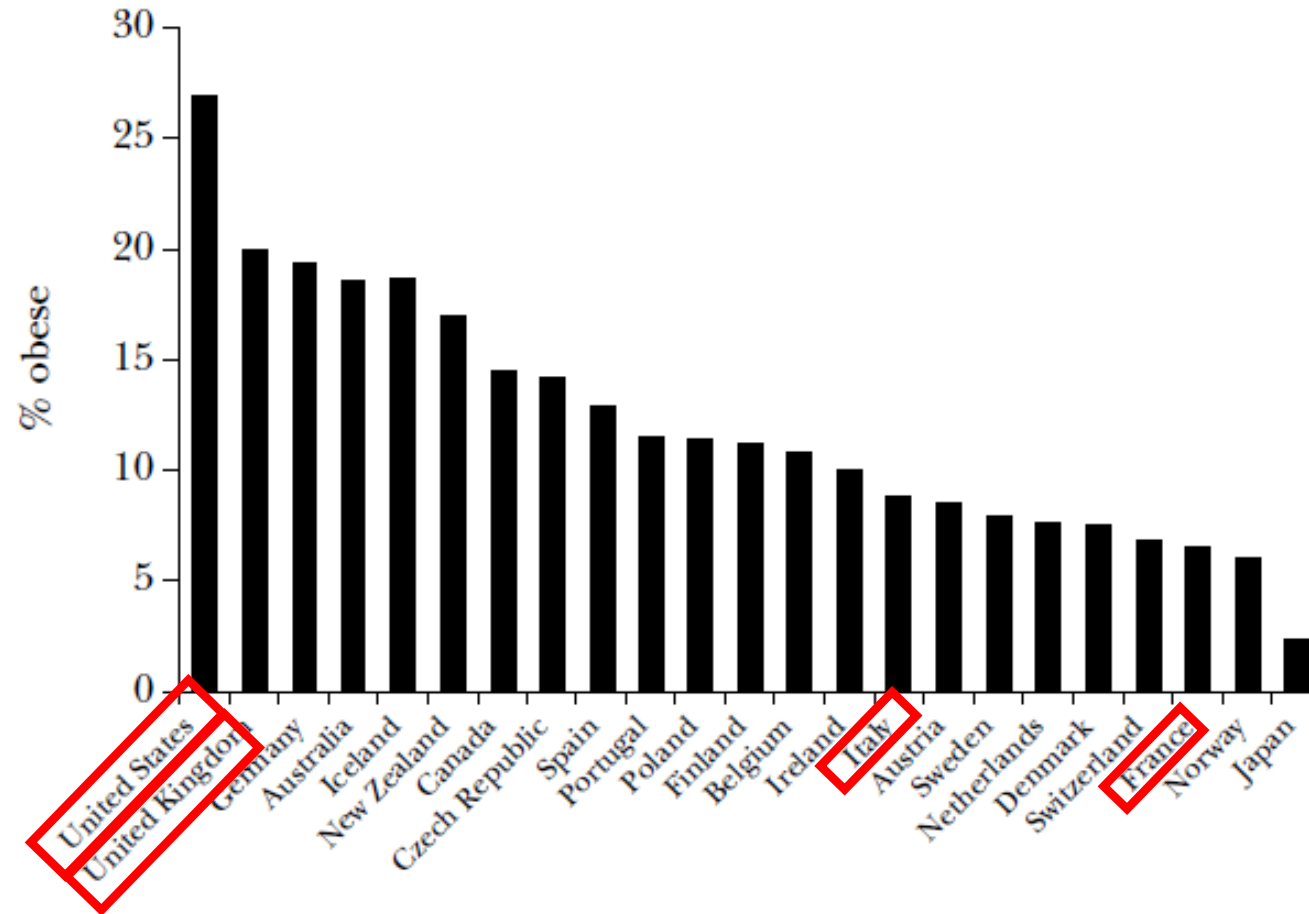
DOI:10.1177/15598276211018165. From Wake Forest School of Medicine, Winston-Salem, North Carolina (SS, DR); and Department of Pediatrics, Wake Forest School of Medicine, Winston-Salem, North Carolina (EEH, JAS). Address correspondence to: Joseph A. Skelton, MD, MS, Department of Pediatrics, Wake Forest School of Medicine, Medical Center Boulevard, Winston-Salem, NC 27157; e-mail: jskelton@wakehealth.edu.

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Skills versus knowledge



Time Spent Cooking and Obesity



Source: OECD Health Statistics (2000).

Why do we need Culinary Medicine?

- Hands-on experience
 - *See one, do one, teach one*
- Children involved in home meal preparation had healthier diets¹
- Cooking skills positively correlate with vegetable consumption²
- Home meal preparation associated with consumption of healthier diet³
- Home meal consumption reduces risk of diabetes⁴

1 Chu, JNEB, 2014

2 Hartmann, Appetite, 2013

3 Wolfson, Public Health Nutr, 2014

4 Zong, PLoS Med, 2016

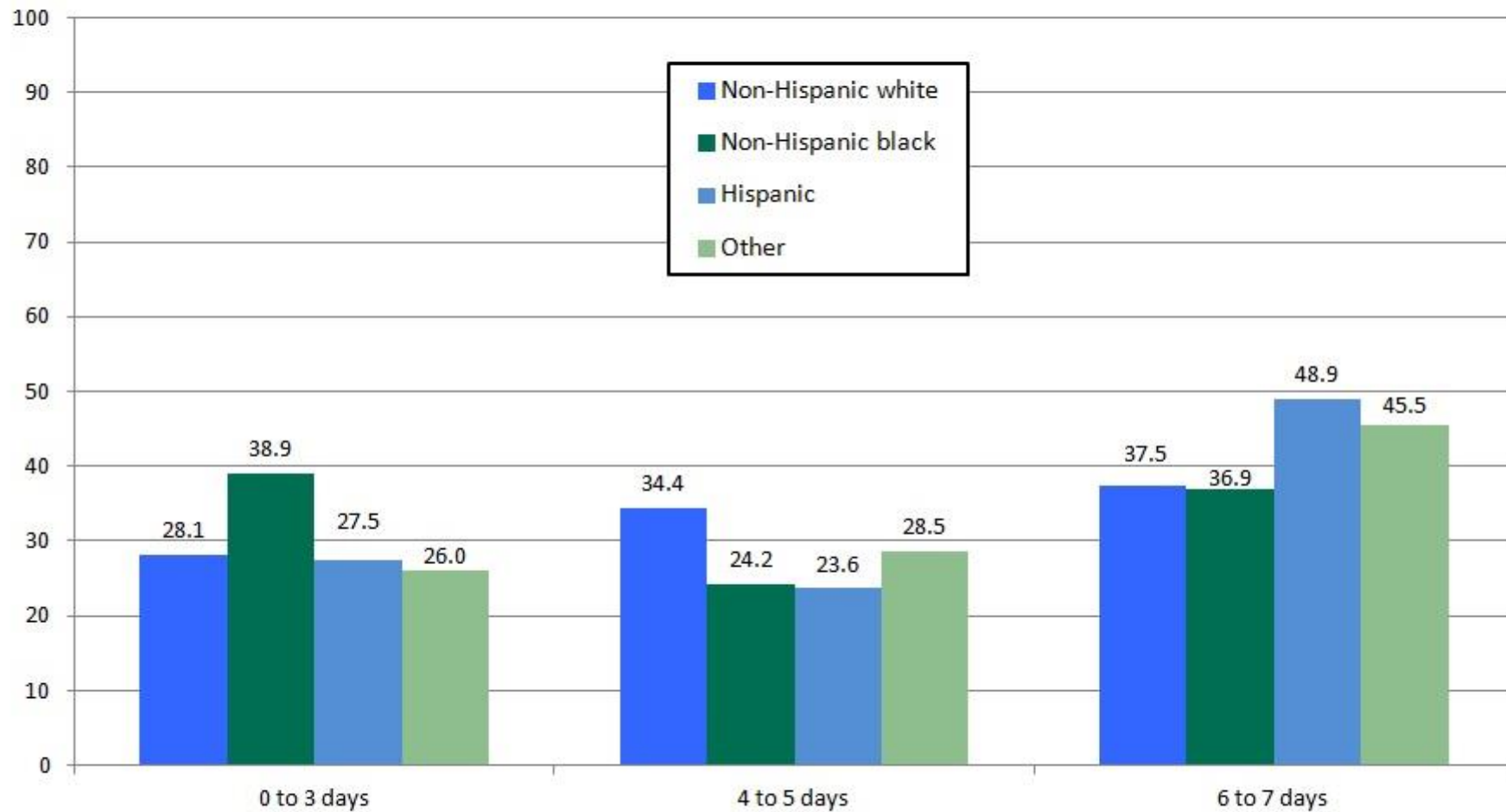
Power of Experience and Role Modeling

- Physicians are more apt to counsel on health behaviors if they practice themselves
 - Exercise
 - Seat belts
 - Sun screen
 - Smoking
 - **Nutrition?**

“...practicing a health behavior oneself was the most consistent and powerful predictor of physicians counseling patients about related prevention issues.”

Figure 1

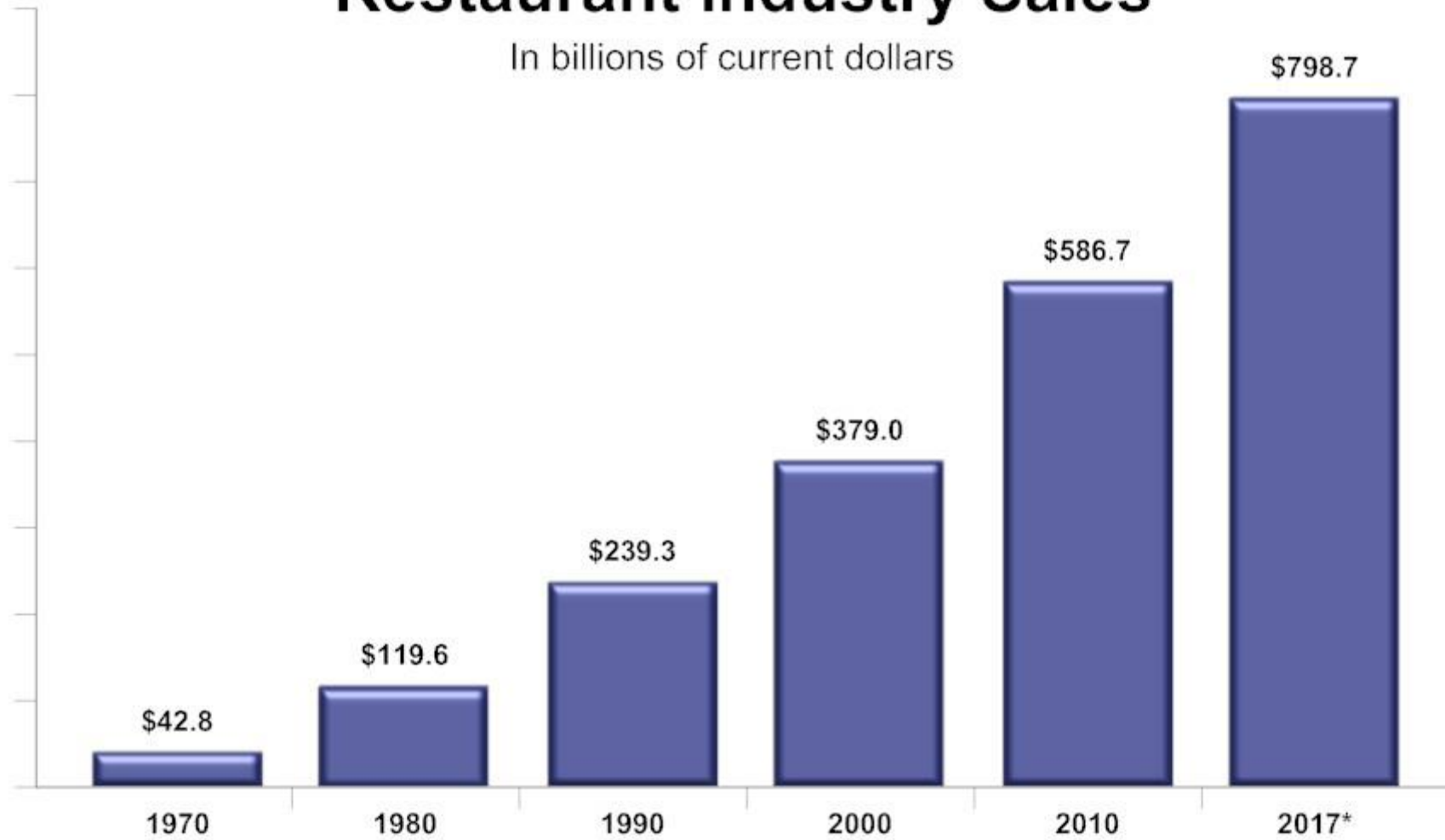
Percentage of 12- to 17-Year-Olds Who Ate a Meal with Their Family Fewer than Four, Four to Five, or Six to Seven Days in the Past Week, By Race and Hispanic Origin: 2011



Source: Child Trends' original analyses of data from the National Survey of Children's Health.

Restaurant Industry Sales

In billions of current dollars



Source: National Restaurant Association, Restaurant.org/Forecast

* projected



Culinary Trends

- Less than 60% of meals eaten at home were made in the home¹
- Fast food AND restaurant meals are significantly higher in calories, saturated fat, and sodium²

“How is it that we are so eager to watch other people browning beef cubes on screen but so much less eager to brown them ourselves?”

- Michael Pollan, 2009

**“Let food be thy medicine and
medicine be thy food.”**

-Hippocrates

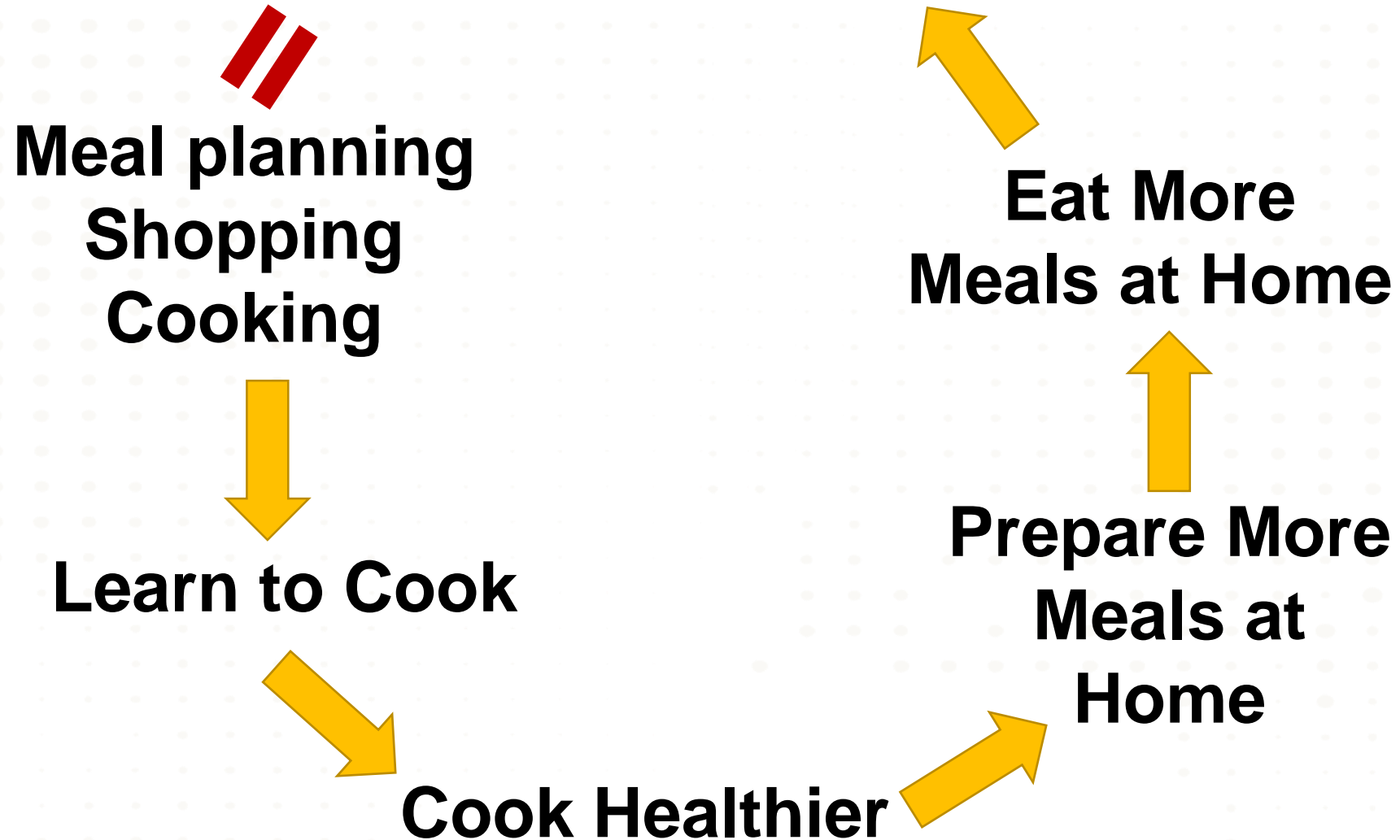
Dietary “prescriptions” for disease: Food is Medicine

- Epilepsy: ketogenic diet
- CVD and cancer prevention: Mediterranean diet
- Cholesterol: legumes
- Hypertension: DASH, soy
- Metabolic Syndrome: tree nuts

Culinary Medicine- our take

- Account for the family
 - Significant others and children
 - Authoritative parenting/feeding
- Account for preferences, regions, and culture
- Don't forget the basics
 - Cooking skills
 - Food and kitchen safety
 - Equipment: pots, pans, stoves, etc.
- Patient-centered: meet them where they are
 - Mediterranean Diet isn't "easy"
 - Takes time to develop skills

Eat Healthier!



Applying Culinary Medicine: Big Ideas

- Hot plate in your office: incorporating classes in your waiting rooms after hours, group visits*, inviting guest chefs
- Have an office “cookbook”: you and your partners feature recipes they like to prepare
- Partner with local organizations: culinary schools, high schools with culinary program, restaurants, chefs to donate time
- Record your own Youtube videos to share with patients: can be done on smart phones

Applying Culinary Medicine: Small Ideas

- Feature recipes in your waiting room
- *ChopChop* magazine in your waiting room
- Collect resources to provide to patients
 - Brenner FIT Youtube channel, Facebook page
- Awareness: gives greater insight into barrier families face in cooking and preparing foods
 - More targeted interventions- don't make suggestions that won't be taken or aren't applicable to patients
 - Talk about small changes like planning meals at home, get take-out but eat family-style

Summary

- We need to do better to serve the nutritional needs of our patients
- Nutrition education through cooking: Applied nutrition
- Can be used in big and small ways