

UPMC HEALTH PLAN

Healthy Eating to Prevent, Treat and Reverse Chronic Disease

What Should We Be Telling Our Patients?

Michael D Parkinson, MD, MPH, FACPM
Sr Medical Director, Health and Productivity

Children's Hospital Pittsburgh (CHP) Case Presentation

Lifestyle Medicine & Environmental Health Grand Rounds

10 y/o African American male with history of obesity, asthma, bipolar disorder, and ADHD presenting for well child check. Has had intermittent chest pain but otherwise no acute complaints. Mother accompanies him and is concerned about his diet.

Dietary History

- 3 meals per day, typically in front of TV
- Fast food 2x / week
- Drinks Mountain Dew or lemonade, occ. water

Past Medical History

Born FT, breastfed for one month

Asthma: multiple ED visits and admissions, no ICU stays

ADHD, Bipolar disorder

Medications

Albuterol PRN, Vyvanse, Abilify

Family History

- Mother is overweight, has type II diabetes, hypertension
- Father is overweight, has hypertension
- Maternal grandfather died of MI
- Paternal grandfather was victim of homicide

Social History

- Resides in Hill district with parents
- Is in 5th grade- frequently bullied
- Father smokes in the home

Physical Examination

Wt 65 kg, Ht 140.7cm, BMI 32 = 99%tile

T 37.6, HR 100, R 20, BP 135/70, O2 sat 98% on RA

Gen: NAD

HEENT: PERRLA, EOMI, oropharynx unremarkable

CV: RRR, normal S1 and S2

RESP: CTAB, no wheezes, normal work of breathing

ABD: Obese, soft, NT, ND. Liver edge palpable 1-2 cm below costal margin.

MSK: No swelling or deformity.

Derm: Acanthosis nigricans noted in posterior neck folds and axillae

Neuro: Normal mental status, no focal deficits

Laboratory Testing

Random blood glucose: 107 mg/dL

Total cholesterol: 210 mg/dL

LDL: 162 mg/dL

HDL: 28 mg/dL

“McLipitor Syndrome”*



"I call it the McLipitor Syndrome. Patients feel they can eat whatever they want as long as they take a statin drug to lower cholesterol..."

Because of time constraints, physicians may spend little time counseling lifestyle change, which can work as well as or better than the best drugs for heart disease, obesity, diabetes and high blood pressure."

**Mark Goldstein, MD, NY Times Magazine Letter to Editor Feb 11, 2007*

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MD Barriers: Time, Resources, My Knowledge/Skills, Patient Interest and Belief Counseling Works*

Indicate how important the following factors are in determining whether you discuss healthy lifestyle changes with patients. Healthy lifestyle changes include quitting smoking, losing weight, changing eating habits, managing stress, or increasing physical activity. (n= 19; Respondents = Physicians, Residents, Physicians Assistants, CRNPs)

Factor	Average Rating 1 = Not Important 10 = Very Important
Time available to spend with patient	9.16
Availability of resources or programs to offer assistance to patients	8.16
My knowledge and skills about the topic	7.74
Patient interest in discussing the topic	7.53
Belief that it will influence the patient's behavior	7.53
How well it fits into my daily routine	6.06
Reimbursement/payment opportunity	3.47

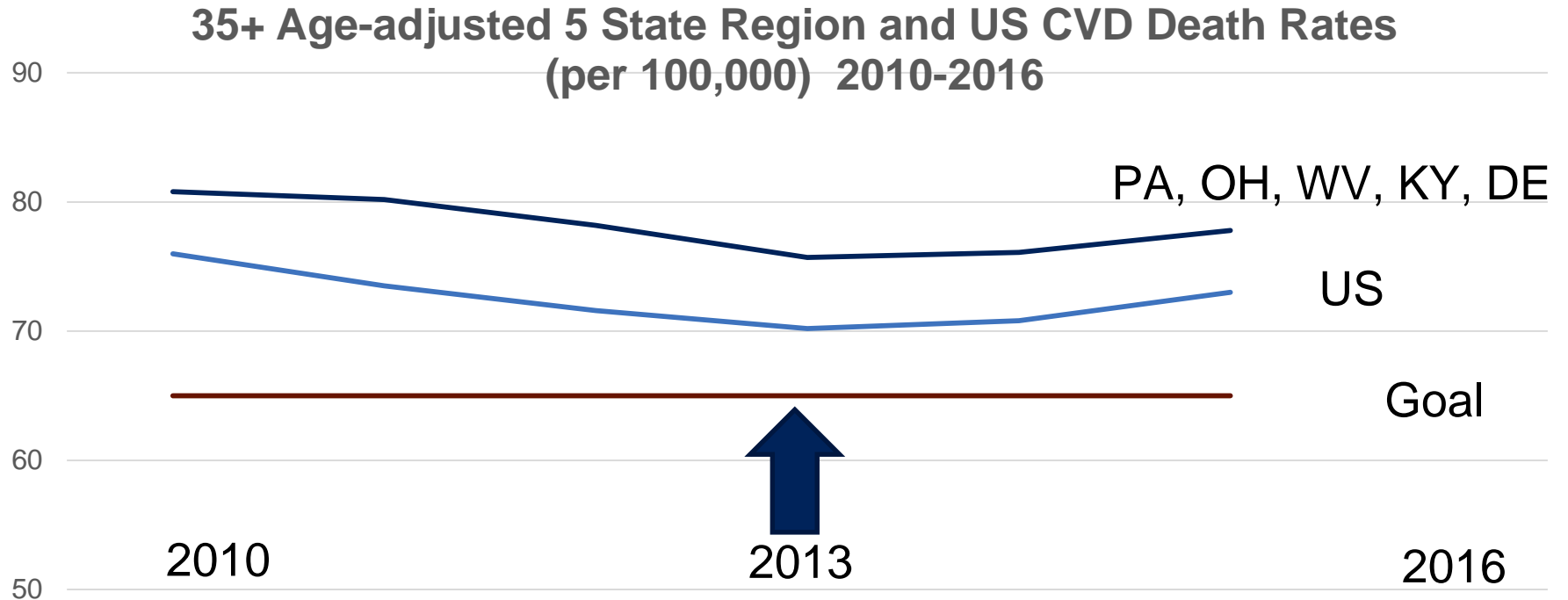
*from UPMC Rx Wellness Case Study manuscript AJMQ review

Mediterranean (or Asian) Diet + Nonsmoker + Daily Activity + Moderate Alcohol Use*

Disease	Reduction Compared to U.S.	Comment
Heart Disease	64%*–83%**	80% due to modifiable risk factors
Cancer	60%*	Approximates NCI estimates
Diabetes	91%**	No type 2 epidemic
All-cause Mortality	50%*	25-year Okinawa program — similar findings

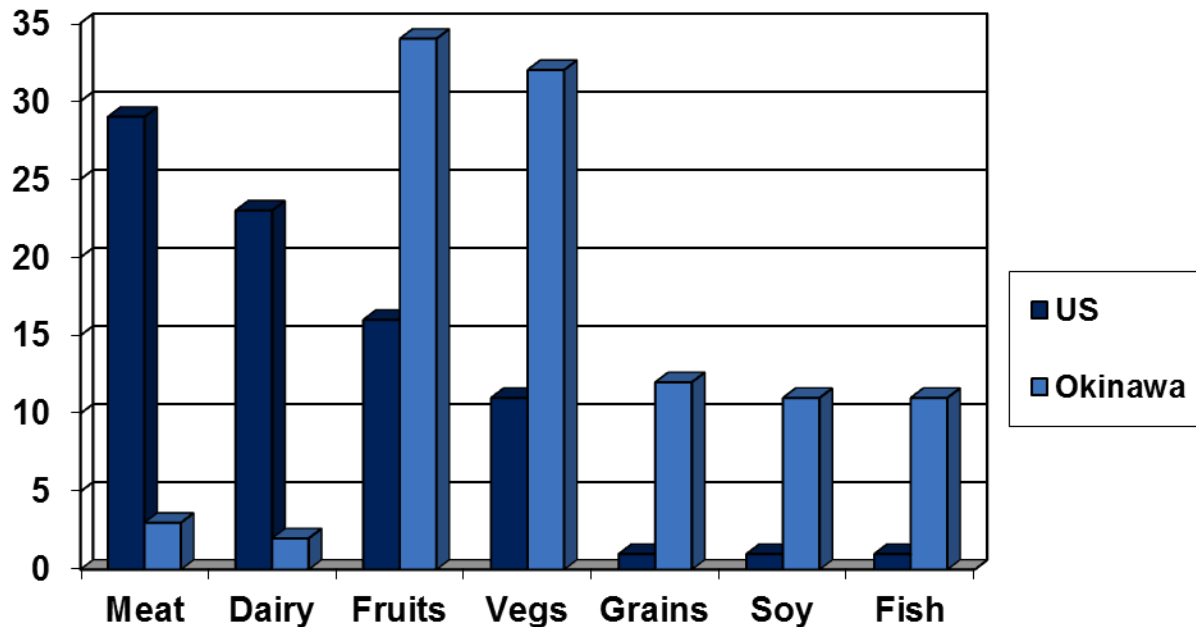
* Knoop et al and **Rimm, Stampfer, JAMA 2004;292:1433-1439

Decades-Long Tobacco Reduction and CVD Treatment Progress Overcome By Lifestyle in Last 5 Years



Okinawan (Mediterranean, Adventist, Physician/Nurse Study, DASH) Diet vs “SAD”

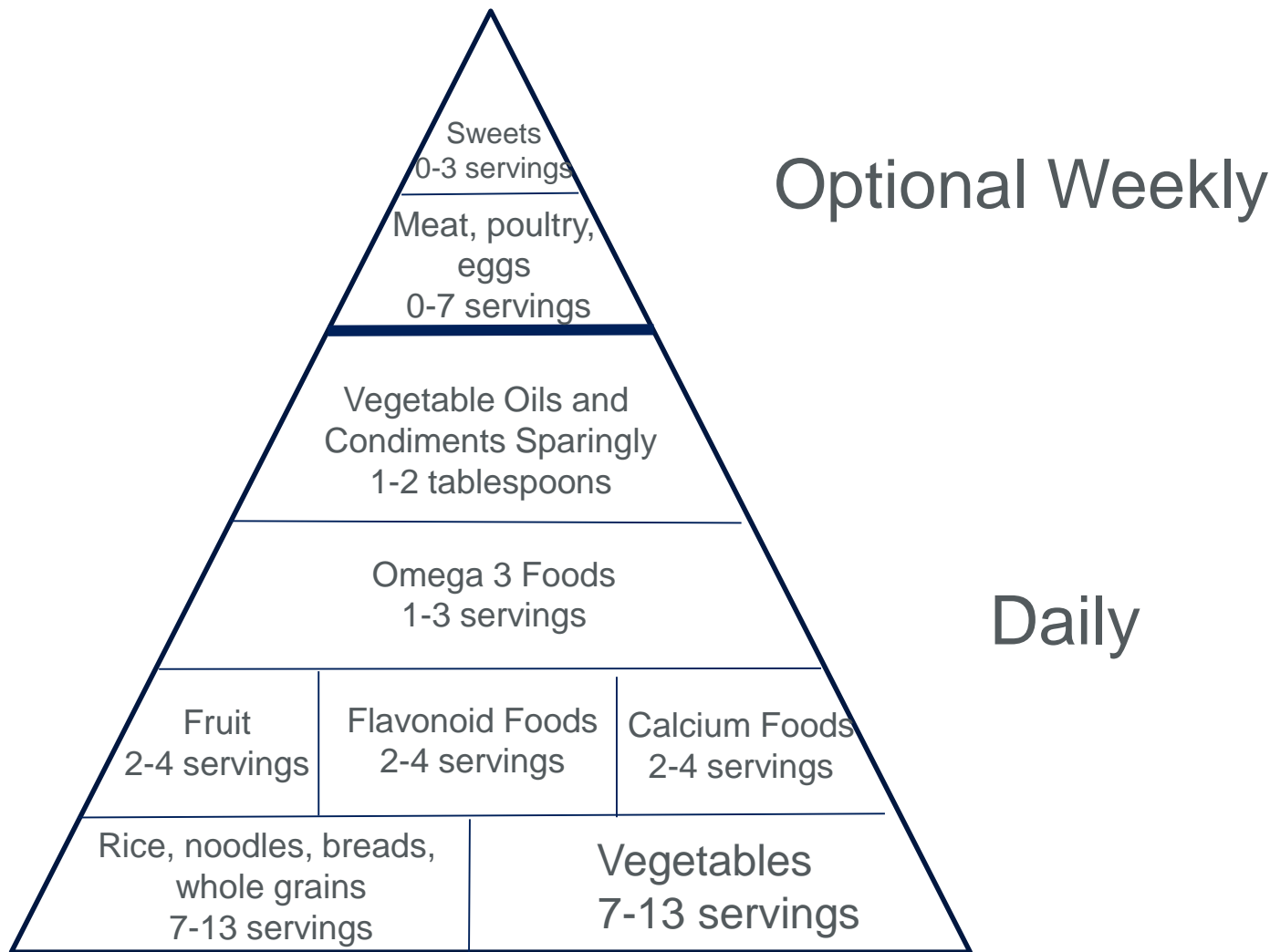
Comparison of US and Okinawa Diet Meat and Dairy vs Fruits, Vegetables, Grains*



- 7 servings of vegetables and fruits
- 7 servings of grains
- 2 servings of soy products
- Omega 3 fish several times per week
- Minimal dairy and meat

*The Okinawa Program: Learn the Secrets to Healthy Longevity, Three Rivers Press, 2001.

Okinawan Food Pyramid* in Detail



(*The Okinawa Program; Willcox, Willcox, Suzuki; 2001; p 75)

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SAD (Standard American Diet) Processed & Animal-based Food Epidemic Recent Decades

- Added salt
 - US adults 3528 mg/day
 - US children 2999 mg/day
- Added sugar
 - US adult sugary drink 74 oz/week
 - US children sugary drink 85 oz/week
- Added fat
 - US 32 lbs cheese per person (8 lbs 1960) per year
 - US 220 lbs meat per person (50% beef/pork, 50% chicken) per year
- No/minimal fiber, potassium, micronutrients, antioxidants
 - 7-8 gm/day vs optimal 40 gm/day or more

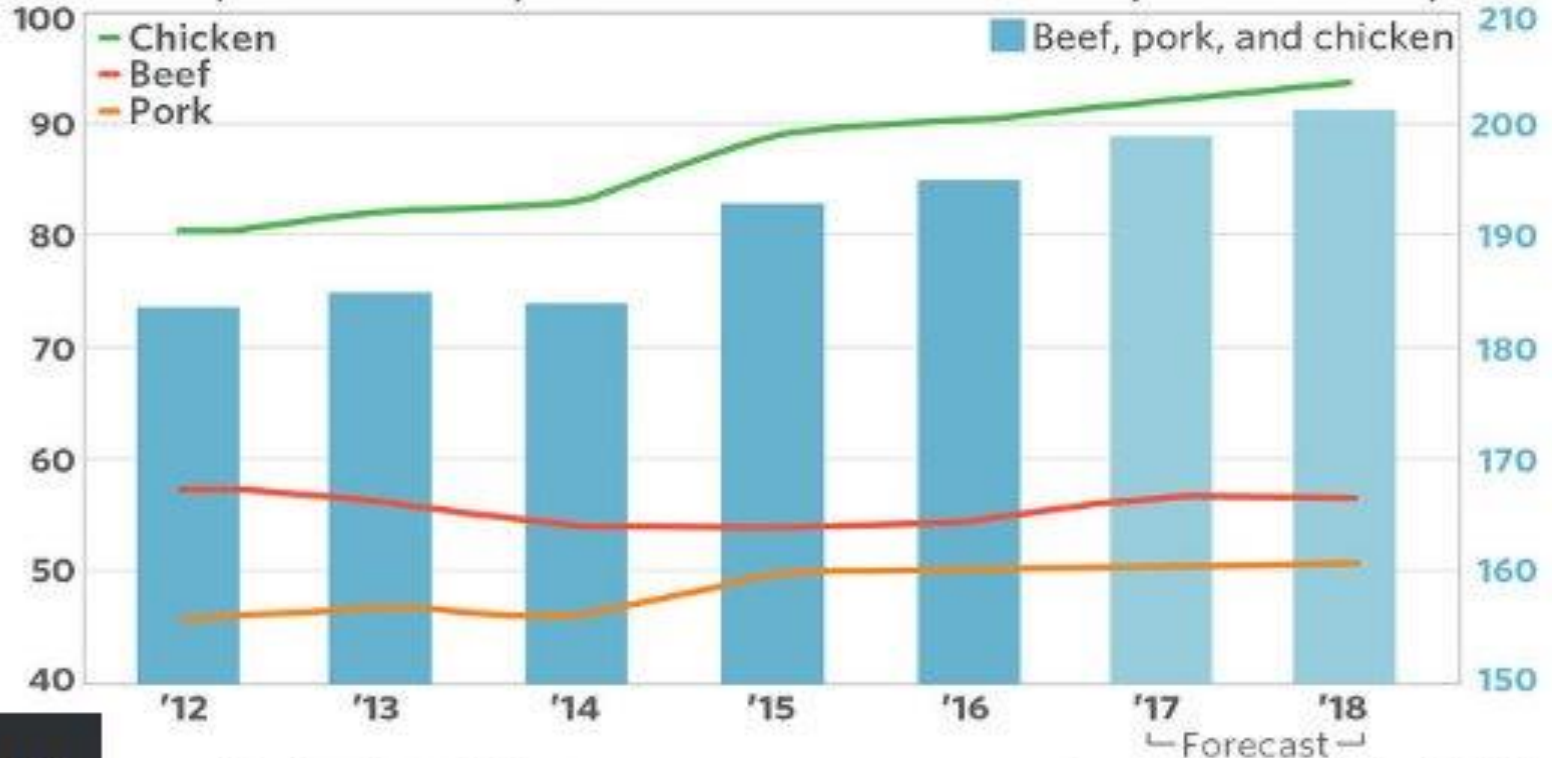
US Per Capita Meat Consumption Continues to Increase (2016 >200 lbs per person per year)

Americans now eat way more meat

Per capita meat consumption, in pounds

Individual protein consumption*

Total protein consumption



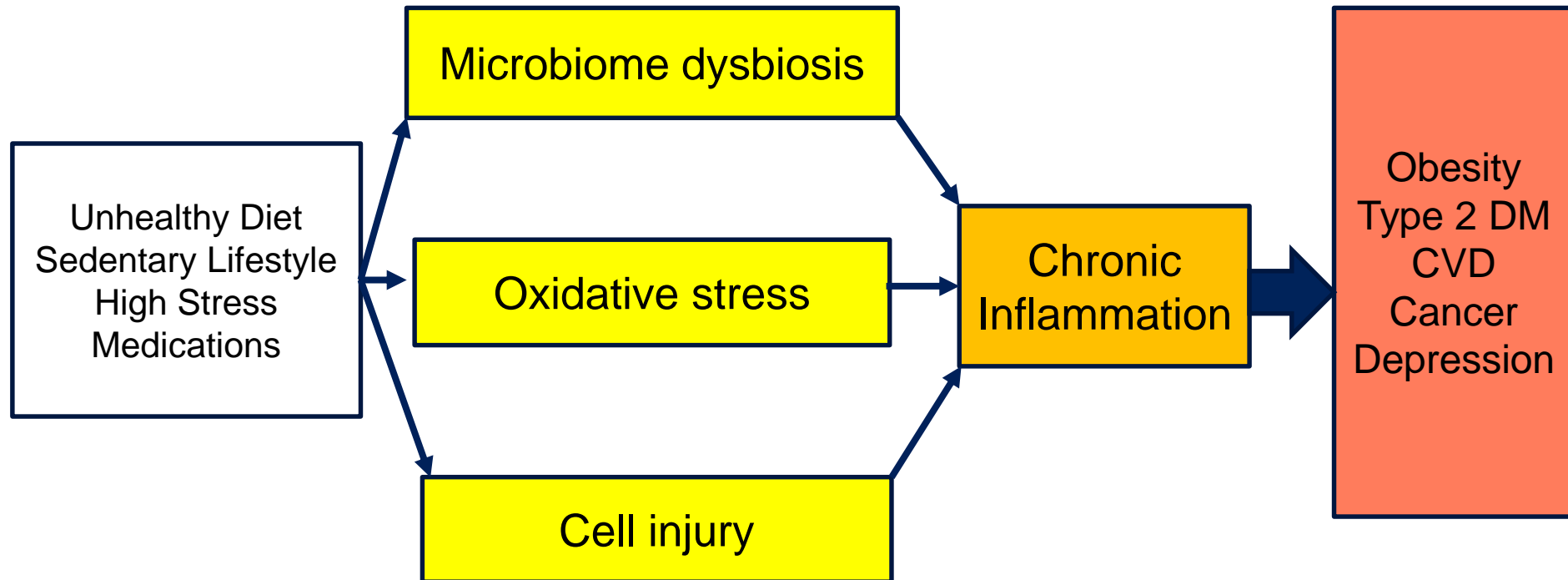
*Beef, pork, or chicken

Source: USDA, Rabobank 2016

Share

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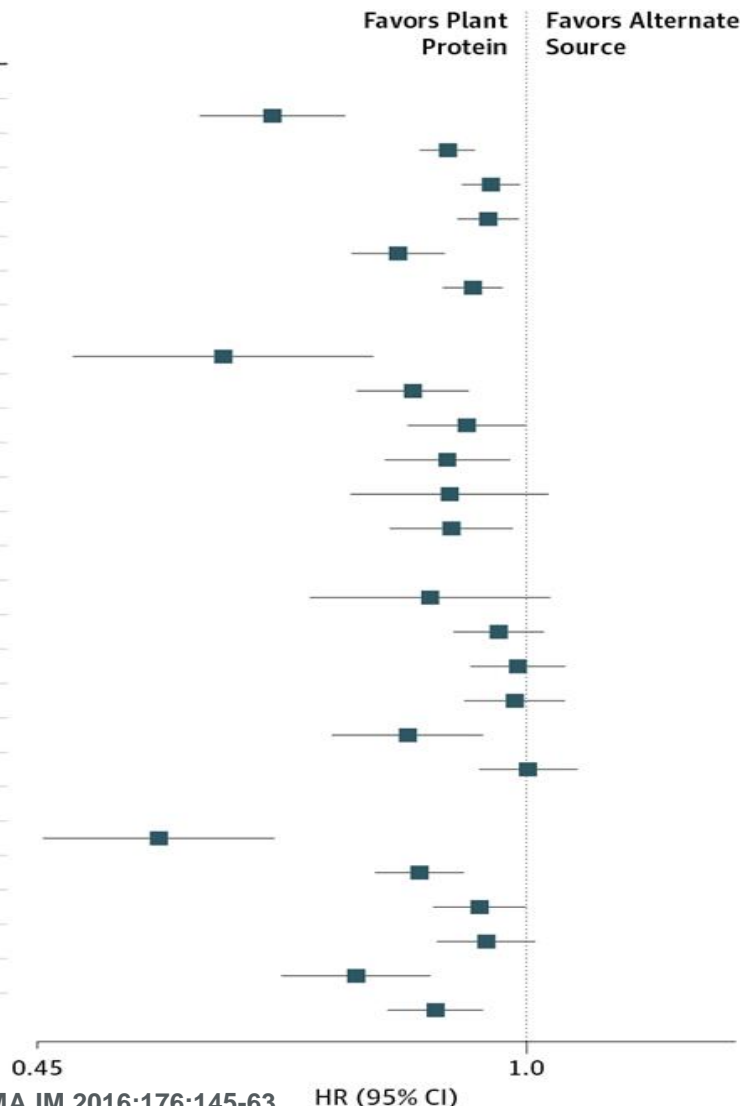
Steps in the Pathogenesis of Inflammation Progressing to Chronic Diseases*



*Adapted from Bodai et al. Lifestyle medicine: A brief review of its dramatic impact on health and survival. PermJ 2018;22:17-025

Effect of Replacing Animal Proteins with Plant Proteins on All-cause, CVD, CA and Other Mortality*

Animal Protein Source by Cause of Death	HR (95% CI)
All cause	
Processed red meat	0.66 (0.59-0.75)
Unprocessed red meat	0.88 (0.84-0.92)
Poultry	0.94 (0.90-0.99)
Fish	0.94 (0.89-0.99)
Egg	0.81 (0.75-0.88)
Dairy	0.92 (0.87-0.96)
CVD	
Processed red meat	0.61 (0.48-0.78)
Unprocessed red meat	0.83 (0.76-0.91)
Poultry	0.91 (0.83-1.00)
Fish	0.88 (0.80-0.97)
Egg	0.88 (0.75-1.04)
Dairy	0.89 (0.80-0.98)
Cancer	
Processed red meat	0.86 (0.71-1.04)
Unprocessed red meat	0.96 (0.89-1.03)
Poultry	0.99 (0.91-1.06)
Fish	0.98 (0.91-1.06)
Egg	0.83 (0.73-0.93)
Dairy	1.00 (0.93-1.09)
Other	
Processed red meat	0.55 (0.46-0.67)
Unprocessed red meat	0.84 (0.78-0.90)
Poultry	0.93 (0.86-1.00)
Fish	0.94 (0.87-1.01)
Egg	0.76 (0.67-0.86)
Dairy	0.86 (0.80-0.93)



131K prospective cohort 1980-2012 in Song M et al JAMA IM 2016;176:145-63.

Scientific Momentum and Clinical Imperative Grows

JACC March 2017 Lead Study and Commentary

- Pooled meta-analysis of 5M person-years prospective Nurses and Health Professional Cohort studies*
 - Significant reduction incident coronary heart disease (HR = .75) for healthy plant-based vs unhealthy (processed/refined) plant & animal-based foods (HR = 1.32)
- “This study adds to the evidence of gradations of adherence to an overall (healthy plant-based eating) with CHD incidence, such that one could propose a risk-based approach to (healthy plant-based eating) prescription: secondary prevention after cardiovascular events and patients at high risk having a stronger recommendation for a strictly (doing so).” (Drs Williams, President ACC and Patel)

*J Am Coll Cardiol 2017;70:411-422

Root Cause Lifestyle Medicine Approach to Undoing Chronic Disease Epidemic: “Eat, Move, Think”

*Purpose, passion,
connection, stress reduction
mindfulness*

*Whole-food,
plant-based
eating*

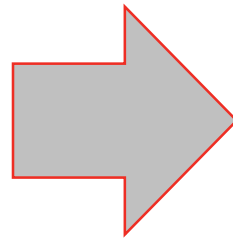


Physical Activity

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What Then is the Best Diet?

- **High Nutritional Value**
- **Low in Empty Calories**
- **High in Fiber**
- **High in Antioxidants**
- **High in Micronutrients (flavonoids, vitamins)**
- **Low Calorie Density**
- **Low/No Cholesterol**
- **Low in Saturated Fats**



**Whole Food
Plant-based
Eating Pattern**

Daily Dietary Recommendations*

Lifestyle Medicine: Impact on Health and Survival**

Decrease substantially or eliminate

Inflammatory effects
Low nutrient/high calorie

- Meat: beef, pork, lamb, chicken, turkey, seafood
- Processed meats: salami, bologna, ham, turkey, chicken
- Animal dairy: milk, cheese, yogurt, kefir, sour cream, cottage cheese, butter
- Sugar substitutes and refined sugars: aspartame, high-fructose corn syrup
- Processed foods: refined grains (white bread, cookies, fried potato chips)
- Soft drinks, alcohol

Increase or consume heavily

Anti-inflammatory effects
High nutrient/low calorie

- Leafy greens
- Vegetables, cruciferous, squash, garlic
- Mushrooms
- Fruits: berries, bananas, pomegranates
- Legumes: green beans, lentils, soybeans, sugar snap peas
- Whole grains: quinoa, wheat, oat, rice, pasta, barley, corn
- Seeds: flax, chia, pumpkin, sesame
- Plant-based “dairy”: soy, almond, rice milk
- High nutrient/high fat: limited consumption
 - Nuts: walnuts, pecans, almonds

Kaiser: Plant-based Diet Recommended All Patients



THE PLANT-BASED DIET:

a healthier way to eat
Presented by Kaiser Permanente

**“Eat food. Not too much.
Mostly plants.”**

— Michael Pollan¹

Start with a simple assessment:

1. Are you open to changing your diet if it could really improve your health?
2. Do you want to lose weight?
3. Do you want to feel better?
4. Do you want to improve, stabilize, or even reverse a chronic condition such as heart disease, high cholesterol, diabetes, or high blood pressure?

If you answered “yes” to any of these questions, then a plant-based eating plan may be for you. This booklet includes information to help you follow a low-fat, whole-foods, plant-based diet.

¹In *Defense of Food: An Eater's Manifesto* (New York: Penguin, 2009)

Canada's Dietary Guidelines for Health Professionals and Policy Makers



Canada.ca.FoodGuide

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Psychosocial Predictors Of 5 Fruits and Vegetables Daily

- Review of 35 studies of psychosocial factors and fruit and vegetable intake*
- Only 3 factors shown to consistently predict healthy consumption
 - Knowledge and skills
 - I know its ‘good’ and know ‘what to do’”
 - Self-efficacy
 - “I believe or know I can change”
 - Social and environmental support
 - “Someone cares, is watching and provides reinforcement for my behavior”

*Am J Prev Med 2008;34(6) 535-543

UPMC Prescription for Wellness: Prescribing Coaching

Evidence-Based Support for Condition Management, Shared Decision Making and Lifestyle Improvement



UPMC MyHealth

Health Coaching
Make the call for a healthier life!

See how these convenient telephone sessions can help you improve your health, reduce your health risks, and increase your enjoyment of life!



Online program to address issues such as stress, tension, anxiety and depression.
Effective evidence-based treatment using Cognitive Behavioral Therapy.

Shared Decision making Support

Back, Hip, Knee and Shoulder Pain
Bariatric Treatment
Breast or Prostate Cancer
Heart Disease
Crohn's Disease
Uterine Fibroids
Benign Prostatic Hyperplasia

Condition Management

ADHD	Diabetes
Anxiety	Cardiac
Asthma	conditions
COPD	Low Back Pain
CKD	Maternity
Depression	Substance Use

Lifestyle Improvement

Nutrition
Tobacco Cessation
Weight Management
Physical Activity
Stress Management

Medical Specialty Societies Define Lifestyle Medicine Competencies

Lifestyle Medicine - evidence-based practice of helping individuals and families adopt and sustain healthy behaviors that affect health and quality of life



**American Academy of Family Physicians, American College of Physicians, American Academy of Pediatrics, American College of Sports Medicine, American College of Lifestyle Medicine, American Osteopathic Association, American Medical Association, American College Preventive Medicine*

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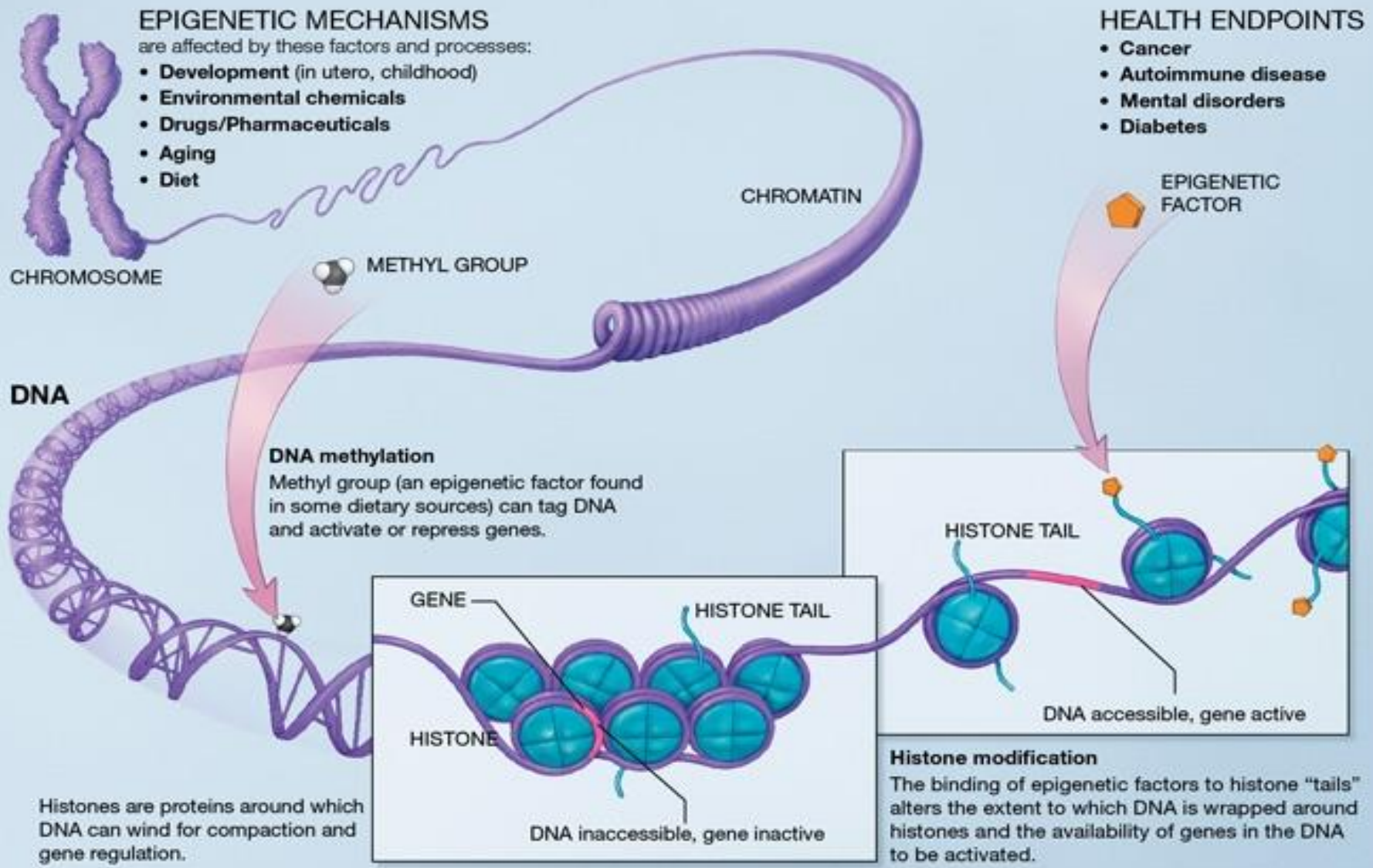
Intensive Lifestyle Disease Reversal Programs Demonstrated Impact

Major Acute Events	Demonstrated Reduction in IL/DR studies
Myocardial Infarctions	✓
Strokes	✓
Stents	✓
Bypass Surgeries	✓
Ablation Surgeries	✓
Joint Replacement	✓
Osteoarthritis	✓
Dialysis	✓
Transplants	✓
Amputations	✓

IL/DR studies have shown a 25-90% reduction in major recurrent CVD and other clinical and costly acute care events

Epigenetics: New Basic Science

Rapid Expression of Health Endpoints Thru Lifestyle



Food – TRULY the Best Medicine

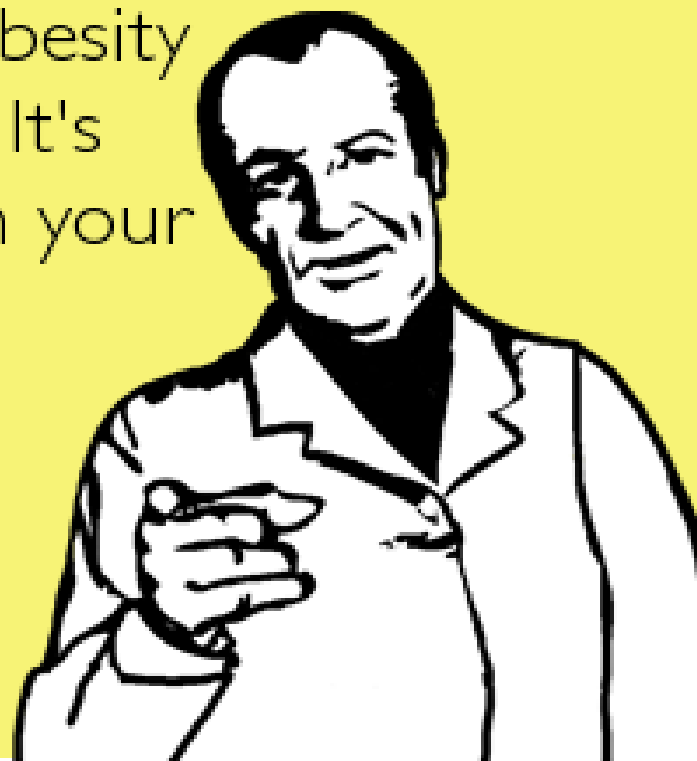
- “Eat food, not too much, mostly plants”
- Fruits, vegetables, whole grains can’t be reduced to pills
- Beware reductionist nutritionism & “approved” diets
- Chronic disease is *reversible* . . with food as medicine!
- Foundational to emerging field of “lifestyle medicine” is whole-food, plant based eating pattern
 - ACPM/ACLM 30 hour CME/CEU Credit Curriculum released 10/16
- Alignment and synergy of “green” with “health”
 - Local foods, richer soils, lower carbon footprint
 - Just beginning and transformational

Recommended Approach

- Assume “undernourished”, inflammatory-inducing eating
- Make the link: “what I eat”, “how I move”, “what I ‘think’” are root cause to of patient risk, condition or disease
- Brief motivational message – we have to address together and I believe we can do so step by step over time
- Core message
 - Whole foods, plant-based as much as possible with fiber, fruits, vegetables and whole grains
 - Minimize or eliminate highly processed foods, dairy, meats, excessive oils or use sparingly as “condiments” to plant-based meals
 - More you move to plant-based, quicker the results (labs, weight, DM)
- *Prescribe* coaching or intensive lifestyle disease reversal program and create expectation of followup at next visit
- Walk the talk: why should I do it if my doc doesn't?

I Can't Help It . . It "Runs In My Family"

It's not that diabetes,
heart disease and obesity
runs in your family. It's
that no one runs in your
family.



somee cards
user card

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Resources

- Bodai et al. Special Report. Lifestyle medicine: a brief review of its dramatic impact on health and survival. PermJ 2018;22:17-025.
- *Journal of Geriatric Cardiology Oct 2017 Special Issue (14:5), Ostfeld, Esselstyn, Williams et al.*
- *How Not to Die.* Michael Greger, MD (NY Times Bestseller) 2015.
- *The Okinawa Program: Learn the Secrets to Healthy Longevity.* Willcox, Willcox and Suzuki, Three Rivers Press, 2001
- *The Full Plate Diet: Slim Down, Look Great, Be Healthy.* Seale, Sherard and Fleming (download for free at <http://fullplateliving.org/diet/full-plate-diet-book>)
- *Everyday Cooking with Dr Dean Ornish.* Ornish Harper Collins 1997.
- *Way to Eat: A Six-Step Path to Lifelong Weight Control.* Katz. Source Books 2006
- *What Healthy People Know ... And the 7 Things They Do to Stay Healthy and Live Long*” by Dr. Bob Gleeson, MD (Health Now LLC and Classic Day Publishing)