



Holistic Wellness and Aging

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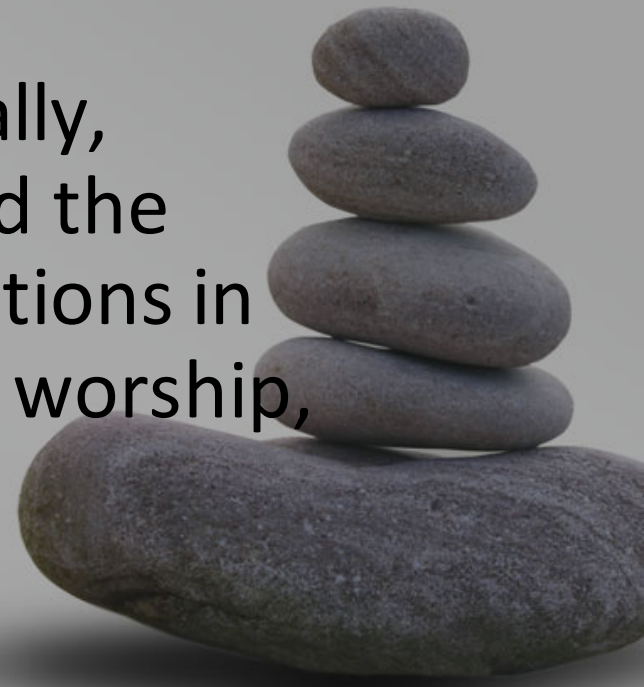
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WHAT DOES IT MEAN TO BE WELL?

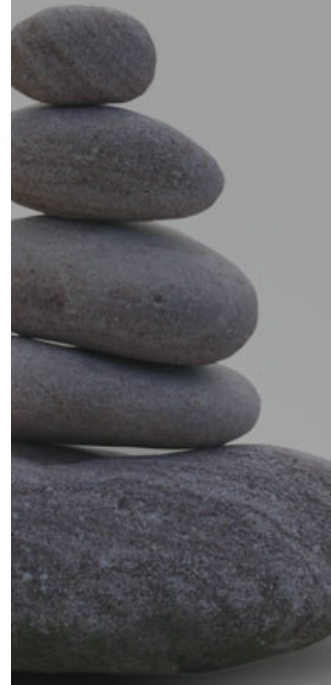
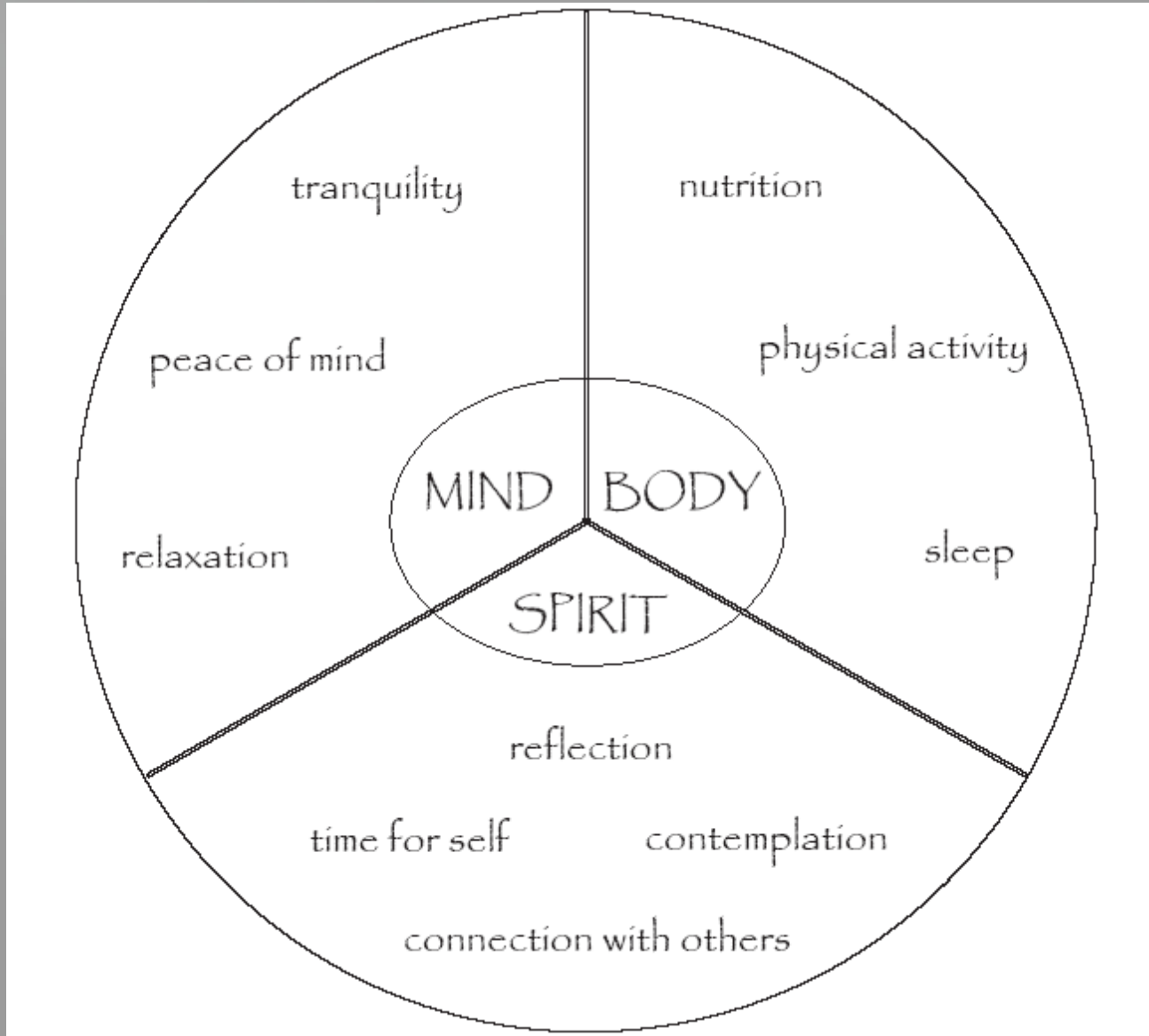


WHO Wellness Definition

Wellness is the optimal state of health of individuals and groups. There are two focal concerns: the realisation of the fullest potential of an individual physically, psychologically, socially, spiritually and economically, and the fulfillment of one's role expectations in the family, community, place of worship, workplace and other settings.

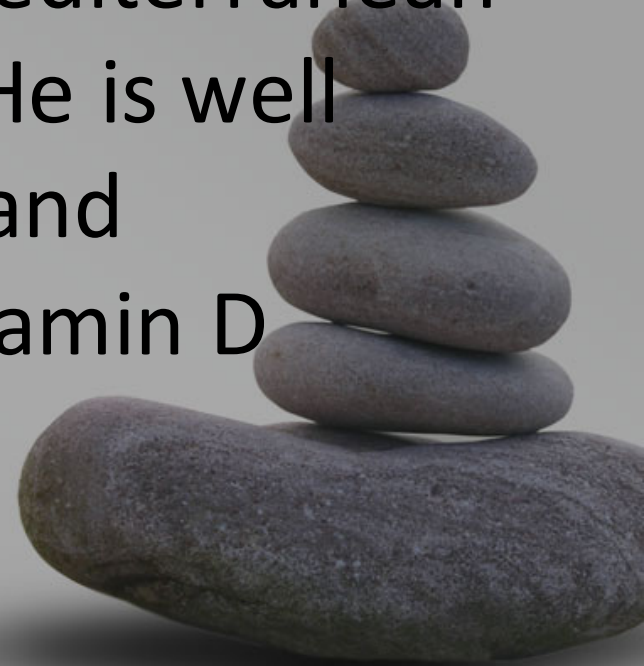


Wellness Wheel



Case 1

- TR is a 72 yo retired man who works out regularly and engages in daily physical activity. He has eaten a Mediterranean diet over most of his life. He is well connected with his family and community. He takes a vitamin D supplement daily.



Case 2

- TR is a 72 yo retired man who recently suffered his 2nd heart attack. His diabetes is under average control. He tries to avoid sugar by using other sweeteners. He quit smoking 3 yrs ago. He takes 7 medications regularly. He walks 3 times/week for 30 min.



Foundations of Health

- Nutrition
- Sleep
- Physical activity
- Love
- Relaxation/calm mind
- Connection with others
- Contemplation



A healthy diet, regular exercise and not smoking can eliminate 80% of heart disease and 70% of some cancers.



Outline

- Wellness as a focus of care
- Specific recommendations
- Incorporating wellness into your life and practice
- Changing the face of health care



Qualities of Health Care Professionals

Take a moment to think
about why you went into
health care.



Prevention
LIFESTYLE

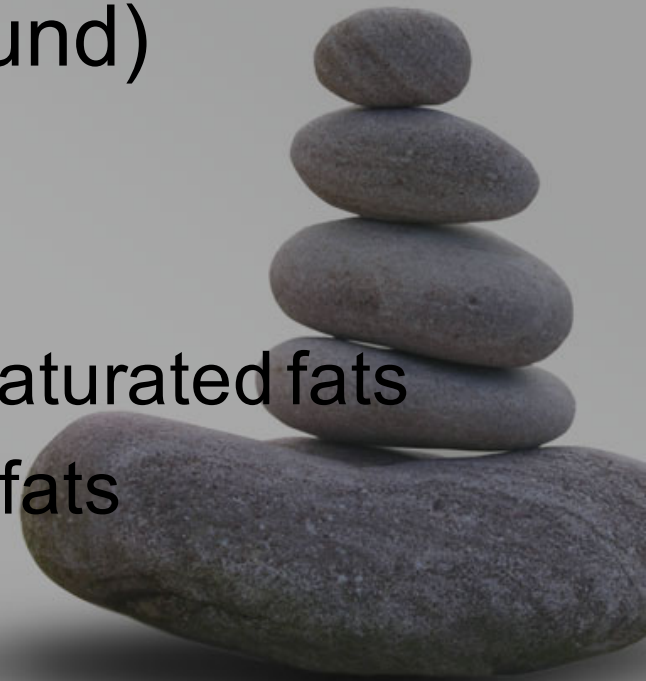


Food as Medicine



Mediterranean Diet

- Emphasis on fruits and vegetables
- Plant proteins and fish over other animal proteins
- Whole grains (coarsely ground)
 - Low glycemic index
- Healthy fats
 - High omega-3 and monounsaturated fats
 - Low omega-6 and saturated fats



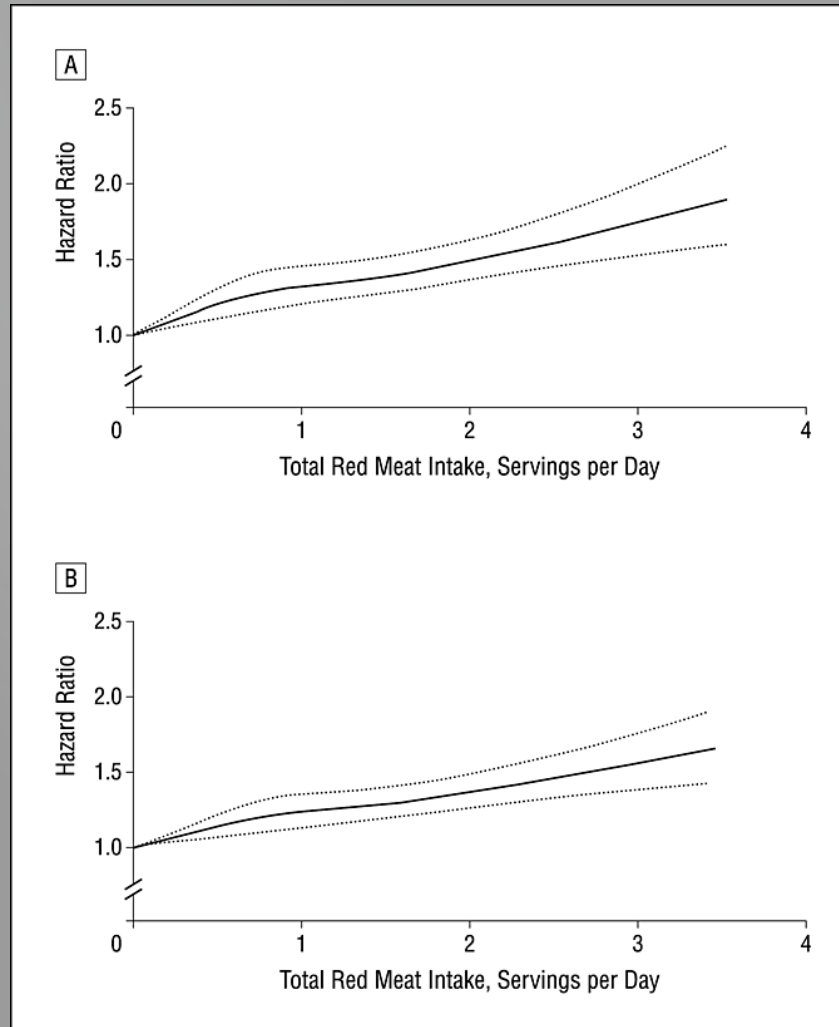
Low Glycemic Index

- Summary of high GI:
 - Eat more
 - Hungry more often
 - Harder to loose weight
 - (even if eat the same amount of food)
 - More likely to have chronic disease
 - Increased inflammation
 - High cholesterol ^{1,2}
 - Diabetes
 - Cardiovascular disease³

1. McMillan-Price et al. Arch Int Med 2006
2. Thomas et al. Cochrane Database Syst Rev. 2007
3. Beulens et al. J Am Coll Cardiol. 2007



Dose-response relationship between red meat intake and risk of all-cause mortality in the Health Professionals Follow-up Study (A) and the Nurses' Health Study (B)



Beverages

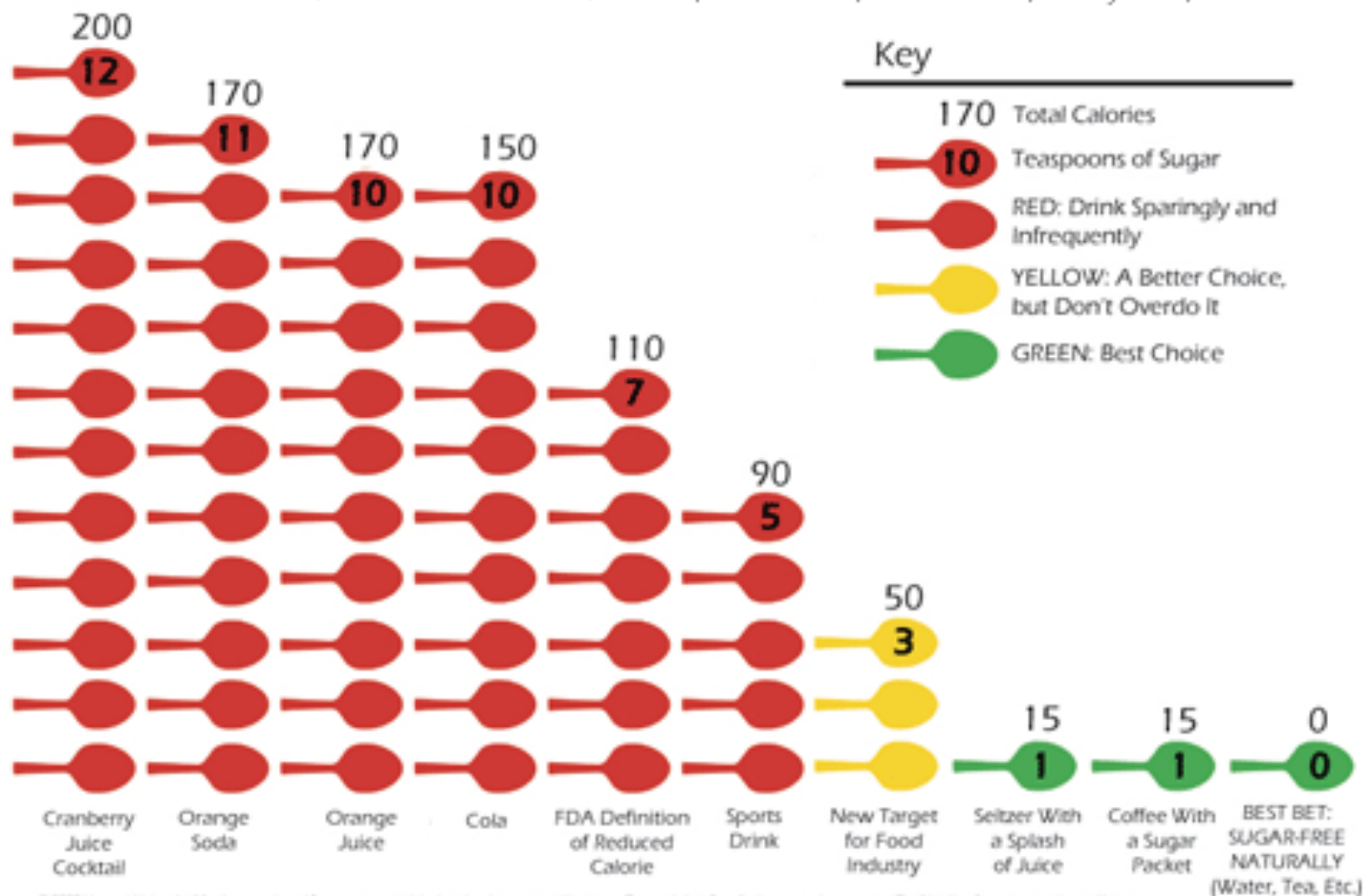
- Water preferable
- Potential for large number of calories
- Often high glycemic index
- Artificial sweeteners
 - May eat more



How Sweet Is It?

Calories and Teaspoons of Sugar in 12 Ounces of Each Beverage

For more information, see The Nutrition Source, www.hsph.harvard.edu/nutritionsource/healthy-drinks/

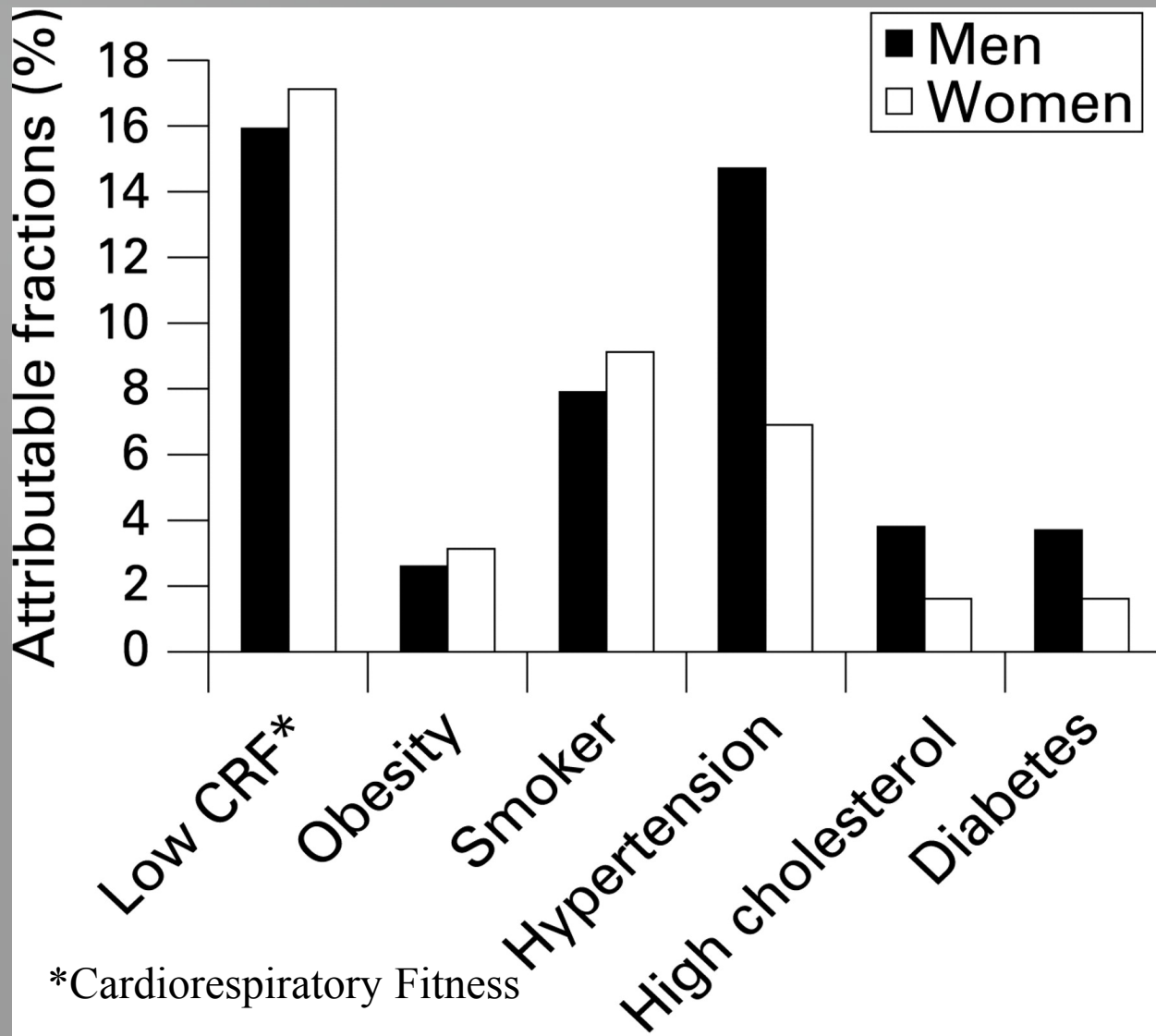


“Those who think they have not
time for bodily exercise will
sooner or later have to find
time for illness.”

Edward Stanley
Earl of Derby 1873



Attributable fractions (%) for all-cause deaths in 40 842 (3333 deaths) men and 12 943 (491 deaths) women in the Aerobics Center Longitudinal Study



Blair S N Br J Sports Med 2009;43:1-2

Sedentary behavior

- Prolonged sitting independently increases risk of obesity and diabetes, cardiovascular death and all cause mortality^{1,2}

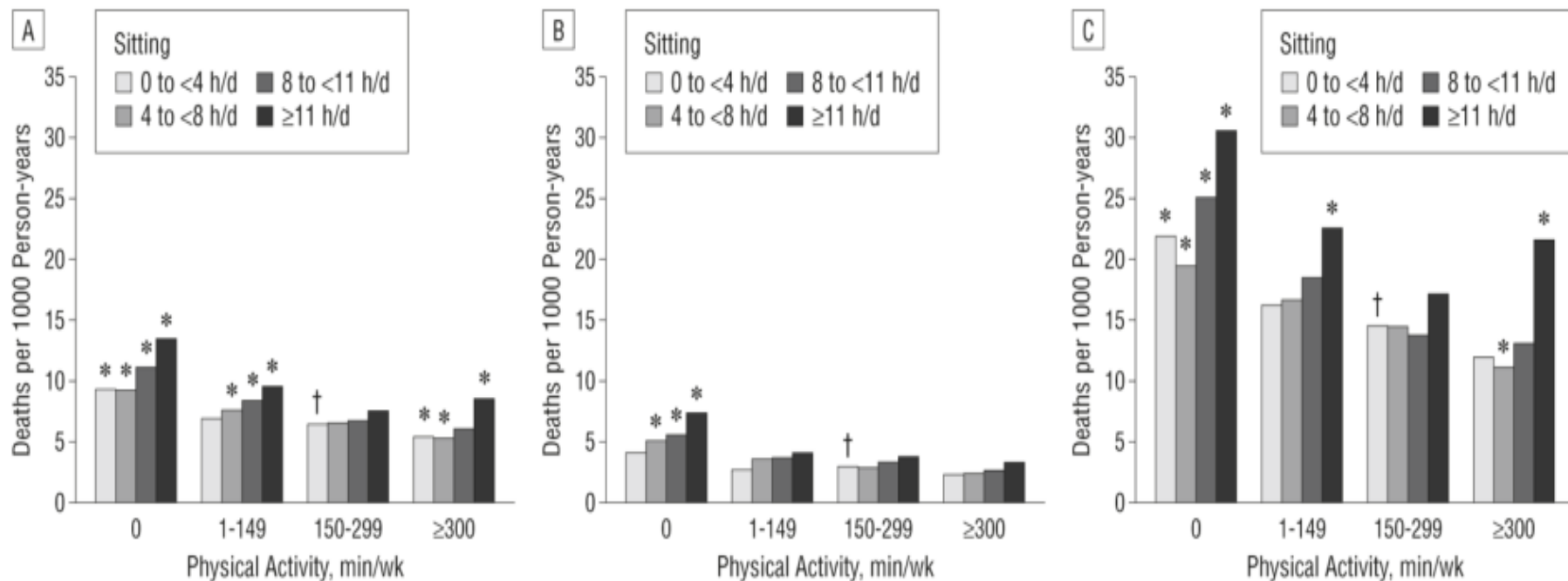


Prolonged sitting is a risk factor for all cause mortality, independent of physical activity

All

Healthy

CVD or DM



From: **Sitting Time and All-Cause Mortality Risk in 222 497 Australian Adults**

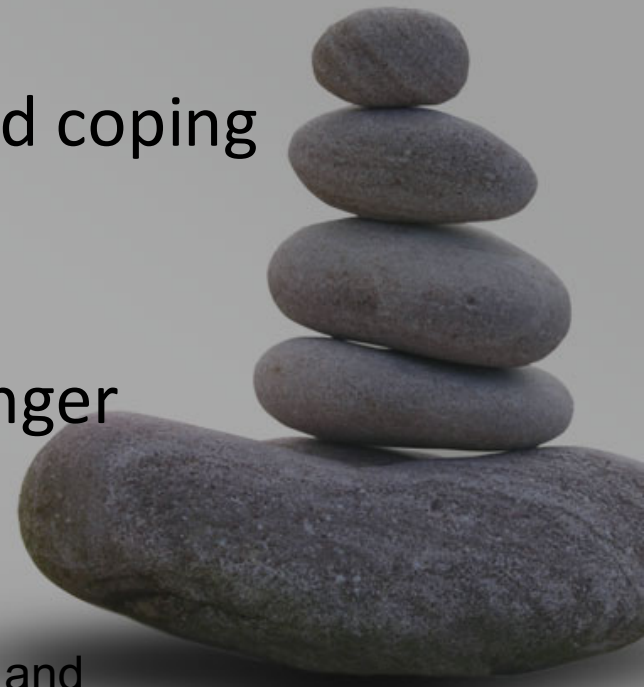
Sleep

- Adequate sleep associated with:
 - Improved blood pressure
 - Decreased rates of diabetes
 - Decreased stroke
 - Increased productivity



Body: Sleep

- Realistic expectations
- Deal with co-morbid conditions
- Cognitive Behavioral Techniques¹
 - Education (sleep hygiene)
 - Address anticipatory anxiety and coping skills
 - Relaxation
 - As effective as meds but last longer



1. Smith et al, Am J Psych 2002, Morin et al, JAMA 1999 and many others

Mental Health

- Beyond the absence of disease
- Resilience
- Purpose
- Mindful



Positive Affect

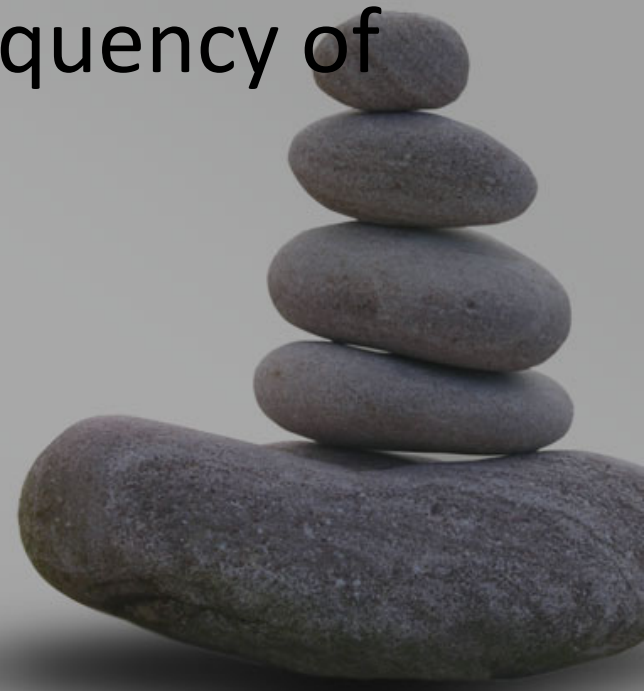
- Deal better with stressful situations¹
- Lower cortisol level, decrease HR¹
- Less severe illness² and frequency of URI³
- Faster healing times⁴

1 Steptoe et al, PNAS 2005

2 Cohen et al, Psychosomatic Med 2003

3 Smith et al, Psychoneuroendocrinology 2001

4 Yang et al, J Neuroimmunology 2002



Spirit



- Fostering connection with others
- Forgiveness
- Time for self
- Experience of love
- Religious experience



Strategies to address

- Seek out support from individuals and groups
- Forgiveness
- Visualization
- Meditation
- Prayer
- Breathing techniques
- Time in nature
- Relaxation
- Prayer
- Tai Chi
- Yoga
- Dance
- Art
- Music



Time in nature

- Improved mental wellbeing¹
- Decreased stress¹
- Outdoor physical activity²
 - Decreased tension, confusion, anger, depression
 - Higher satisfaction
 - Increased sustainability



1. Marselle et al. Int J Environ Res Public Health 2013 and 2014

2. Thompson et al. Environ Sci Technol 2011

SPECIFIC RECOMMENDATIONS





BRAIN HEALTH



Nutrients for Brain health

- Antioxidants¹
 - Dark fruits and veggies
 - Especially blueberries
- Omega-3²
 - Monounsaturated fats increase absorption
- Vitamin D³



Brain Health

- Cognitive challenge
- Physical activity
 - Aerobic + strength or flexibility
- Social connection
- The basics: helmets



In the news: PPI use and dementia

- Pharmacy data study
 - increase in dementia
 - 52% men
 - 42% women
- > 70,000 elders; mean age 83
- Consistent with animal data





HEART HEALTH



Nutrition for Heart health

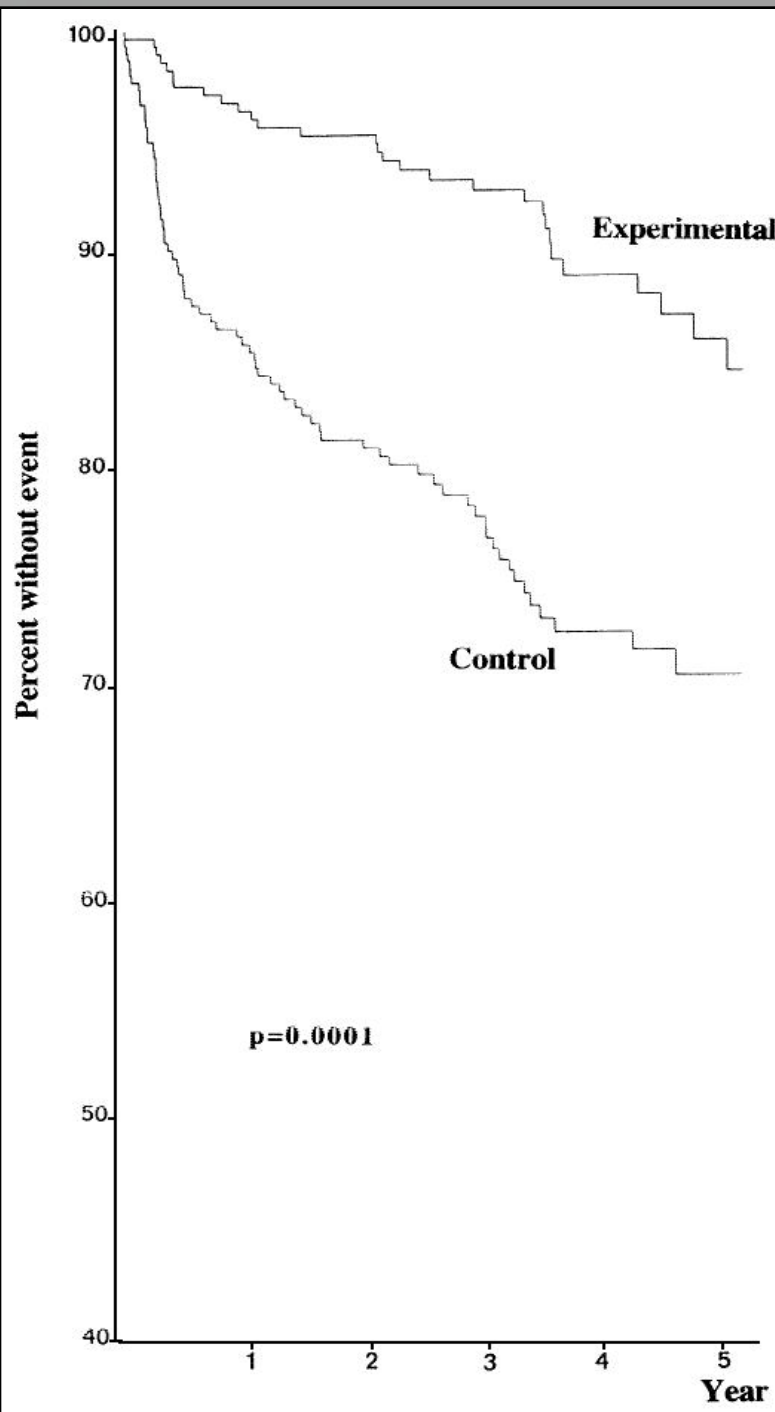
- Fruits and veggies
- Nuts¹/healthy fats
- Low glycemic index²
- Moderate alcohol



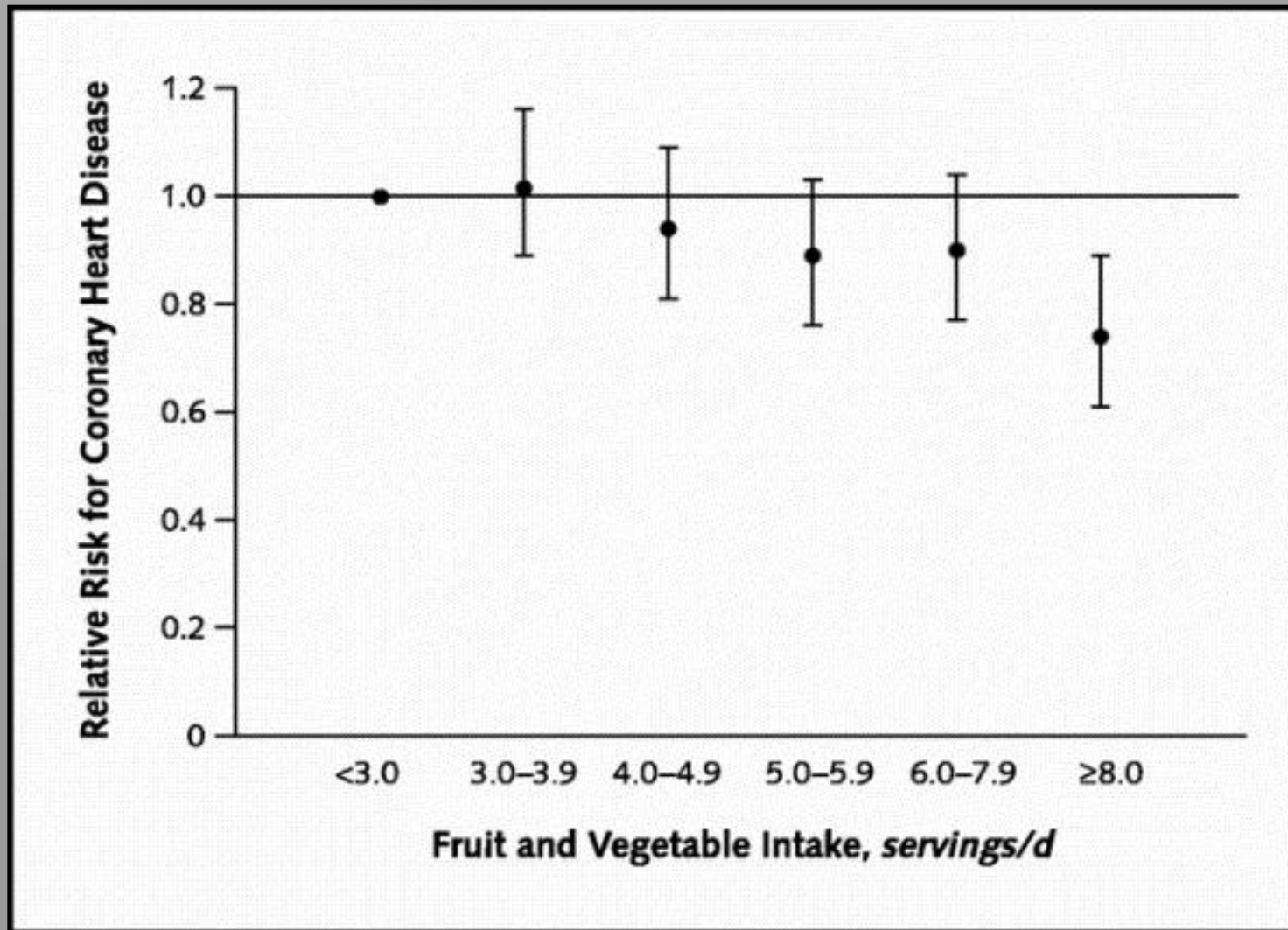
1. Grosso et al. Am J Clin Nutr 2015. 2. Beulens et al. J Am Coll Cardiol. 2007

Lyon Diet Heart Study

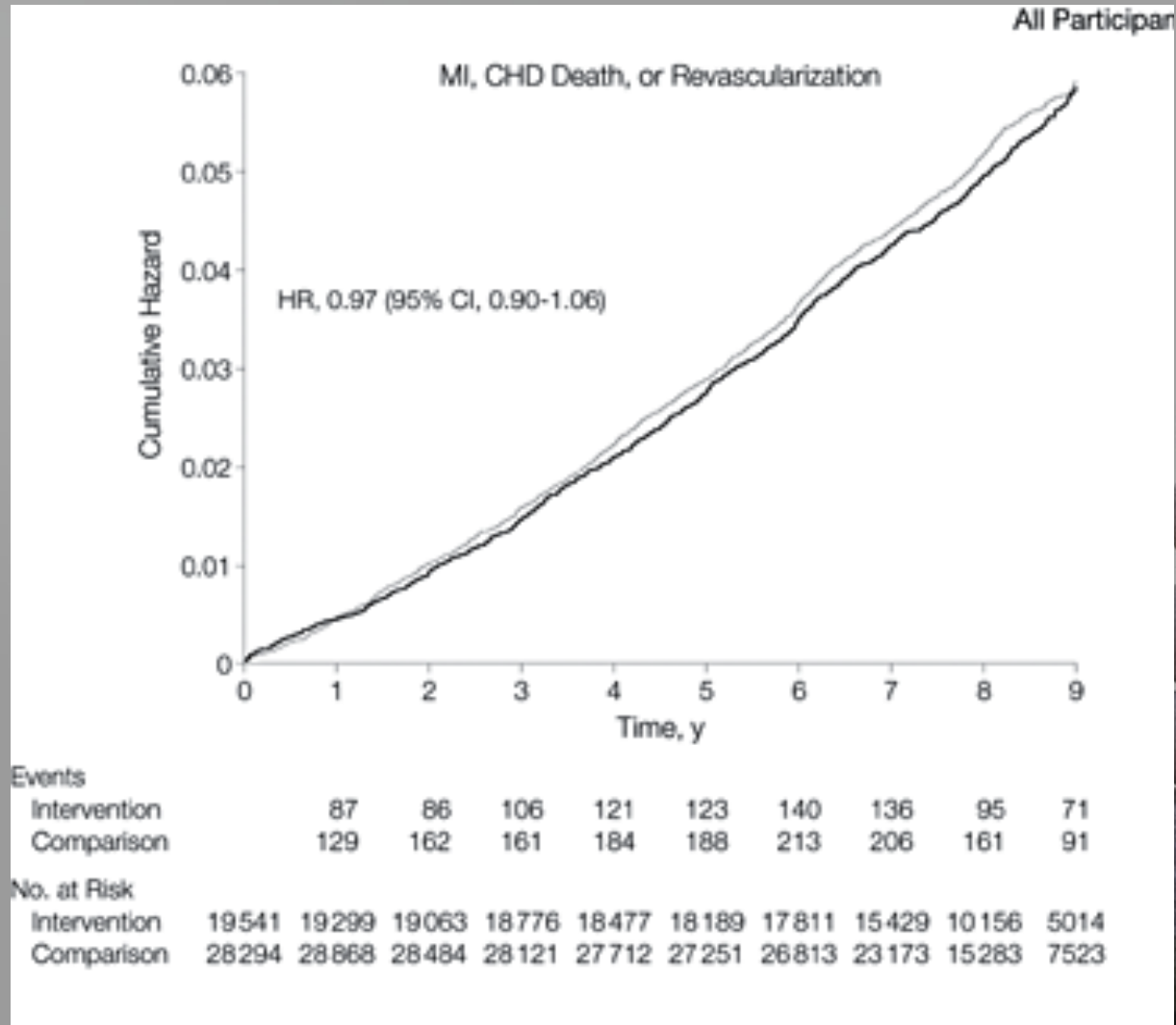
Cumulative survival without nonfatal infarction and without major secondary end points



Relative Risk for heart disease: Fruits and Vegetables



Low fat diet vs. standard diet



Lifestyle Activities vs. Exercise

- Equal weight loss when combined with nutrition changes¹
- Equal impact on CVD risk factors^{1,2}
- May be easier and more sustainable
- Significant cost difference²

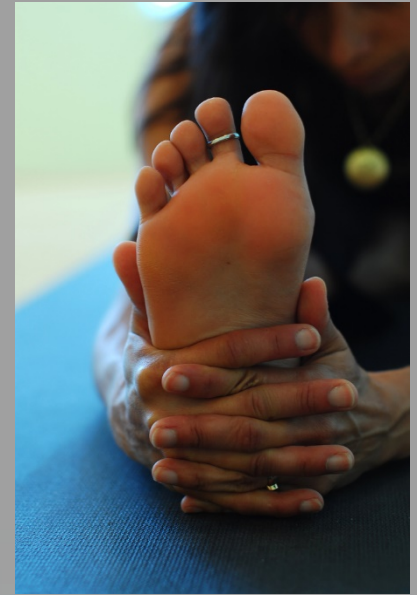
1. Andersen et al, JAMA 1999

2. Dunn et al, JAMA 1999



Heart Health

- Mental and Spiritual Health
 - Stress management¹
 - Social connection
 - Marital status and cohabitation²
- Mouth care
 - Periodontal disease associated with early onset MI³



1. Bergh et al. Heart 2015. 2. Kilpi Soc Sci Med 2015. 3. Ryden et al. Circulation 2016

Social connectedness

- Support from others leads to improved health
 - Support groups
 - Breast cancer survivors
 - Post melanoma resection
 - Familial/community support
 - Post cardiac catheterization
 - Upper respiratory infections





BONE HEALTH



Nutrition

- Plant based diet
 - Calcium, vitamins D and K
 - Avoid acidic load
- Avoid over supplementation



Physical activity

- BEST trial
 - Bone Estrogen Strength Training
 - Postmenopausal women
 - Increased bone mineral density with resistance training +/- estrogen
 - Decreased bone density in control

Metcalfe et al, ASCM Health Fit J 2001



Resistance Training

- Maintain lean muscle mass¹
- Decrease fat mass¹
- Increase resting metabolic rate²
- Decrease risk of osteoporosis³
- Maintain function status
- Decrease risk of CAD⁴
- Decreased hypertension

1. Campbell et al. Am J Clin Nutr 1994

2. Broeder et al. Am J Clin Nutr 1992

3. Nelson et al. JAMA 1994

4. Tanasescu et al. JAMA 2002



Balance and Agility

- Functional Status
 - Activities of daily living
- Tai Chi RCT with elders^{1,2}
 - Decreased fall risk by 48%
 - Fear of falling decreased
 - Improved mood
- Yoga





JOINT HEALTH



Joint Health

- Anti-inflammatory diet¹
- Physical activity
- Joint load reduction
 - Weight maintenance
 - Limit prolonged standing
 - Wedges where appropriate



Joint health physical activity

- **Aerobic training**
 - Decrease pain and progression of disease
- **Resistance training and strengthening**
 - Stabilizing joints helps prevent pain
- **Flexibility**
 - OA can limit motion
 - Flexibility training can improve function



Hormones

- Bio-identical hormones
- What is “Natural”?
- What is their purpose?



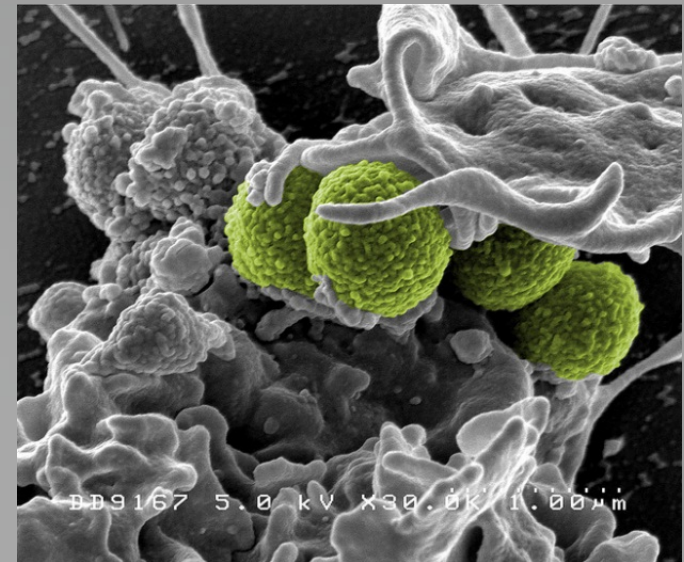


BOWEL HEALTH



Microbiome

- 10 times the number of human cells
- 99% of the genetic material
- Over 1000 species
- Varies from person to person
- 90% are in the gut
- The “composite organism”
 - Co-evolution



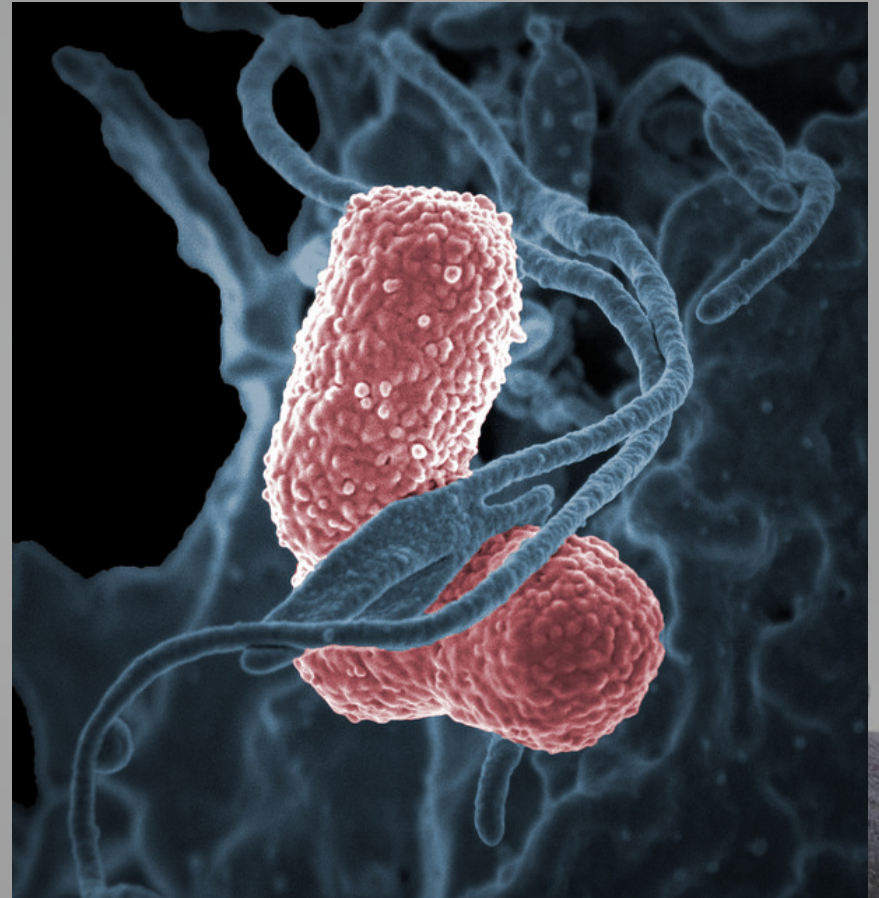
Associations with different species

- Autism
- Inflammation
 - Including IBD
- Allergic disease
- Anxiety
- Insulin sensitivity
- Ghrelin regulation
- Weight
- Early osteoarthritis



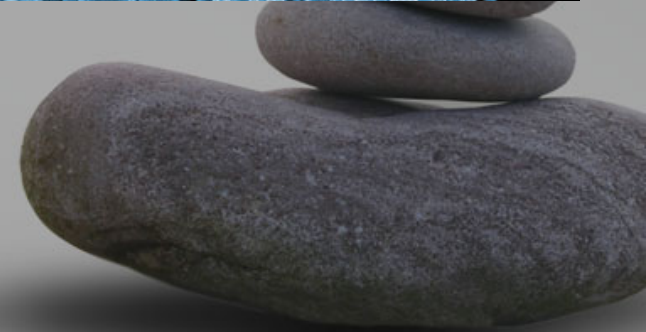
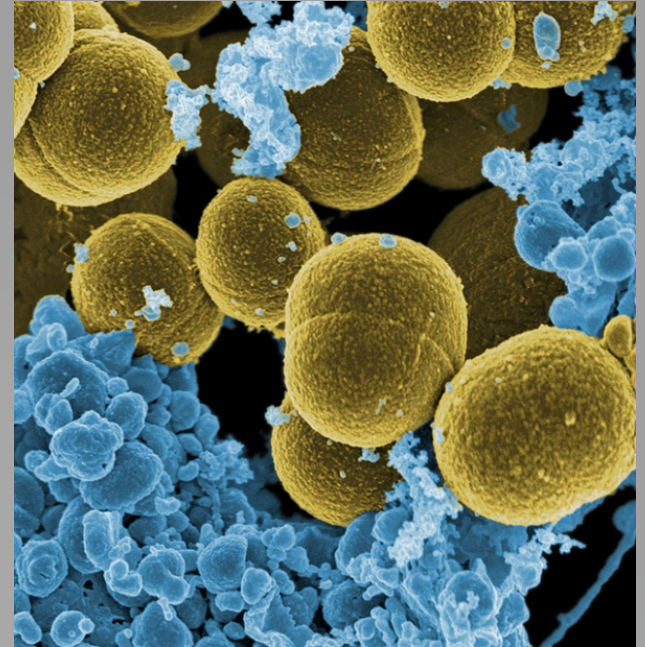
Changing the microbiota

- Vaginal delivery
- Breastfeeding
- Diet
 - Fiber
 - Food additives
- Hygiene/sanitation
- Probiotics/prebiotics
- Pharmaceuticals
- Fecal transplant



Low diversity

- Adiposity
- Inflammation
- Insulin resistance
- Low Short Chain Fatty Acids
- Dyslipidemia
 - Increased triglycerides
 - Low HDL



Increasing diversity

- Increased dietary fiber
- Western societies have about 25-30% less diversity (and different species)
- Change in diet¹:
 - Improves diversity
 - Reverses inflammatory markers
 - Improves lipids
 - Decreases adiposity



Mucosal disruption

- Emulsifiers in processed foods
 - Lecithin, polysorbate 80, datem, etc.
 - Damage mucosa
 - Increased bacterial translocation¹
 - In mice²:
 - Change flora
 - Inflammatory disorders
 - Obesity
 - Metabolic syndrome
 - Overt colitis



Avoid unnecessary testing

- Choosing Wisely Campaign
- What does the evidence support?
 - Prostate cancer screening
 - Breast cancer screening
 - Osteoporosis screening
 - Cardiovascular screening

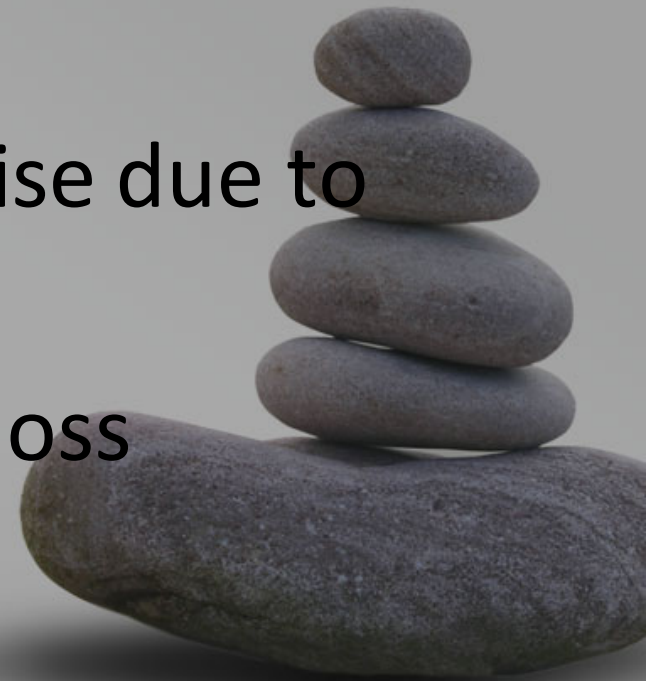


Where to start?



Motivation: what doesn't work

- Brief one time educational intervention
- Unrealistic goals
- Guilt
- Recommend against exercise due to chronic disease
- Focus on dramatic weight loss



Motivating Individuals

- Clear goals
 - i.e. Health/Wellness rather than weight loss
 - Short term positive: feel better, more energy
- Tailored message
 - Start with one step
- Play: What is fun?
- Self Monitoring
 - Tracking
- Get family and friends involved
- Lead by example
- Each day is a new day
- Close follow-up





Future of Medicine

- Patient Centered Medical Home
- Whole Person Care
- Team Based Care
- Population management replaces fee-for-service care



Integrative Medicine at University of Utah

- Now
 - Huntsman
 - Primary Children's
 - Family Medicine
 - Orthopedics
- Future
 - Wellness
 - Collaboration



University of Utah

Wellness and Integrative Health

- Human Resources Programs
- Wellness Centers
- Lifestyle support
 - Nutrition
 - Physical activity
 - Mindfulness
 - Health Coaching
- Integrative services



Take home points

- Lifestyle is the foundation of health
- Focus on lifestyle must be the expectation rather than the exception
- We spend an disproportionate amount of time on treatment of disease over prevention
- Wellness interventions can reduce dependence on pharmacotherapy, limit morbidity and extend life
- Start with yourself



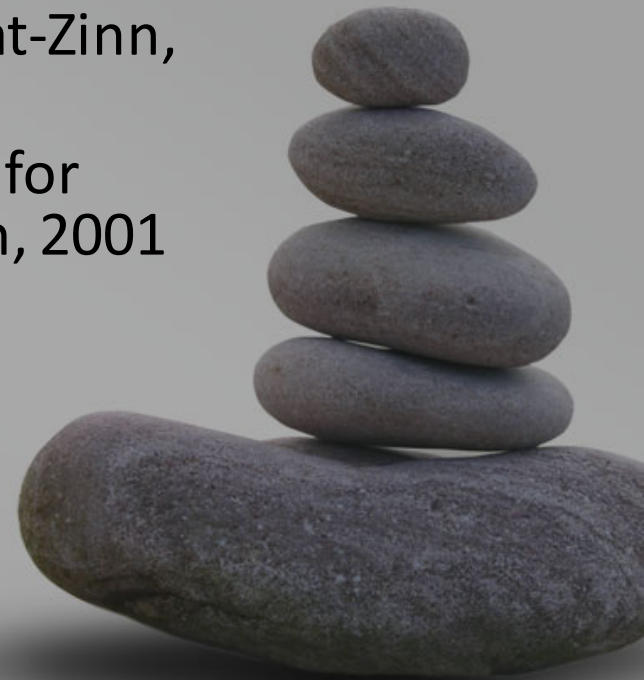
Resources - Provider

- University of Wisconsin Integrative Medicine
 - Teaching Modules
 - <http://www.fammed.wisc.edu/integrative>
- Integrative Medicine, David Rakel, 2012
 - Available on MDConsult and Clinical Key
- Eccles Library Guide to CAM
 - <http://campusguides.lib.utah.edu/cam>
 - Natural Medicines
- NCCIM website
 - www.nccam.nih.gov



Resources

- www.nutritionsource.org
- Why We Eat More Than We Think, Wansink, 2007
- Switch, Chip and Dan Heath, 2011
- No Sweat, Michele Segar, 2015
- Where Ever You Go There You Are, Kabat-Zinn, 2005
- Forgive for Good: A Proven Prescription for Health and Happiness, Luskin and Luskin, 2001



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“What fits your busy schedule better, exercising one hour a day or being dead 24 hours a day?”

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