Lifestyle Medicine: What it is and Why it Matters

University of Saskatchewan
College of Medicine – 30 year Reunion
June 23, 2017
Dr. G. Werner Spangehl
Outline

- Lifestyle Medicine: Isn’t this just motherhood and apple pie?
- Lifestyle Medicine: An elegant consistency
- Lifestyle Medicine: sustainability – there is no other option
- The Blue Zones: Lessons from the longest living communities
- Sustainability: Personal
- Sustainability: Global
Faculty/Presenter Disclosure

- Faculty: **G. Werner Spangehl, MD** (U of S Med ‘87)

- Relationships with commercial interests:
  - Unfortunately, NONE
Disclosure of Commercial Support

- This program has NOT received financial support in any form.

Potential for conflict(s) of interest:
- Dr. Spangehl owns Peace Arch Publishing, that has published *One Minute Medicine* a book that will be discussed.
Mitigating Potential Bias

- 100% of the proceeds from the sale of *One Minute Medicine* will be donated to the University of Saskatchewan Alumni Association.
Lifestyle Medicine – a “new” discipline
lifestyle medicine 2014

Treat the Cause: Evidence-based Practice

CONFERENCE ATTENDEE
October 19th - 22th, 2014
SAN DIEGO, CA
“Lifestyle recommendations”

- Every set of guidelines be they for hypertension, diabetes, hyperlipidemia, etc. start of with:

- “Try dietary and lifestyles changes first … when that does not work – here are all the drugs you will need …”
Health Outcomes

• In a large survey of determinants of health it was found that genetics, environmental factors, and medical care each contribute approx. 10%.

• Fully 70% of our health, vitality, longevity, need for medications and hospitalization is determined by lifestyle choices that we have control over:

• What we eat, how much we exercise, if we smoke or use substances, how we deal with stress, how we love and relax …
Diabetes Prevention Program

Risk reduction:
• 33% by metformin
• 58% by lifestyle

(Knowler et al, 2002, NEJM)
Cut chronic disease by 78% 

EPIC trial

- 95% reduction in Diabetes
- 80% reduction of heart disease (CAD)
- 50% reduction of stroke
- 33% reduction of cancer

By: not smoking, not being obese, exercising 30 minutes daily, eating healthy (MORE greens, beans, whole grains, fruits and veggies, LESS saturated fat, meats, processed foods)
Harvard Study Group

- 70-90% of CHRONIC DISEASE is Avoidable and Preventable
  Stroke, Cancer, Heart Disease, Diabetes

Dr. Walter Willett (2006)

The Mediterranean Diet: Science and Practice

Journal of Public Health and Nutrition
2050 (kids born today) Risk of DM 1:3
Unsustainable – esp. in developing countries
The rise and rise of chronic illness
Treat the cause
Chronic conditions that can be reversed with lifestyle changes

- Obesity
- Hypertension
- Cardiovascular Disease – coronary artery disease (atherosclerosis), stroke, congestive heart disease
- Diabetes – Type 2, but also some Type 1 – with improvement of microvascular and macrovascular complications.
More conditions improved or reversed with lifestyle medicine

- Dementia
- Osteoporosis and Osteoarthritis – chronic LBP
- Certain cancers: colorectal, breast, prostate, lung
- Dental cavities
- Sleep apnea
- Chronic constipation/ diverticulosis
- Gastroesophageal reflux
- Erectile dysfunction – peripheral vascular disease
- Depression
- Macular Degeneration
A Shift from Illness-care

The new paradigm for Health Care involves:

- Pharmaceuticals
- Surgery
- Self-care

To improve overall health

– physicians are now expected to deliver this care
Lifestyle Medicine includes:

- Diet
- Exercise
- Restorative sleep and Relaxation
- Meditation
- Epigenetics
- Emotional resilience
- Sense of connection
- Communication
- Environment
Genetics loads the gun …

But the environment (Lifestyle) pulls the trigger
Types of Exercise

- Cardio-vascular (aerobic)
- Resistance Training (strengthening)
- Flexibility (stretching)
- Postural/Balance
- Physical activity vs. exercise
  - Structured exercise
  - Lifestyle exercise – natural movement
Sitting is the new smoking

- Getting some exercise is not enough – avoiding inactivity is just as important.

- Sedentary time detrimentally associated with:
  - waist circumference – HDL cholesterol – C-reactive protein – triglycerides – insulin – beta cell function – insulin sensitivity –
  - through decreased muscle contractions and endothelial dysfunction

Prolonged sitting proportionally increases CAD, T2DM, cancer, and all-cause mortality.
Aim for 150 minutes a week

Recommended weekly exercise

- 25 minutes 3 times per week
- 30 minutes 5 times per week
A food-borne illness
Standard American Diet (SAD)

Processed foods: Oil, Sweets, Refined Grains (60-70%)

Meats, Eggs, Dairy, Fish (25%)

Unrefined Plant Food: Fruit, Vegetables, Beans, Nuts, Seeds (10.5%)

Whole Grains (2.5%)

Promotes chronic disease
Reduces immune function
The Old Food Pyramid

- Fats, Oils & Sweets
  - USE SPARINGLY

- Milk, Yogurt & Cheese Group
  - 2-3 servings

- Vegetable Group
  - 3-5 servings

- Fruit Group
  - 2-4 servings

- Bread, Cereal, Rice & Pasta Group
  - 6-11 servings

- Meat, Poultry, Fish, Dry Beans, Eggs & Nuts Group
  - 2-3 servings

KEY
- ☳ Fat (naturally occurring and added)
- ▼ Sugars (added)

Those symbols show fats and added sugars in foods.
The New Concept

Choose MyPlate.gov
Eat REAL Food

Choose Real Food
Foods that are OVERCONSUMED

1. Processed meats: bacon, sausages, luncheon meats, deli ham, etc. – high in saturated fat, salt, and toxins – carcinogenic … and devoid of fiber

2. Saturated and Trans Fats: cheese and other high fat dairy products as well as meats, fried foods, burgers and pizza. Most trans fats are found in packaged baked goods.

3. cholesterol: eggs, meats, cheese

4. Processed (refined) carbohydrates: white flour, white rice, sugar, baked goods, soft drinks, juices …

5. salt
World Health Organization classifies processed meats as carcinogenic to humans (Group 1 – same as cigarettes). Red meats are probably carcinogenic to humans. October 2015
Foods that are UNDERCONSUMED

1. Whole (unprocessed) plants: Fiber - whole grains, greens, Legumes: beans, lentils, chick peas, nuts and seeds
2. Whole vegetables and fruits (not juices) - Potassium
3. essential oils – flax, chia, walnuts, avocados, oily fish (be wary of polluted waters …)
4. calcium: greens, veggies, seeds, dairy
5. magnesium: nuts, seeds, legumes, some meats and seafood (not fruits and veggies)
6. Water
Optimal Diet


- More consistency than controversy – even when looking at eating patterns as disparate as vegan and paleo!
The intention of Low Carb, Low Fat, High Protein Diets
The reality
3 Irrefutable food facts

1. Vegetables, beans, seeds, nuts, fruits, are good for you.

2. Excessive amount of animal products cause disease.

3. Refined carbohydrates cause disease and lead to overweight and obesity.
Beans and Longevity

- 8% reduction in death, for each 20 grams (2 tbsp) beans
- No other food so significantly predictive of survival
  inositol pentakisphosphate – (IP-5) - will not allow
  tumors to grow.
- Beans twice a week, 50% reduction in colon cancer
Coronary Artery Disease
Dr. William Osler

- Textbook of Medicine – 1928
- Expect one heart attack a year in average hospital in average American town.
- Today: over 4000 heart attacks per day
- From “rare” condition to “common” in less than 100 years – despite great gains in medical science … change has been Lifestyle.
Absence of Coronary Artery Disease

- Rural China
- Central Africa
- Tarahumara Indians
- Papua Highlanders
Early Atherosclerosis Present in Virtually All Americans


...as early as age 10
Advanced atherosclerosis
Monkeys and atherosclerosis

Rhesus monkeys have been used since the 1950s to study atherosclerosis. On their natural diet, they do not develop coronary artery disease. Fed a Standard American Diet, monkeys develop atherosclerosis and die of myocardial infarction in about 2.5 years.

A group of rhesus monkeys were fed a high fat, high cholesterol diet raising their total cholesterol levels from 3.6 mmol/l to 18 mmol/l. After 17 months some of the monkeys were sacrificed and their coronary arteries were found to have significant narrowings. The remaining monkeys were put back on their regular low fat plant based diet and their cholesterol levels returned to baseline in a few weeks. When these monkeys were sacrificed several months later – the coronary arteries were clear – atherosclerosis had regressed!
Dr. William Castelli

Framingham Heart Study (started in 1948)
5,209 men and women between 30 – 60 years
Ongoing data collection with 2 subsequent generations.

“We have seen many cases of plaque regression in humans. We also know that atherosclerosis can be turned on and off in monkeys with diet.

*The problem is you have to be a monkey to get proper treatment for heart disease in this country.*
Nathan Pritikin

American engineer, inventor, and nutritional researcher
Born August 29, 1915, Chicago
Feb. 1958 – diagnosed with coronary artery disease at 43 yrs – advised to “take it easy” (avoid exercise) and diet will not help.
Developed Pritikin Diet – low fat, low cholesterol, plant-based diet and began running daily.
Dropped total cholesterol from 300 mg/dL (7.76 mmol/l) to 100-120 mg/dL (2.45 – 2.80 mmol/l) and kept it there x 25 yrs.
Died on February 21, 1985 of malignant lymphoma.
Autopsy reported in NEJM, July 4, 1985
All arteries were soft and pliable without any evidence of atherosclerotic plaques or narrowing of these vessels. No evidence of any infarction. There was no evidence of any vascular disease. In a man of 69 yrs with a history or CAD, the absence of atherosclerosis and the complete absence of its effects are remarkable.
American College of Lifestyle Medicine 2014

- Treating the Cause to Prevent and Reverse Heart Disease
- Caldwell B. Esselstyn, Jr., M.D.
- American Cardiac Surgeon
- Olympic Rower
- 2011 Documentary: *Forks over Knives*
Participants: 1985 - 1988

- 23 men, 1 woman with severe triple vessel coronary artery disease – age range 44 - 68

- AVOID: oils, meats, fish, fowl, dairy, eggs, sugar, nuts, avocado, caffeinated coffee

- INCLUDE: whole grains, legumes and lentils, vegetables, fruit

- Fist-full of fresh greens, boiled to soften, chewed slowly (not juiced) 6 times a day!
Not amenable to CABG
Arrest and Reversal Outcomes

- No mortality from the diet
- No morbidity from the diet
- Benefits improve with time
Quality of Life Issues

- Patients are empowered by the knowledge that they are in control of the disease that was destroying their lives.
Isn’t Chronic Illness One Disease?

- Obesity
- Hypertension
- Diabetes – with microvascular complications
- Heart Disease
- Stroke
- Alzheimer’s Disease
- Low Back pain
- Macular Degeneration
- Depression
Program for Reversing Heart Disease (1990)
The first program scientifically proven to “undo” heart disease by making comprehensive lifestyle changes.
SPECTRUM – Love Your Life
    focus: Joy, Pleasure, Freedom

Nutrition
Stress Management
Fitness
Love and Support
“eat better, stress less, exercise more, love more”
72 hour behavioural program funded by Medicare in USA since 2010
Our VISION is a world where all people live long and healthy lives, free of preventable chronic disease.

Our MISSION is to create a culture free of preventable chronic disease by disseminating the global consensus on the fundamental, evidence-based truths on lifestyle as medicine.
Matthew Kelly

How to become the ‘best-version-of-yourself’

Physical
Intellectual
Emotional
Spiritual

Make an ACTION PLAN – write it down
Audience Participation

- Not Smoking
- Exercise at least 30 min at least 5 times a week
- Eat at least 8 servings of fruits and veggies a day
- Avoid processed meats
- Limit alcohol to no more than 10 drinks a week
- In meaningful relationship
- At least 2 friends that you can count on
- Sleep 7-8 hours
Blue Zones

Lomo Linda, CALIFORNIA
Sardinia, ITALY
Okinawa, JAPAN
Nicoya, COSTA RICA
Ikaria, GREECE
5 regions of centenarians

- Barbagia region of Sardinia – Mountainous highlands of inner Sardinia with the world’s highest concentration of male centenarians.

- Ikaria, Greece – Aegean Island with one of the world’s lowest rates of middle age mortality and the lowest rates of dementia.

- Nicoya Peninsula, Costa Rica – World’s lowest rates of middle age mortality, second highest concentration of male centenarians.

- Seventh Day Adventists – Highest concentration is around Loma Linda, California. They live 10 years longer than their North American counterparts.

- Okinawa, Japan – Females over 70 are the longest-lived population in the world.
Stamatis Moraitis returns to Ikaria to die of inoperable cancer at 62 yrs – tending his vineyard and olive trees at 97 yrs … or he claims 102!
The Power 9

1. Move Naturally
2. Right Outlook
   2.1. Know your purpose
   2.2. Down shift
3. Eat Wisely
   3.1. 80% rule
   3.2. Plant slant
   3.3. Wine@5
4. Belong
   4.1. Family first
   4.2. Belong
   4.3. Right tribe

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Keep Moving

1. Move Naturally

The world’s longest-lived people don’t pump iron, run marathons or join gyms. Instead, they live in environments that constantly nudge them into moving without thinking about it. They grow gardens and don’t have mechanical conveniences for house and yard work.
A purpose-filled life

2. Purpose

The Okinawans call it “Ikigai” and the Nicoyans call it “plan de vida;” for both it translates to “why I wake up in the morning.” Knowing your sense of purpose is worth up to seven years of extra life expectancy.
Stress Reduction

3. Down Shift

Even people in the Blue Zones experience stress. Stress leads to chronic inflammation, associated with every major age-related disease. What the world’s longest-lived people have that we don’t are routines to shed that stress. Okinawans take a few moments each day to remember their ancestors, Adventists pray, Ikarians take a nap and Sardinians do happy hour.
Don’t stuff yourself

• 4. 80% Rule

“Hara hachi bu” – the Okinawan, 2500-year old Confucian mantra said before meals reminds them to stop eating when their stomachs are 80 percent full. The 20% gap between not being hungry and feeling full could be the difference between losing weight or gaining it. People in the Blue Zones eat their smallest meal in the late afternoon or early evening and then they don’t eat any more the rest of the day.
Eat your veggies

5. Plant Slant

Beans, including fava, black, soy and lentils, are the cornerstone of most centenarian diets. Meat—mostly pork—is eaten on average only five times per month. Serving sizes are 3-4 oz., about the size of deck or cards. -
Enjoy a social drink

6. Wine @5

People in all Blue Zones (except Adventists) drink alcohol moderately and regularly. Moderate drinkers outlive non-drinkers. The trick is to drink 1-2 glasses per day (preferably Sardinian Cannonau wine), with friends and/or with food. And no, you can’t save up all weekend and have 14 drinks on Saturday.
But you gotta have Faith

7. Belong

All but five of the 263 centenarians we interviewed belonged to some faith-based community. Denomination doesn’t seem to matter. Research shows that attending faith-based services four times per month will add 4-14 years of life expectancy. -
The Family that stays together

- 8. Loved Ones First

Successful centenarians in the Blue Zones put their families first. This means keeping aging parents and grandparents nearby or in the home (It lowers disease and mortality rates of children in the home too.). They commit to a life partner (which can add up to 3 years of life expectancy) and invest in their children with time and love (They’ll be more likely to care for you when the time comes).
Social capitalism

9. Right Tribe

The world’s longest lived people chose—or were born into—social circles that supported healthy behaviors, Okinawans created ”moais”—groups of five friends that committed to each other for life. Research from the Framingham Studies shows that smoking, obesity, happiness, and even loneliness are contagious. So the social networks of long-lived people have favorably shaped their health behaviors.
The Blue Zones

...in other communities
Squaring off the Curve
Goal: Improved Health Span

- Reduced/remove need for medications, surgery, medical procedures
- Reduced doctors visits for sickness
- Increased time of feeling well/enjoyed life
- Increased time of independent living
- Reduced chance of assisted/nursing home living
Complete Health Improvement Program

- Based out of U of Loma Linda, CA – NA only Blue Zone
- Began 1988 - >70,000 participants

CHIP is the most cost effective proven way to treat chronic disease.
- Journal of American Cardiology, January 2012

Goal – to make you biologically younger as you get chronologically older
Prevent, Arrest, Reverse
Results of first cohort:

- 18 sessions – Peace Arch Hospital – January to March 2015
- Up to 40 pounds weight loss – 80 pounds over the next yr.
- LDL cholesterol dropped 56% in 5 weeks
- Insulin dose reduced by 66% in 8 weeks
- Reduction of blood pressure and lipid meds
- Hope restored!
- Simple … but not easy.
Why physician health matters
Looking after ourselves is not Selfish, but Self-sustaining
Foster resilience …

- Create work/life balance
- Connect and stay connected with colleagues and friends
- Develop interests outside of medicine – music, sports, travel
- Schedule regular vacations – “Tarzan holidays”
- Build mini-breaks into each day
- Exercise – outside, in group …
- Get a GP and see her/him regularly …
Shakespeare on self-care:
King Henry V, Act 2, scene 4

“Self-love, my liege,
is not so vile a sin/As self-neglecting.”
The Disease of Medicine

Bright-eyed and idealist medical student/ junior resident
A flawed priority for self-care

“Devaluing self-care while prioritizing the care of others may be a significant, but unnecessary, source of burnout for physicians.”

Schneider et al. Physician Coaching to Enhance Well-Being
EXPLORE 2014; 10:372-379
Self-compassion
“Nothing will benefit human health and increase the chances for survival of life on earth as much as the evolution to a vegetarian diet.”

“We cannot solve our problems with the same thinking we used when we created them.”
Global depletion - rainforests

- Rainforests produce > 20% of the world’s O2 and take millions of tons of CO2 out of the atmosphere – deforestation (mostly for livestock) destroys atmosphere and reduces biodiversity.

- Our planet was composed of 15% rainforest. Since the 1970s we have lost 30 Million acres a year, reducing the rainforest to < 2% of the earth’s surface.

- Despite this loss – nearly 50% of all living things – 5 Million species of plants, animals and insects – still reside in rainforests.

- 25% of all prescription drugs – including 70% of anti-cancer drugs (eg. Vincristine) originate from the rainforest.
Land use

- 80% of arable land (in USA) and 77% of grain used for livestock feed.
- US livestock produce 7 Million tons of excrement per minute.
- Rapid depletion of surface water and aquifers.
- More global warming from livestock (CO2, methane, nitric oxide) than all transportation combined …
Global sustainability

- 10-20 Gal water needed to produce one pound of fruit, veggies, soybeans, grain.
- 5000 Gal water needed to produce one pound of beef.
- Eating a pound of fruits, veggies, soybeans or grain is healthier than eating pound of meat.
- If developing countries want to eat like Americans – it will require 4x the land mass of plant Earth
- 1.1 Billion – malnourished/ suffer hunger and 6 Million children will die of starvation this year.
Not doomsdayers …

… but scientific projection –

If present trends continue, we could kill our planet within 100 years

- 7.5 Billion people – with 250,000 added daily
- 70 Billion livestock (cattle, pork, sheep)/yr.
- 1.7 trillion chickens
- 2 trillion fish
Dominion over animals – or stewardship?

- Fish stocks down 80% - blue fin tuna 4% of historic stock.
- 200,000,000 pounds of sea life extracted from ocean every hour – 90% of fish species lost.
- Cruel slaughtering methods of intelligent, sentient beings … is this healthy – or sustainable?
Unsustainable

Unfortunately, MEAT and DAIRY have become OBSOLETE for global sustainability …

… like the typewriter,

    pony express,

    and kerosene lamps …

- Dr. Richard Oppenlander
A call to action:

Knowing is not enough – we must apply, willing is not enough – we must do.

- Johann Wolfgang von Goethe (1749-1832)
Solutions

Knowing – broad education (from comfortably unaware --> uncomfortably aware)

Doing – transition farms from animals to plants.

- *ALL* greenhouse gasses can be sequestered and world hunger can be reduced by changing livestock and grazing land to growing food for eating.


- Eco-tax for polluters, Health-tax for producers of unhealthy foods
Final thought …

We did not ask for the burden to save lives and the planet …

… but together – we have the responsibility.

Dr. David Katz, past president- ACLM True Health Coalition
Are we up for the challenge?
Summary

- Despite ongoing controversy as to what an optimal diet consists of …

- There is an ELEGANT CONSISTANCY in that a whole food plant-based diet is the only diet that has been shown to reverse heart disease, as well as diabetes and hypertension, is the healthiest for our nutrition, the least expensive, and the only eating pattern that is sustainable for global survival, as well as the kindest to the other creatures with which we share this planet.
Remember …

- Eat better …
- Exercise more …
- Stress less …
- Love more …
Resources:

- NutritionFacts.org
- True Health Initiative – a global consensus on lifestyle medicine
- American College of Lifestyle Medicine: lifestylemedicine.org
Movies:

- Forks Over Knives
- COWSPIRACY: The Sustainability Secret
- PlantPure Nation
- An Inconvenient Truth – Al Gore
Books:

- **How Not To Die** - Dr. Michael Greger
- **The Oh She Glows Cookbook** – Angela Liddon
- **The China Study** - Dr. T. Colin Campbell
- **Rhythm of Life**: Living Everyday With Passion and Purpose - Matthew Kelly
- **Drop Dead Healthy**: One Man’s Humble Quest for Bodily Perfection – A.J. Jacobs
Books: sustainability

- **The Blue Zones Solutions**: *Eating and Living Like the World’s Healthiest People* – Dan Buettner

- **The Food Revolution**: *How Your Diet Can Help Save Your Life and Our Planet* – John Robbins, foreword Dr. Dean Ornish

- **Comfortably Unaware**: what we choose to eat is killing us and our planet - Dr. Richard Oppenlander
Spangehl@shaw.ca
One Minute Medicine
Your Effortless Guide to Vibrant Health