


Medicine is NOT Health

Patana Teng-umnuay, MD PhD



"Natural forces within us
are the true *healers* of disease."

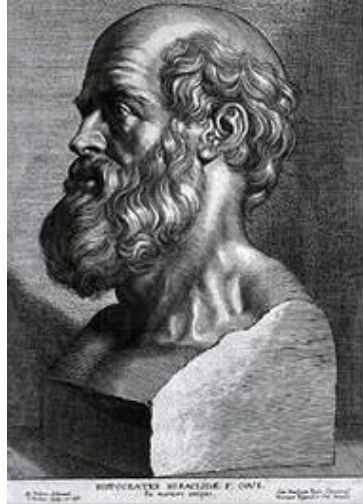
- Hippocrates

A man with dark hair and round glasses, wearing a light green suit jacket, a white shirt, and a patterned tie, is smiling and standing against a plain, light-colored background. He is positioned on the left side of the image.

**Medicine is NOT health
when doctors are trying
treat laboratory results
and treat diseases without
treating patients.**

Dr. Patana Teng-umnuay

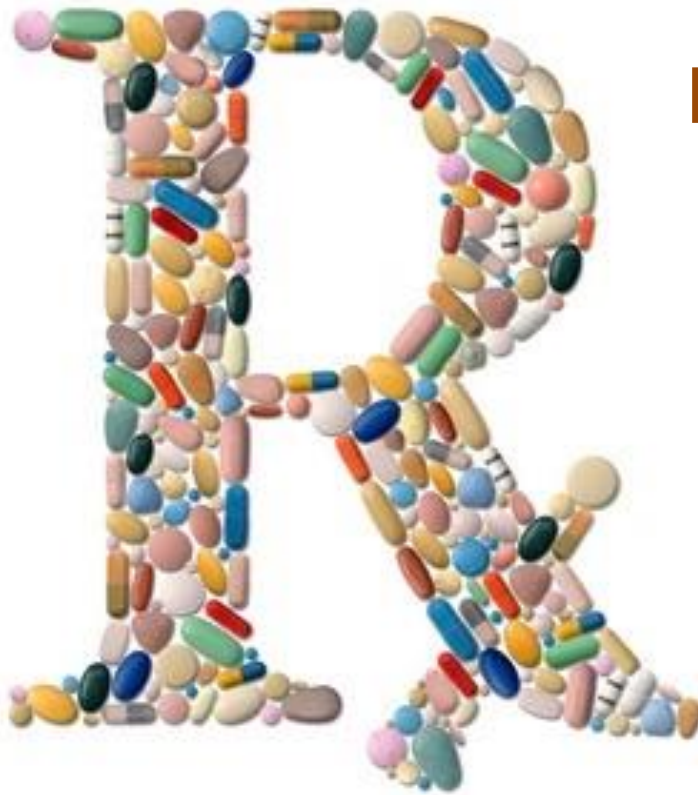
The Meaning of MEDICINE



“Let food be thy medicine
and medicine be thy food”
– Hippocrates

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1. The Science of Healing; the practice of the diagnosis, treatment and prevention of disease, and the promotion of health.
2. Medications, drugs, substances used to treat and cure diseases, and to promote health



Medicine is NOT HEALTH!



- We have made the medicine synonymous with health, when in fact, these are two separate entities.
- We live in the world of medicalization – drugs, drugs, and more drugs.

Who Wrote Medical Guidelines?

If they really work why we still have more patients?

- Most of the guidelines are defined and financed by the pharmaceutical companies and supported by doctors sponsored by pharmaceutical companies.
- If these guidelines are good why we do not see lower rates of diseases. On the other hands we have more people who are suffering from chronic illness.



Most guidelines are written by authorities without proof

- Most Doctors have been brainwashed by pharmaceutical companies without knowing and deny.
 - “I follow guidelines”
 - “It’s written in the textbooks”
 - “My professor told me”
- Most doctors who say that they follow guidelines barely read any guideline but use only Facebook, Line, and Google as their guidelines.
- Authorities who wrote guidelines may NOT have real patients experience but using studies and textbook.
- When studies are not available, these authorities will follow their own ego and “PLAY SAFE” to keep their status or stay popular.
- Authorities decision may be influenced by pharmaceutical companies as well.
- **Once written, these rules may not be changed.... for a long long time.**

What is wrong with medical practice today?

- Lack of lifestyle adjustment.
- Poor nutritional advice.
- No empathy or spiritual care.
- Most doctors still believe that medicines are safe but vitamins are toxic!
- Treat symptoms, treat laboratory testing results without treating the TRUE cause of illness or treating patients.
- Following guidelines that have been written under pharmaceutical influence without understanding patients.
- Unaware of drug side effects that can be fatal
- Side effects of certain medicine are treated with another medicine, creating more side effects.

Medical Side Effects

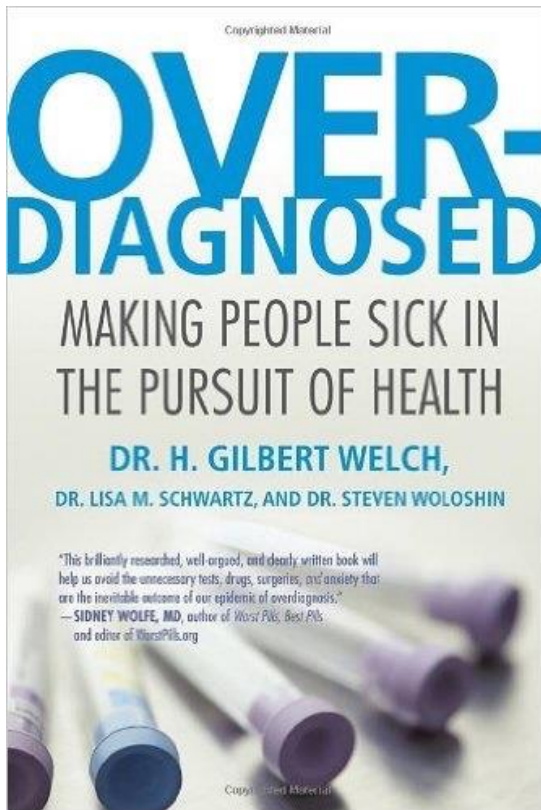
(more common than you know)

- **Statin** – cramps, muscle pain – can be resolved by dosage reduction and high dose coenzyme Q10 (200 mg/day), renal failure, diabetes, dementia, hepatitis.
- **Proton pump inhibitor** – kidney failure, dementia, osteoporosis, increase mortality
- **Sulfonylurea** – renal failure, beta cell apoptosis, arrhythmia, increase mortality
- **Diuretic** – hypokalemia, hyponatremia, hyperuricemia, and renal failure – stop or change to spironolactone (K-sparing diuretic)
- **Warfarin** – vascular calcification
- **Aspirin** – bleeding
- **Paracetamol** – hepatic failure, renal failure
- **Prednisolone** – diabetes, weight gain, adrenal fatigue, infection
- **Quinolone** – neurotoxicity, muscle and tendon damage

Treat Patients, not Lab Results, please!

- A women, 42 years old, non-smoking was diagnosed with high blood total cholesterol (230 mg%). The doctor didn't test for HDL-cholesterol. The patients didn't have diabetes nor hypertension. However, the doctor prescribed simvastatin 20 mg/day to reduce her blood cholesterol.
- One week later she developed calf pain and cramp and went back to see the same doctor who prescribed her an NSAID and a muscle relaxant.
- Six month later, she had black stool and want to see a gastroenterologist who performed a gastroscopic examination. She was diagnosed with gastritis and a proton pump inhibitor was prescribed.

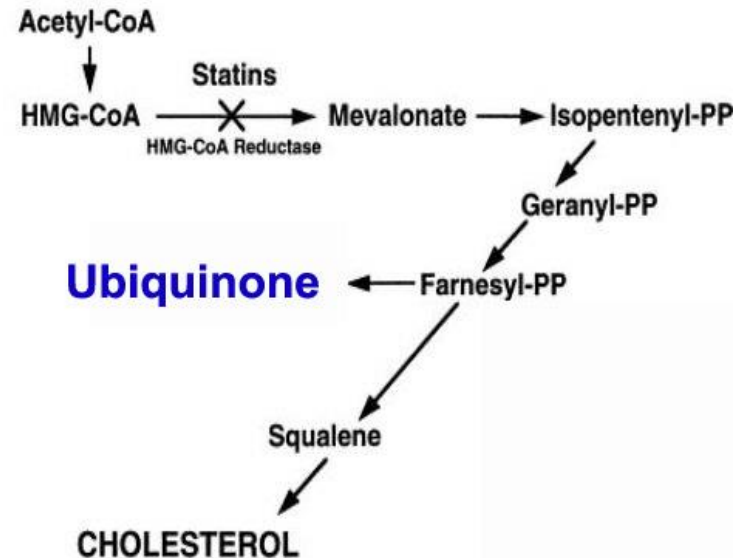
Unaware of Drug Side-Effects



- One year later, the patient was still taking simvastatin, omeprazole and NSAID had her medical check-up. The doctor informed that she had kidney failure and probably would need dialysis treatment in the near future.
- Is it justified to prescribe simvastatin, simply because high blood cholesterol?

Statin

(simvastatin, pravastatin,
atorvastatin, rosuvastatin)



- Statins inhibit HMG-CoA reductase which catalyzes the rate limiting step in cholesterol synthesis.
- Low density lipoprotein cholesterol (LDL) levels are lowered by inhibiting synthesis and up-regulating LDL receptors.
- **Statin inhibits ubiquinone (coenzyme Q-10) synthesis**
- Studies have demonstrated their ability to prevent coronary events and reduce mortality.
- **Those at highest risk benefit the most!**

Potential Side Effects of Statins

- Diabetes
- Elevated liver enzymes
- Myalgia and myositis
- Rhabdomyolysis and renal failure
- Coenzyme Q10 depletion
- Adrenal fatigue
- Loss of libido
- Menopause and Andropause
- Drug-drug interactions
 - Antifungal drugs
 - Niacin
 - Fibrates
 - Cyclosporine
 - Erythromycin and Clarithromycin
 - Diltiazem and Verapamil
 - Amiodarone
 - HIV protease inhibitors
 - Omeprazole

Statin Not Supported for Primary Prevention in Healthy Elders

BMJ 2018;362;k3359

- Researchers conducted a retrospective study on a Spanish cohort of nearly 50,000 people aged 75 and older who were initially free of CVD and not taking statins.
- During a median follow-up of some 8 years, about 15% started taking statins.
- In both old (75–84 years) and very old (85+) people without diabetes, taking statins was not associated with a lower risk for CVD or all-cause mortality.
- Among those with diabetes, statin use was associated with lower CVD risk (hazard ratio, 0.76) and all-cause mortality (0.84) in the 75–84 age group; the protective effect was not apparent among the very old.

Lack of an association or an inverse association between low-density- lipoprotein cholesterol and mortality in the elderly: a systematic review

Ravnskov U, et al. **BMJ Open** 2016;6:e010401. doi:10.1136/bmjopen-2015-010401

- The researchers identified 19 cohort studies including 30 cohorts with a total of 68,094 elderly people, where all-cause mortality was recorded in 28 cohorts and CV mortality in 9 cohorts.
- Inverse association between all- cause mortality and LDL-C was seen in 16 cohorts (in 14 with statistical significance) representing 92% of the number of participants, where this association was recorded. In the rest, no association was found.
- In two cohorts, CV mortality was highest in the lowest LDL-C quartile and with statistical significance; in seven cohorts, no association was found.
- **Since high LDL-C is inversely associated with mortality in most people over 60 years and elderly people with high LDL-C live as long or longer than those with low LDL-C**, This study provides reason to question the validity of the cholesterol hypothesis.

Low cholesterol linked to higher risk of bleeding stroke in women

Neurology May 07, 2019; 92 (19)

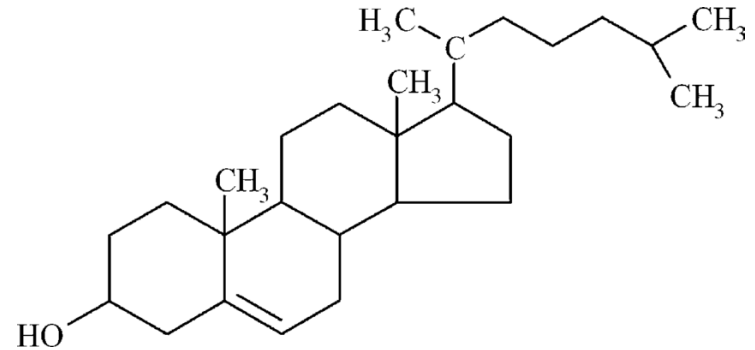
- A prospective cohort study among 27,937 women enrolled in the Women's Health Study with measured total cholesterol, low-density lipoprotein cholesterol (LDL-C), and high-density lipoprotein cholesterol (HDL-C), as well as triglycerides. Cox proportional hazards models to analyze associations between lipid categories and hemorrhagic stroke risk
- **Results** During a mean of 19.3 years of follow-up, 137 hemorrhagic strokes occurred. Compared to those with LDL-C levels 100–129.9 mg/dL, those with LDL-C levels <70 mg/dL had 2.17 times the risk (95% confidence interval [CI] 1.05, 4.48) of experiencing a hemorrhagic stroke.
- No significant increase in risk was seen for those with LDL-C levels 130–159.9 mg/dL. Women in the lowest quartile of triglycerides had a significantly increased risk of hemorrhagic stroke.
- No significant associations between total cholesterol or HDL-C levels and hemorrhagic stroke risk were observed.
- **Conclusion** LDL-C levels <70 mg/dL and low triglyceride levels were associated with increased risk of hemorrhagic stroke among women.

Drug Interactions

More common that you think

- A 62 year old man who has diabetes for 10 years. He has been taking metformin but a cardiologist told him that he needs to keep his LDL-cholesterol below 100 mg/dL and simvastatin 80 mg per day has been prescribed.
- During the past 10 years, he has receive balloon angioplasty 5 times.
- Two year ago, the doctor told him he needs to keep his triglyceride levels below 150 mg/dL and fenofibrate was prescribed.
- Since then he say his creatinine rising. The doctor told him “Cardio-Renal” Syndrome and he will need long term dialysis treatment soon.
- By the time he saw me, **his creatinine was 2.4 mg/dL**. He was asked to stop both statin and fenofibrate drugs for two weeks. He was also advice to become vegetarian and drink plenty of mineral or alkaline water. Fish oil was also prescribed.
- **Two weeks after, his creatinine level decreased to 1.4 mg/dL**. Rosuvastatin was restarted but only 10 mg three times a week.
- His creatinine was eventually got back to 1.2 mg/dL with LDL-C less than 100 mg/dL and triglyceride less than 150 mg/dL

Cholesterol



- **Essential** for life.
- Structure of plasma membrane.
- Precursor of vitamin D, bile acids, adrenal hormones, and sex hormones.
- **Stress, insomnia, and medical conditions such as hypothyroid can increase blood cholesterol**, but that doesn't mean that they need statin.
- Only animal food contains cholesterol.
- **Eating diet with high cholesterol content has very little impact on the cholesterol levels in the blood.**
- Trans fat and long chain saturated fat (but not medium chain triglycerides) increase blood cholesterol

ATP III LDL-C Goals

Risk Category	LDL-C (mg/dL)		
	Goal	Initiation Level for TLC	Consideration Level for Drug Therapy
High risk: CHD or CHD risk equivalents (10-yr risk >20%)	<100 (optional: <70)	≥100	≥100 (<100: consider drug options)
Moderately high risk: 2+ risk factors (10-yr risk 10–20%)	<130 (optional: <100)	≥130	≥130 (100–129: consider drug options)
Moderate risk: 2+ risk factors (10-yr risk <10%)	<130	≥130	≥160
Lower risk: 0–1 risk factor	<160	≥160	≥190 (160–189: LDL-C-lowering drug optional)

An important question cardiologists never asked!



- Why cholesterol lowering agents besides statin never show benefit in reduction risk of cardiovascular disease?
- Only high potency statins (atorvastatin and rosuvastatin) have shown to have benefits for cardiovascular outcomes.
- Would it mean statin benefit come from 'pleiotropic effects' but not 'cholesterol lowering effect'?

Pleiotropic Effects of Statin

- Up-regulate eNOS
- Inhibit vascular smooth muscle cell proliferation.
- Plaque stability
- Stem cell enhancement
- Lower hs-CRP
- Anti-inflammation

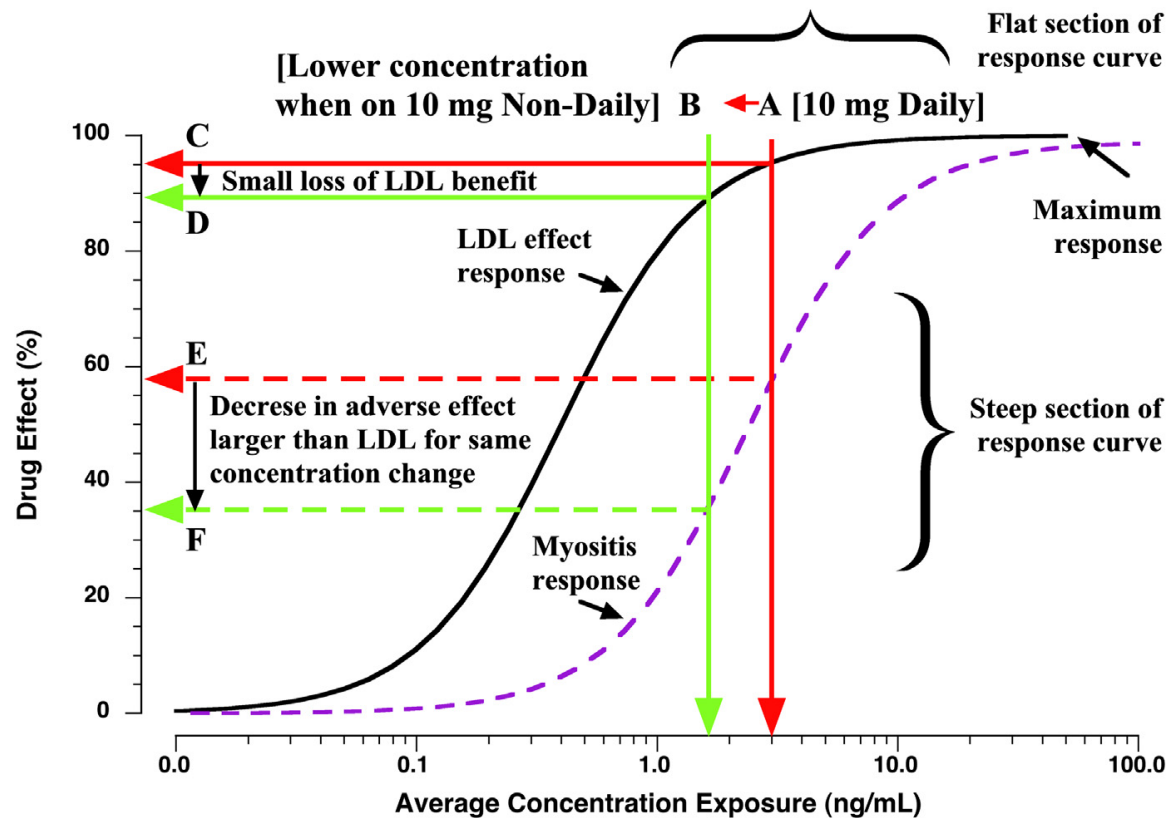
STATIN

- **Low Potency Statin (pravastatin-mevalotin, red yeast rice)**
 - Less side effects but efficacy for cardiovascular protection is uncertain.
 - Use for the purpose of cholesterol control only (psychological effect)
- **Intermediate Potency Statin (simvastatin-Zocor)**
 - Generic brands are the most popular; however, the efficacy is unproven.
 - Side effects may be higher than benefits.
- **Lipid soluble, high potency (atorvastatin-Lipitor, rosuvastatin-Crestor)**
 - High potency means higher risk of complications
 - Anti-inflammatory effects help preventing cardiovascular disease
 - To avoid side effects, non daily dosing is recommended.

Nondaily Statin Dosing

Mechanisms of a potentially important approach to dealing with statin intolerance

Canadian Journal of Cardiology (2013) 29;895-898



Periodic Rosuvastatin or Atorvastatin Dosing Arrays (PRADA)

Drugs R D (2014) 14:221–225

- This retrospective study reviewed the medical records of patients with hyperlipidemia during an 8-year period in a private internal medicine practice. Periodic dosing was negotiated following several patients' refusal of statin therapy because of muscle aches or cost.
- Treatment was initiated by dispensing **rosuvastatin** or **atorvastatin** in a stepwise patient-directed approach (from two times/week to three times/week to every other day, up to five times/week).
- Chart review identified 46 patients who had been treated. Two patients with persistent myalgia terminated treatment before 12 weeks. Among the remaining 44 patients, 20 received doses of rosuvastatin from 15 to 100 mg per week, and 24 received atorvastatin from 20 to 140 mg per week.
- There was a significant decrease from pre-treatment in the mean TC/HDL-C ratio of 1.72 and mean LDL-C of 43.3 mg/dL.
- An independent samples t-test showed a non-significant reduction of the mean TC/HDL-C ratio and LDL-C with rosuvastatin versus atorvastatin.

Should we prescribe statin?

When, Why, and How?

- Statin is used to prevent complications of **ATHEROSCLEROSIS**
- Recommended in patients with **higher risk** of having myocardial ischemia, stroke.
- **LDL number should not be the main factor in guiding treatment to prevent heart attack and stroke.**
- Risk of myopathy, kidney failure, hepatitis, diabetes, cerebral hemorrhage, and dementia.
- Lowering coenzyme Q10 levels
- Don't stop statin in patients who previously had myocardial ischemia, cerebral ischemia, underwent coronary bypass surgery or having balloon angioplasty.
- **In my practice, I only prescribe statins to high risk patients.**
- **Statin that I used is rosuvastatin 10 mg, but only 2-3 times a week!.**

To determine if the patients need statin, we need to know how to assess cardiovascular risk factors

- History of stroke or ischemic heart disease
- Life Style (Diet, Smoking habits, Stress)
- Lipid profile (LDL-C/HDL-C > 3)
- Metabolic Syndrome Markers (HbA1c, uric acid, SGPT)
- Blood Pressure
- Inflammatory Marker (hsCRP, ESR, EPA/AA ratio)
- Homocysteine
- Calcium Score (Coronary Artery Calcification)

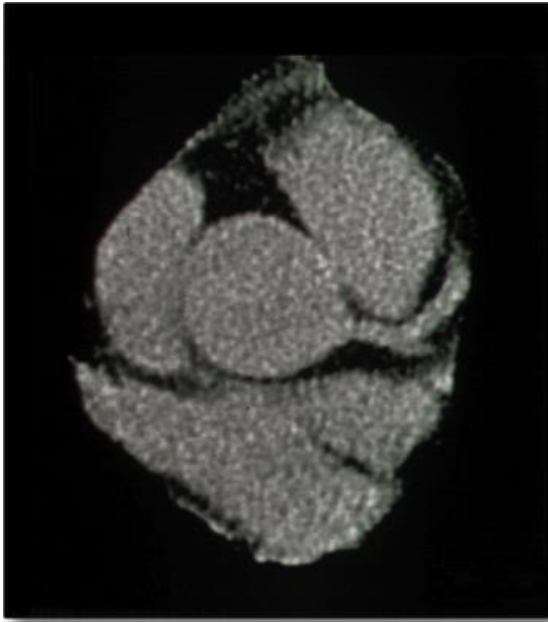
Coronary Artery Calcium Scoring



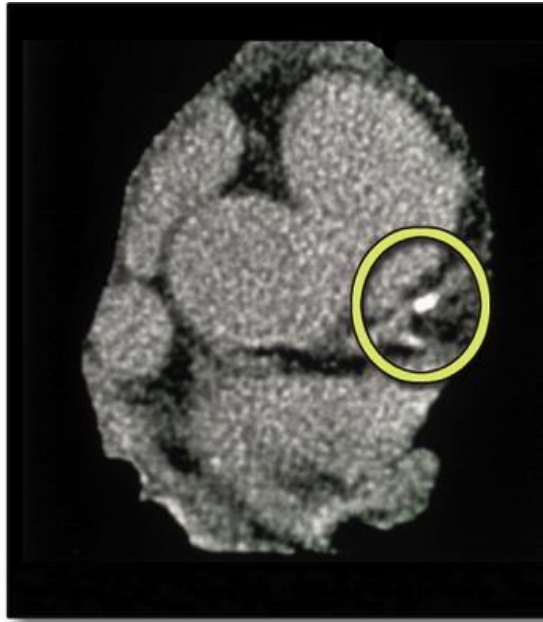
- Calcification is part of the inflammation and repair processes that are ubiquitous in atherosclerotic lesions.
- Calcification occurs early in atherosclerosis, but we are not able to detect it with imaging until it increases in quantity, typically **after the age of 40** in men and women.
- The coronary artery calcium score is a measurement of the **amount of calcium in the walls of the arteries** that supply your heart muscle, using a special computed tomography **(CT) scan** of your heart.

Coronary Calcium Score: Agatston Method

JACC 1990;15:827-832



Normal



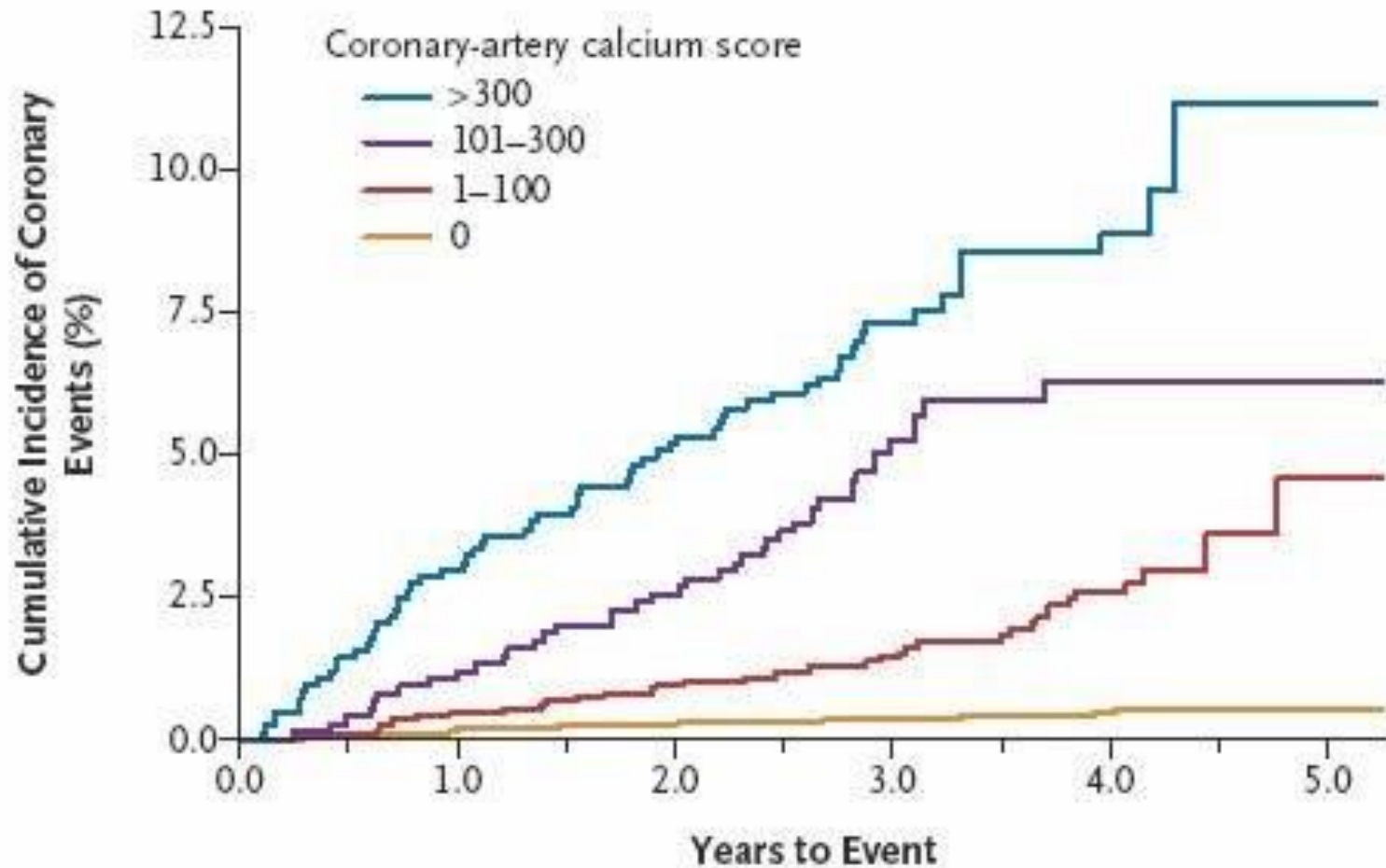
**Moderate
Calcification**



**Severe
Calcification**

Coronary Calcium and Coronary Events (MESA Study)

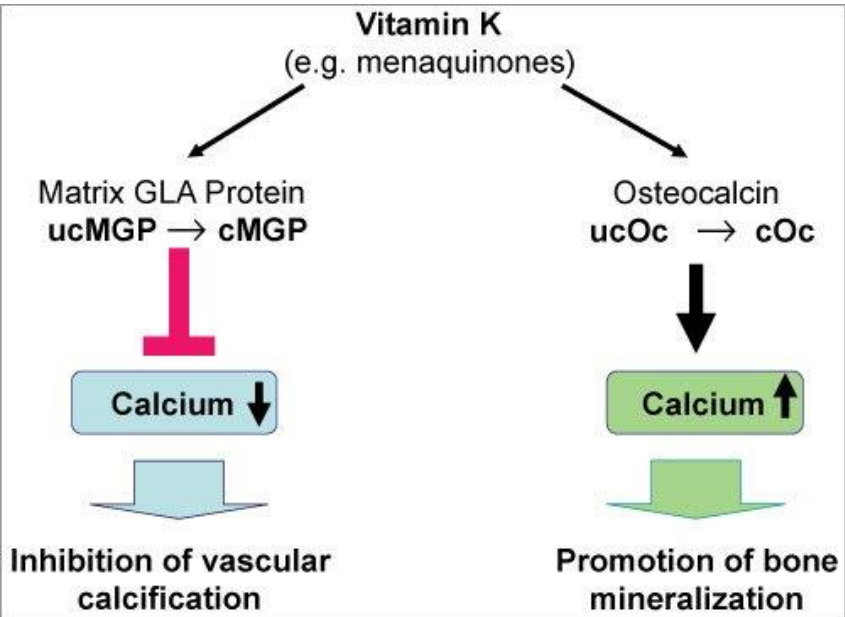
New Engl J Med 2008; 358: 1336 -1345.



Magnesium Counteracts Vascular Calcification

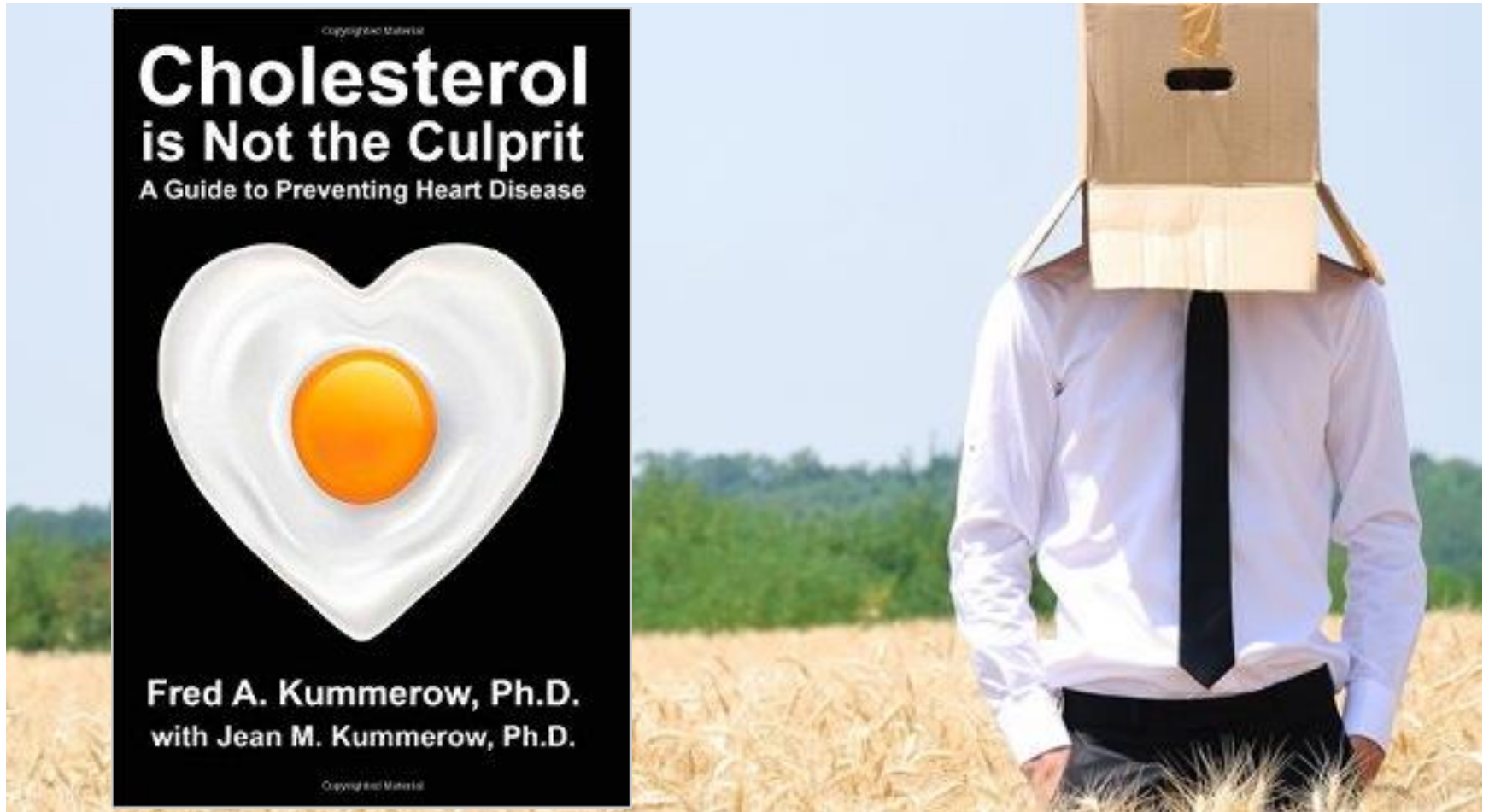
- Over the last decade, an increasing number of studies report a close relationship between serum magnesium concentration and cardiovascular disease risk in the general population.
- In end-stage renal disease, hypomagnesemia was identified as a strong predictor for cardiovascular disease in these patients.
- A substantial body of in vitro and in vivo studies has identified a protective role for magnesium in vascular calcification.
- Magnesium prevents vascular calcification *in vitro* by inhibition of hydroxyapatite crystal formation (Braake, A.D., *et al. Sci Rep* 2018;8:2069)
- Randomized trial showed that magnesium oxide appears to be effective in slowing coronary artery calcification progression in pre-dialysis chronic kidney disease (J Am Soc Nephrol 2019;30(6):1073-1085).

The chemical structure shows a naphthoquinone core (a benzene ring fused to a six-membered ring with two carbonyl groups). The naphthoquinone is substituted with a methyl group at the 2-position and a long, branched polyene chain at the 4-position. The polyene chain consists of several conjugated double bonds, with methyl groups branching off at various points, giving it a complex, zig-zag appearance.



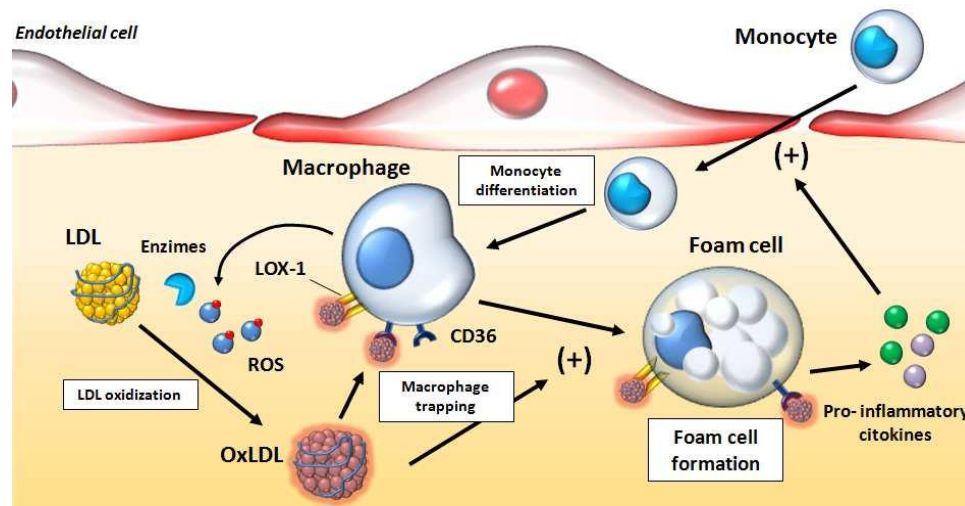
- Vitamin K₂ the main storage form in animals, has several subtypes, which differ in isoprenoid chain length. These vitamin K₂ homologues are called **menaquinones**, and are characterized by the number of isoprenoid residues in their side chains.

**To prevent atherosclerosis
we have to think outside the box.**



Beyond cholesterol. Modifications of low-density lipoprotein that increase its atherogenicity: the role of Oxidized LDL (OxLDL)

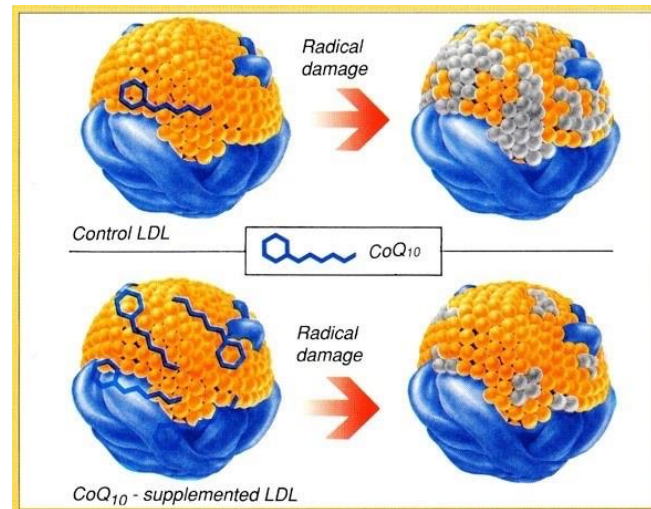
N Engl J Med 1989 Apr 6;320(14):915-24.



- Many lines of evidence suggest that oxidized low-density lipoprotein (LDL) is implicated in the pathogenesis of atherosclerotic vascular diseases.
- The LDL oxidation is the first event in the foam cell formations and the LDL lipids in human arterial lesions are extensively oxidized (*J Atheroscler Thromb* 20:878-892; 2013).

Coenzyme Q10 protects against LDL peroxidation

Proc Natl Acad Sci USA 1991;88:1646-1650, Acta Med Iran 2013;51:12-18

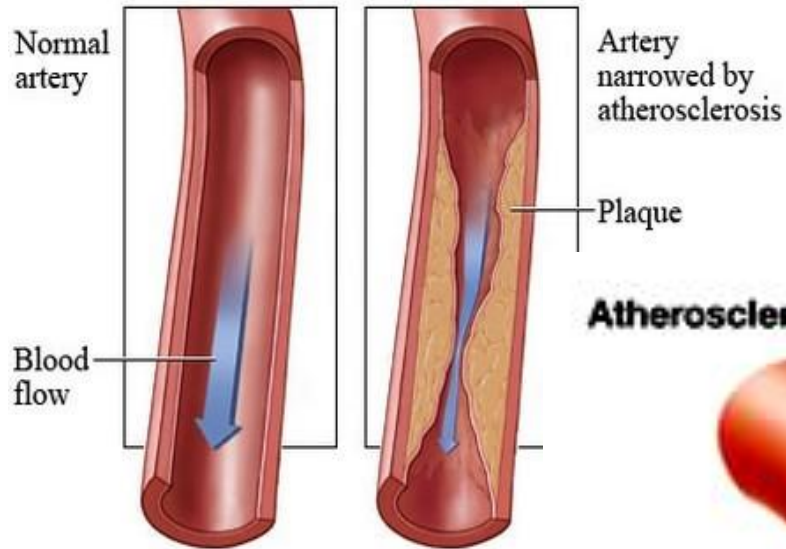


- In vitro studies indicate that coenzyme Q(10) is a potent antioxidant to protect LDL against oxidation in vitro and may be a good alternative to reduce the risk of atherosclerosis and coronary heart disease and other free radical associated health problems

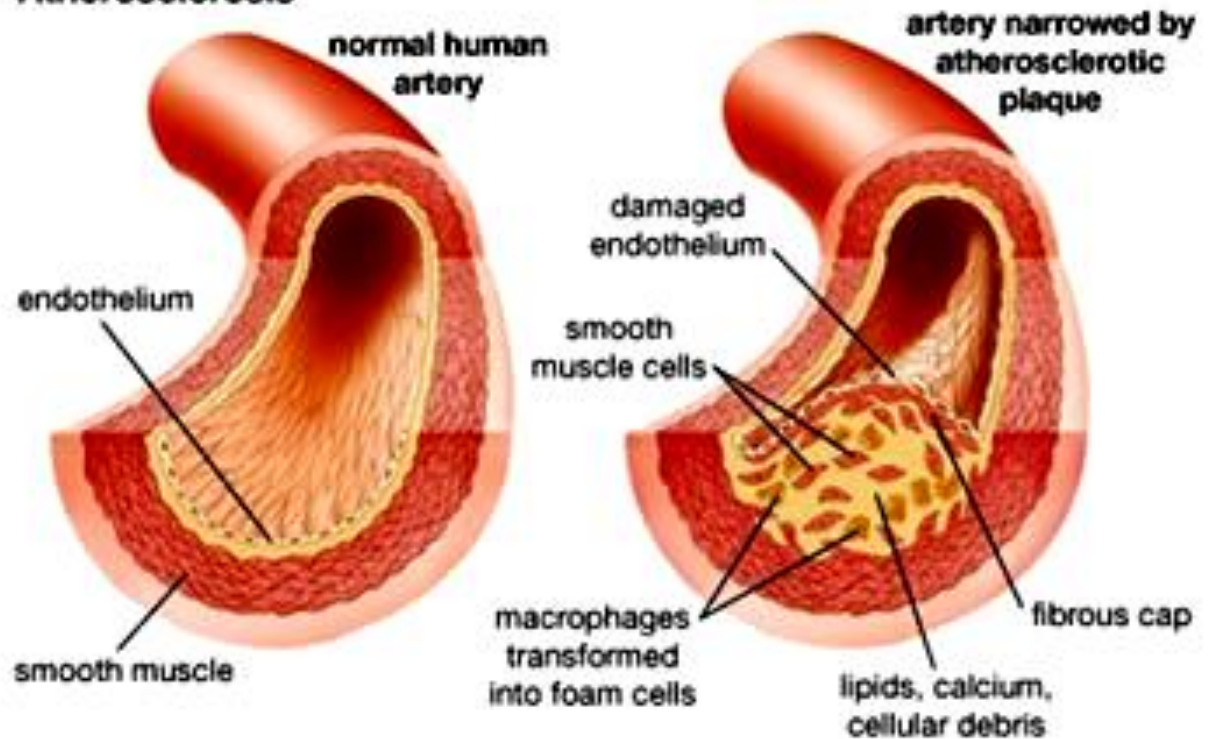
Coenzyme Q-10 and Congestive Heart Failure

- A number of intervention trials that administered supplemental coenzyme Q10 (100-200 mg/d of coenzyme Q10 for one to three months) to congestive heart failure patients, in conjunction with conventional medical therapy, have demonstrated improvements in some cardiac functions, reduced morbidity and mortality.
- Belardinelli R, et al. Coenzyme Q10 and exercise training in chronic heart failure. Eur Heart J. 2006.
- Mortensen SA et al. The effect of coenzyme Q10 on morbidity and mortality in chronic heart failure. JACC Heart Failure 2014.
- Alehagen U. et al. Reduced cardiovascular mortality 10 years after supplementation with selenium and coenzyme Q10 for four years. PLoS One 2015.
- Alehagen U. et al. Supplementation with selenium and coenzyme Q10 reduces cardiovascular mortality in elderly with low selenium status. PLoS One 2016.

Atherosclerosis is a chronic inflammation of the artery that leads to vascular thrombosis



Atherosclerosis



According to a reanalysis of 45-year-old data, swapping out saturated fats with omega-6 fatty acid doesn't seem to improve clinical outcomes and may even be tied to worse survival among seniors.

BMJ 2016;353:i1246

- In the 1968–73 Minnesota Coronary Experiment, a cohort of adults in mental institutions or a nursing home were randomized to one of two diets: one that replaced saturated fats with vegetable oil rich in omega-6 linoleic acid or a control diet high in saturated fat. Researchers have now reanalyzed the data, including unpublished material, of 2400 participants who followed the diets for at least 1 year.
- The intervention group had a greater reduction in serum cholesterol than the control group. However, this didn't translate to a lower mortality rate. Among seniors, mortality risk seemed higher with the intervention diet, but there were not enough data to confirm this finding.

Three types of unsaturated fat: Omega 3, Omega 6, and Omega 9

Omega-6 fatty acids	Food sources
LA, linoleic acid 18:2 ω 6	Vegetable oils (corn, soybean), animal
AA, arachidonic acid 20:4 ω 6	Animal sources (meat, milk)
Omega-3 fatty acids	Food sources
ALA, alpha-linolenic acid 18:3 ω 3	Flaxseed, canola oil, walnuts
EPA, eicosapentaenoic acid 20:5 ω 3	Marine sources, fish oils
DHA, docosahexaenoic acid 22:6 ω 3	Marine sources, fish oils, egg, dairy products
Omega-9 fatty acids	Food sources
Oleic acid 18:1 ω 9	Olive oil, rice bran oil

n-3 Polyunsaturated fatty acid (PUFA) provide benefits in mortality and admission to hospital in patients with heart failure
(GISSI-HF Trial: Lancet 2008)

- 6975 patients with clinical evidence of heart failure of any cause were randomly assigned to receive one capsule per day of n-3 PUFA (850-882 mg of EPA and DHA) or to placebo.
- The median duration of follow-up was 3.9 years.
- The study showed that long-term administration of n-3 PUFA was effective in reducing both all-cause mortality and admission to hospital for cardiovascular reasons without adverse effects.



Fish Oil

EPA = anti-inflammatory

DHA = structure of brain and retina



Label	Size	DHA	EPA
Fish oil Mini	500 mg	120 mg	180 mg
Regular Fish Oil	1000 mg	120 mg	180 mg
Omega Daily	1000 mg	266.6 mg	400 mg
Omega Cardi	1000 mg	210 mg	420 mg
Omega DHA	1000 mg	500 mg	100 mg
Omacor	1000 mg	375 mg	465 mg

Olive Oil
The heart of Mediterranean diet
The Best Source of Omega-9



OLIVE OIL: FAT COMPOSITION

Saturated Fat

Palmitic acid 7.5% -20%
Stearic acid 0.5%-5%

Monounsaturated Fat

Oleic acid 55%-83%

Polyunsaturated Fat

Linoleic acid 3.5%-21%
Linolenic acid <1.5%

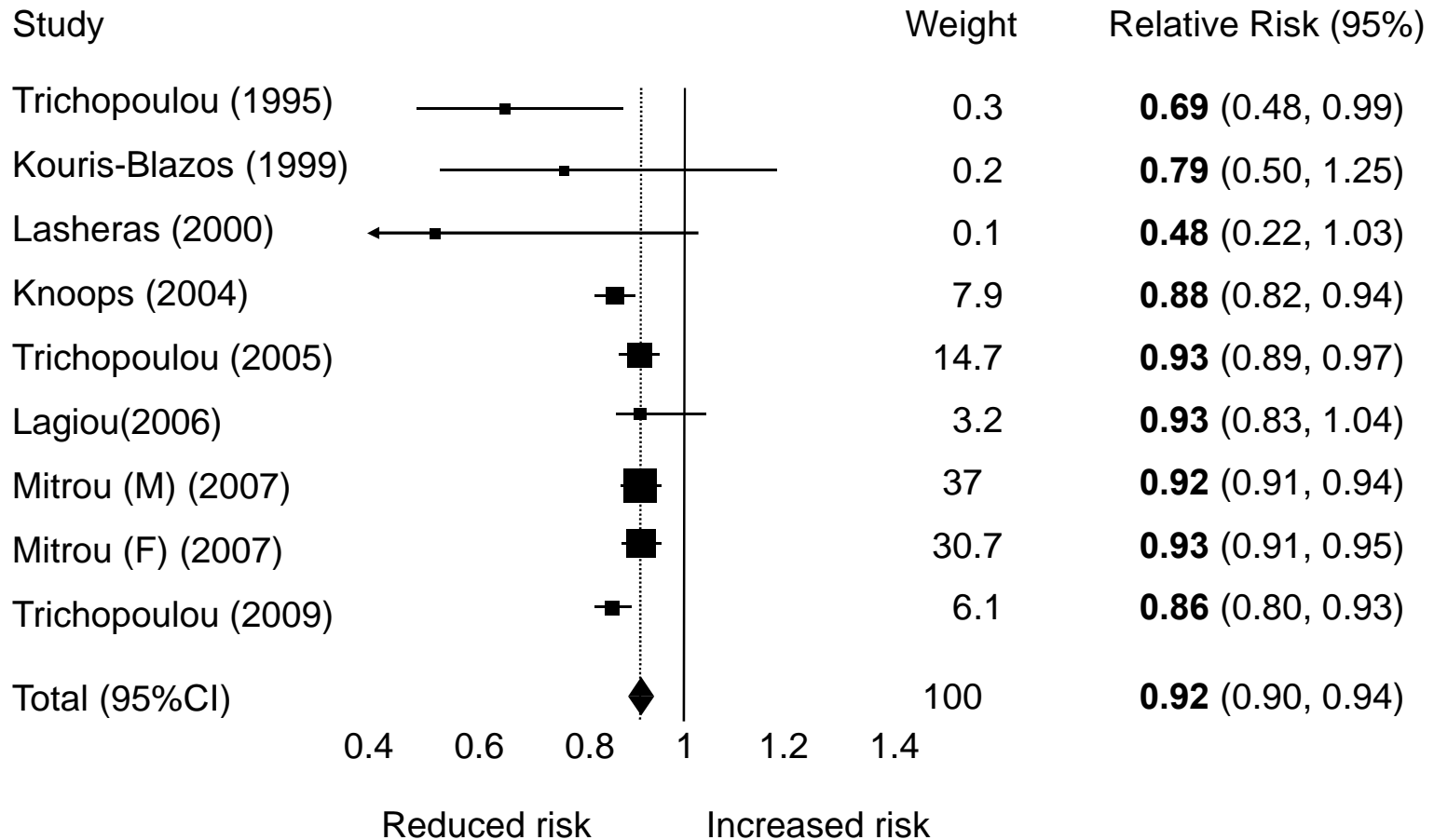
Mediterranean Diet Tested in a Randomized Trial

Estruch R et al. N Engl J Med 2013 Feb 25.

- About 7500 people (age range, 55–80) without known cardiovascular disease but with either diabetes or ≥ 3 or nondiabetes cardiac risk factors were randomized to one of three diets:
 - Mediterranean diet supplemented with extra-virgin olive oil (at least 4 tablespoons daily)
 - Mediterranean diet supplemented with a daily 30-g serving of walnuts, almonds, and hazelnuts
 - Low-fat control diet
- During average follow-up of 5 years, the primary composite outcome (myocardial infarction, stroke, or cardiovascular-related death) occurred significantly less often in the two Mediterranean-diet groups than in the control group. Among the three components of the primary endpoint, only stroke was significantly lower in the intervention groups. The two Mediterranean diets did not lower all-cause mortality significantly.

Mediterranean Diets Reduce Risk of All Caused Mortality in NCD

Sofi et al. Am J Clin Nutr 2010;92;1189-1196





Food and Lifestyles are Our Best Medicine

“Eat less, live longer”

“Sugar is toxin”

Grains over Rice

Vegetable and fruit in moderation.

Avoid fried food, cut down animal fat including milk.

Choose olive oil and rice bran oil.

Drink more water, filtered water not tap.

Drink more mineral and alkaline water.

Exercise your muscle, back and leg exercises are best.

Take supplements (vitamin D, probiotics)

Try to be positive

Stress-related disorders are associated with excess risk for cardiovascular diseases.

Song H et al. *BMJ* 2019 Apr 10

- In this study from Sweden, researchers used national registries to identify 140,000 patients with diagnosed stress-related disorders (e.g., post-traumatic stress disorder, acute stress reaction, adjustment disorder) from 1987 through 2013. The investigators also identified a sibling cohort (170,000 full siblings without stress-related diagnoses) and a population cohort (10 randomly selected unexposed people for each exposed patient, matched by birth year and sex). Median follow-up times were ≈ 7 years in each group; results were adjusted for multiple variables.
- Patients with stress-related disorders had a 64% higher risk for any CVD during the first year following diagnosis compared with unaffected siblings. Stress patients had excess relative risks for ischemic heart disease, cerebrovascular disease, hypertension, and heart failure.
- After 1 year, relative risks generally were lower (i.e., 29% excess risk for any CVD).
- Similar results were obtained for comparisons with matched controls and by specific stress-related disorder.

Stress is the cause of all diseases



- Low immunity
- Gastric ulcers
- Fibromyalgia
- Hyperglycemia
- Weight gain
- Hypertension
- Cardiovascular disease
- Depression
- Sleep dysfunction
- Aging

Precaution but not panic.



We have more chance to die from stress related illness than influenza.

Singapore Student Assaulted in Racist Corona Virus Attack (CNN.Com)



- Jonathan Mok wrote in a public post on Facebook Monday, detailing how he was attacked by a group of people on Oxford Street, a busy shopping area in the center of the British capital, at about 9.15 p.m. local time (4.15 p.m. ET) on February 24.
- "The guy who tried to kick me then said, 'I don't want your coronavirus in my country', before swinging another sucker punch at me, which resulted in my face exploding with blood (from my nose)," wrote Mok.
- Mok said doctors told him the assailants had left him with "a few fractures" in his face and he might need reconstructive surgery.

The 2019–2020 influenza vaccine effectiveness is only 45%

MMWR Report February 21, 2020 / 69(7);177–182

- Researchers calculated vaccine effectiveness by studying roughly 4100 patients aged 6 months and older with an acute respiratory illness during October to January. Of these, 26% tested positive for influenza.
- Among those who tested positive, 37% had received the seasonal flu vaccine, compared with 55% of those who tested negative, an adjusted vaccine effectiveness of 45%. Vaccine effectiveness was higher — 50% — against influenza B/Victoria.
- Overall effectiveness was higher among children and adolescents, around 55%.

Cochrane Database Review, has issued several reports between 2006 and 2012

- Influenza vaccines have **a modest effect** in reducing influenza symptoms and working days lost. There is no evidence that they affect complications, such as pneumonia, or transmission.
- Inactivated vaccines caused local harms and an estimated **1.6 additional cases of Guillain-Barré Syndrome per million vaccinations.**
- A large-scale, systematic review [14] of 51 studies, published in the Cochrane Database of Systematic Reviews in 2006, found **no evidence that the flu vaccine is any more effective than a placebo in children under two.** The studies involved 260,000 children, age 6 to 23 months.
- The available evidence is of poor quality and provides **no guidance regarding the safety, efficacy or effectiveness of influenza vaccines for people aged 65 years or older.**

Impact of Repeated Vaccination on Vaccine Effectiveness Against Influenza A(H3N2) and B

Clinical Infectious Diseases, 2014;59(10):1375–85

- Patients presenting with acute respiratory illness were prospectively enrolled during the 2004–2005 through 2012–2013 influenza seasons. Respiratory swabs were tested for influenza and vaccination dates obtained from a validated registry. Vaccination status was determined for the current, previous, and prior 5 seasons. Vaccine effectiveness (VE) was calculated for participants aged ≥ 9 years using logistic regression models with an interaction term for vaccination history.
- There were 7315 enrollments; 1056 (14%) and 650 (9%) were positive for influenza A (H3N2) and B, respectively.
- Vaccination during current only, previous only, or both seasons yielded similar protection against H3N2 and B.
- In the analysis using 5 years of historical vaccination data, vaccine effectiveness against influenza H3N2 and influenza B was significantly higher among vaccinated individuals with no prior vaccination history compared with vaccinated individuals with a frequent vaccination history.

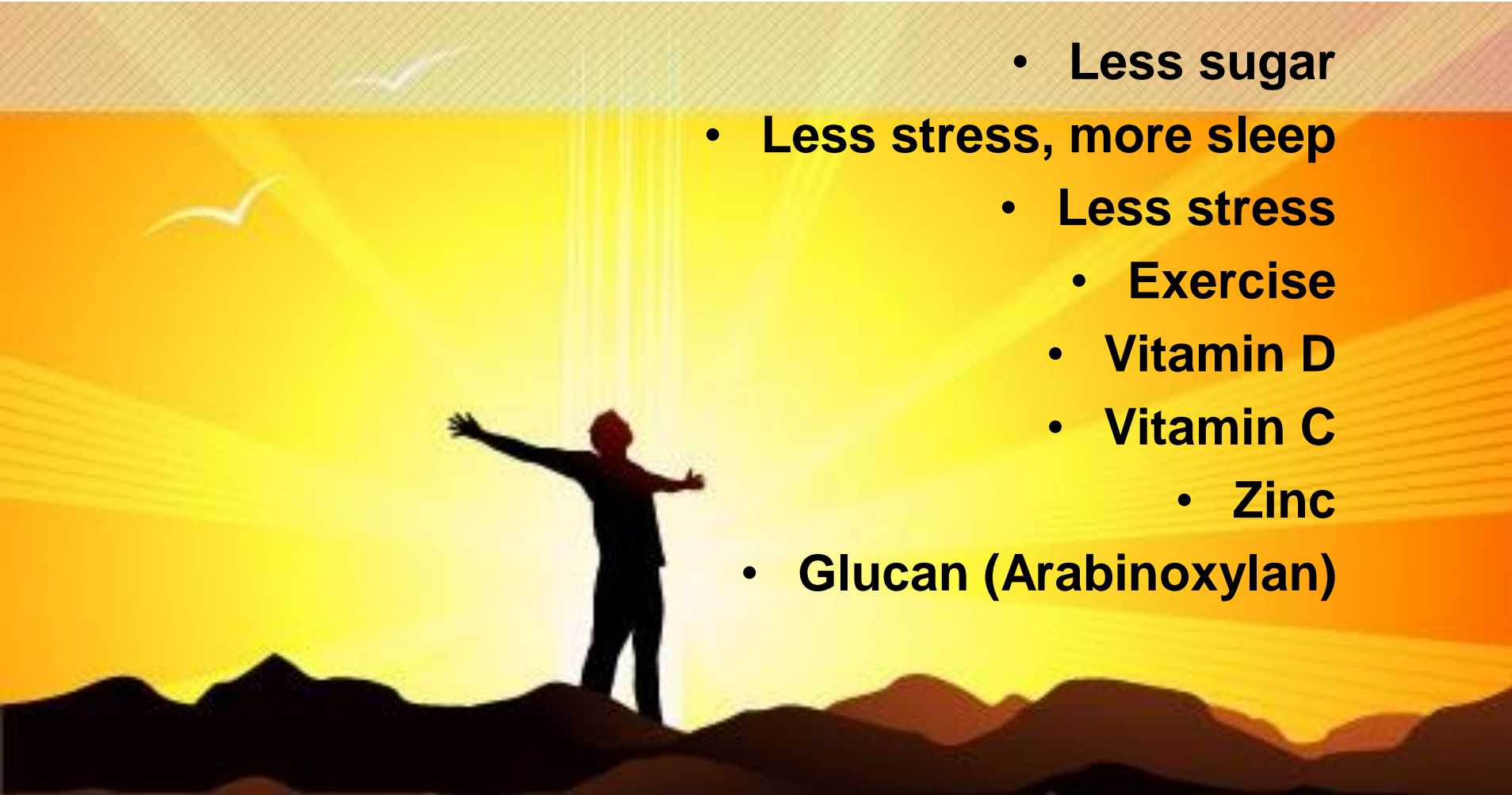
Association between the 2008–09 Seasonal Influenza Vaccine and Pandemic H1N1 Illness

PLoS Med 2010 Apr 6;7(4)

- Several epidemiologic investigations were conducted included: (1) test-negative case-control design based on Canada's sentinel vaccine effectiveness monitoring system in British Columbia, Alberta, Ontario, and Quebec; (2) conventional case-control design using population controls in Quebec; (3) test-negative case-control design in Ontario; and (4) prospective household transmission (cohort) study in Quebec.
- Based on the sentinel study of 672 cases and 857 controls, 2008–09 TIV was associated with statistically **significant protection against seasonal influenza** (odds ratio 0.44, 95% CI 0.33–0.59).
- In contrast, estimates from the sentinel and three other observational studies, involving a total of 1,226 laboratory-confirmed pH1N1 cases and 1,505 controls, indicated that **prior receipt of 2008–09 TIV was associated with increased risk of pH1N1 illness** during the spring–summer 2009, with estimated risk or odds ratios ranging from 1.4 to 2.5.

Strong immunity is the key to prevent infection

- Less sugar
- Less stress, more sleep
 - Less stress
 - Exercise
 - Vitamin D
 - Vitamin C
 - Zinc
 - Glucan (Arabinoxylan)



Serum 25(OH)D levels are inversely associated with recent upper respiratory tract infection.

Arch Intern Med. 2009;169(4):384-390.

- The researchers examined the association between 25(OH)D level and recent URTI in 18,883 participants 12 years and older. The analysis adjusted for demographics and clinical factors (season, body mass index, smoking history, asthma, and chronic obstructive pulmonary disease).
- The median serum 25(OH)D level was 29 ng/mL (range, 21-37 ng/mL), and 19% of participants reported a recent URTI.
- **Recent URTI was reported by 24% of participants with 25(OH)D levels less than 10 ng/mL, by 20% with levels of 10 to less than 30 ng/mL, and by 17% with levels of 30 ng/mL or more ($P < .001$).**
- Even after adjusting for demographic and clinical characteristics, lower 25(OH)D levels were independently associated with recent URTI

Vitamin D3 Supplementation may reduce incidence and severity of influenza

Am J Clin Nutr 2010;91:1255–60.

- From December 2008 through March 2009, Japanese investigators conducted a randomized, double-blind, placebo-controlled trial comparing vitamin D3 supplements (1200 IU/d) with placebo in schoolchildren. The primary outcome was the incidence of influenza A, diagnosed with influenza antigen testing with a nasopharyngeal swab specimen.
Results: Influenza A occurred in 18 of 167 (10.8%) children in the vitamin D3 group compared with 31 of 167 (18.6%) children in the placebo group [relative risk (RR), 0.58; 95% CI: 0.34, 0.99; P = 0.04].
- In children with a previous diagnosis of asthma, asthma attacks as a secondary outcome occurred in 2 children receiving vitamin D3 compared with 12 children receiving placebo (RR: 0.17; 95% CI: 0.04, 0.73; P = 0.006).

What can go wrong, when patients with upper respiratory tract infection (URI) go to see a doctor.

- Some doctors don't have the concept that our bodies can heal ourselves, give them a REST!
- Some doctors will unnecessarily prescribe steroid.
- Some patients believe that injection drug is better than oral, without knowing that doctors only inject paracetamol or NSAIDs.
- Overuse of paracetamol and NSAIDs.
- Overuse of antibiotics

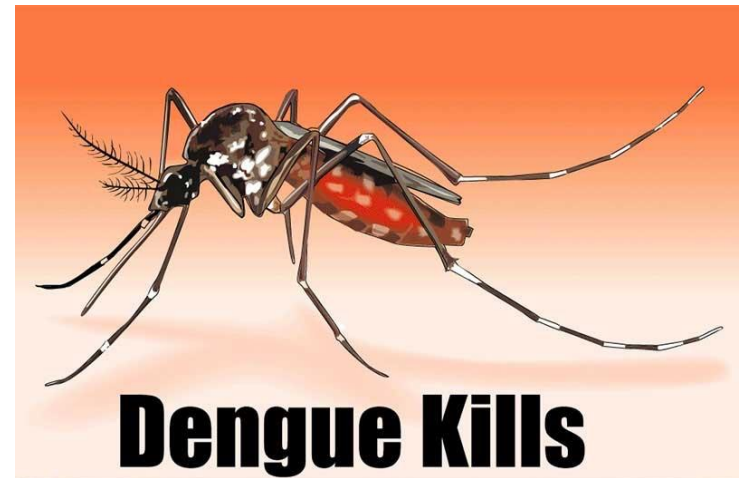


A Fever is Good for You

- A fever stimulates your immune system into producing more white blood cells, antibodies, and a protein called interferon, all of which work to protect your body against harmful microorganisms.
- By raising your body's temperature a few degrees, a fever makes it harder for invading bacteria and viruses to survive. The higher your core body temperature is, the harder it is for harmful microorganisms to grow in your body.



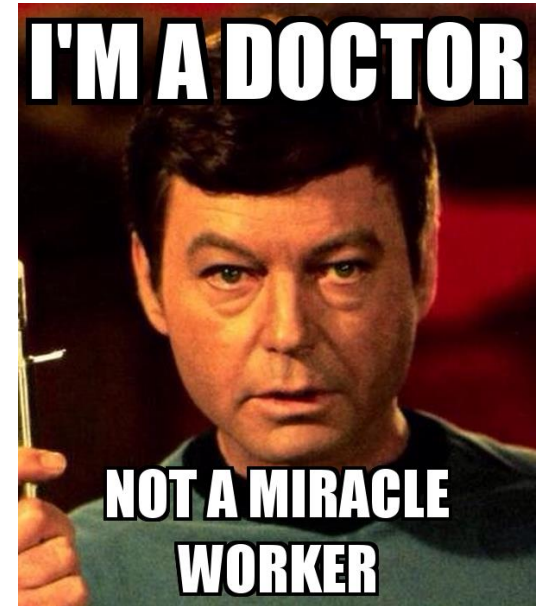
What will happen if most case of hepatic failure in dengue fever didn't come from viral infection?



- Characteristics of dengue fever is high body temperature for 5 days. During that time, most doctors will prescribe paracetamol around the clock since they believe that paracetamol is safe.
- Paracetamol has been written in a treatment guideline for dengue fever.
- No one thinks that patients with dengue fever already have hepatitis, so giving them liver toxic drug such as paracetamol even in a small amount can be seriously harmful.

Liver Failure: from virus or drug?

- A 16 years old patient was admitted into ICU in comatose condition. He was diagnosed with dengue fever. His liver enzyme SGPT was 4200 mg/dL and his parents were informed that he may not recover.
- The patients were treated with high dose N-acetyl cysteine. Next day his liver enzyme SGPT was 400+ mg/dL, he gained his consciousness.
- Four days later his liver enzymes levels were within normal range and he was discharged.





I don't want to be like those doctors, who would rather keep their ego and pride, even when their patients have died.

Dr. Patana Teng-umnuay



Meet Our Speakers
Cocktail Party
Thursday March 12, at 6.00 pm
Kandhavas Place on the forth
floor

Sponsor by Primal Health