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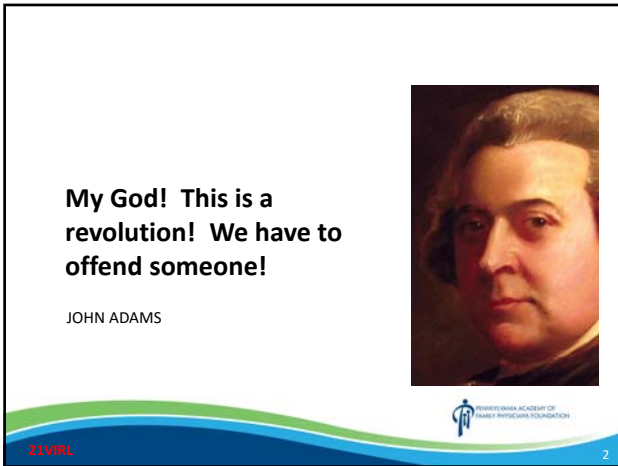
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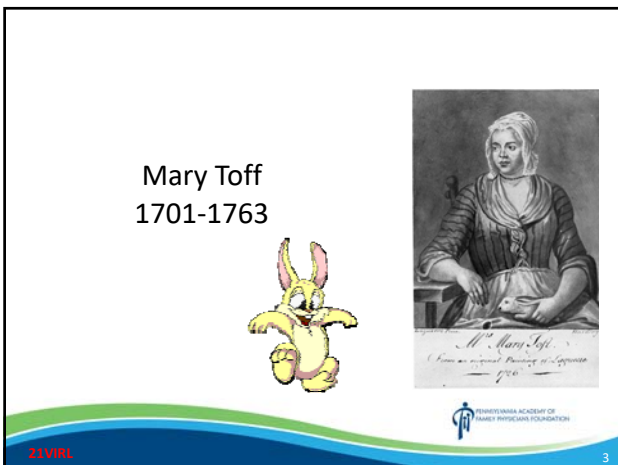
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### Mary Toft

- Miscarried after seeing a rabbit, Next month gave birth to 8 baby rabbits, by a local surgeon, Howard
- King George I, sent own, personal surgeon, St. Andre.
  - Felt belly and confirmed rabbits were be formed in right fallopian tube
  - Helped deliver the 15<sup>th</sup> baby rabbit
- British stopped eating rabbit stew
- Another surgeon dissected a rabbit, found droppings with corn and hay



21VHRU

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“To argue with a person who has renounced the use of reason is like administering medicine to the dead.”

Thomas Paine



21VHRU

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**ANYTHING BUT A COLD**

21VHRU

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## Antibiotics for Bronchitis

- 90% are viral, 10%-30% multiple viruses
- Viral shedding is decreasing at presentation
- 2/3 are treated with antibiotics
- 55% of patients believe they help for URI's
- 25% use left over antibiotics

ROSS H. ALBERT, MD, PhD, Am Fam Physician. 2010 Dec 15;82(11):1345-1350.



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## Do Antibiotics Prevent Pneumonia?

- 814,000 pts, 1.5 million visits
- 65% Dx with bronchitis
- Significant minor adverse side effects in treated group
- Less hospitalizations for pneumonia in antibiotic group
  - NNT is **12,225**



Meropol SB et al. Ann Fam Med March/April 2013 vol. 11 no. 2 165-172



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**Green Mucous**  
**≠**  
**Bacterial Infection**



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### Why is Mucous Green?

- Not Bacteria nor "Sinus"
- Green protein myeloperoxidase from neutrophil and monocyte granules




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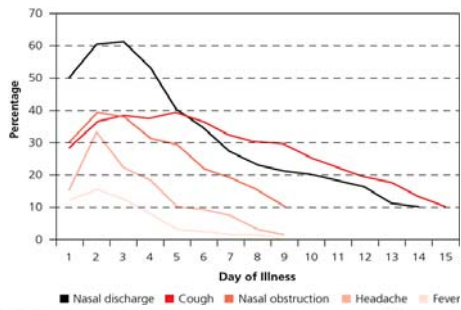
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### Natural Course Rhinosinusitis URI




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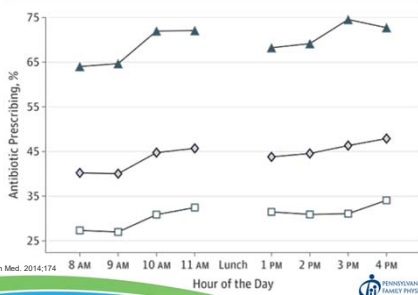
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### ABX Scripts and Time of Day

▲ Antibiotics sometimes indicated (n = 7544)    ◆ Overall (n = 21867)    □ Antibiotics never indicated (n = 14323)



Linder et al. JAMA Intern Med. 2014;174




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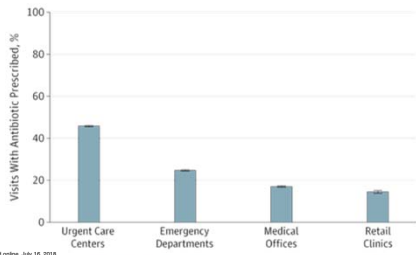
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## Antibiotic-Inappropriate Respiratory Diagnoses Leading to Antibiotic RX



AMA Intern Med. Published online July 16, 2018




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## Incentives Against Antibiotic Stewardship in Retail Clinics and UrgiCenters

- Patients seek these clinics specifically to get an antibiotic
- Clinicians concerned about not returning if the expectations aren't met
- Conflicts with business model



AMA Intern Med. Published online July 16, 2018

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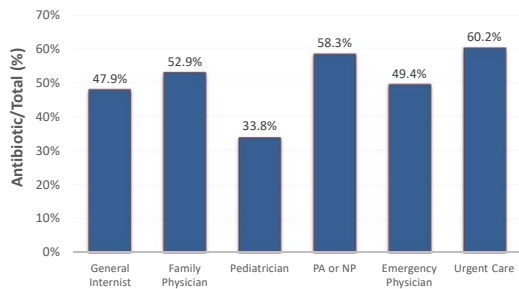
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## Antibiotics for Presumed Viral Illnesses by Specialty



Diab M, Hsieh T. Antibiotic use for viral acute respiratory tract infections remains common. *Am J Med Sci*. 2018;316(10):e87-e87a.




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## Study implications

- Antibiotic use for viral infections has increased from 2007 to 2012
- 8.9% of patients get a 2<sup>nd</sup> antibiotic script for the viral infection
  - Peaks at day 3 and day 7
- Stop using the term “bronchitis”
  - “You have a chest cold that is caused by a virus and will probably last about 2 weeks. Antibiotics are unlikely to help and may hurt you.”
- Azithromycin is too cheap

David Maki, M.D. T. Antibiotic use for viral acute respiratory tract infections remains common. Am J Med Care. 2012;53(10):e42-425



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Everybody wants their chicken “antibiotic free” but y’all beg for antibiotics for a viral infection



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## Fever Phobia



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**“Fever is a mighty engine which nature brings into the world to the conquest of her enemies,”**

THOMAS SYDENHAM



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## 98.6°F ?

- Studies from 19<sup>th</sup> century
- New Values
  - Mean 36.8 °C (98.2°F)
  - Upper limit 37.7°C (99.9°F)
- 6 am nadir, 4-6pm zenith.
- Mean variability of 0.5°C (0.9°C)



Carl Reinhold August Wunderlich

JAMA. 1992;268(12):1578



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## Physician Perception of Fever in Children

- 5% believe fever is safe
- 35% believe fever causes brain damage
- 8% believe causes death
- 29% believe anti-pyretics prevent brain damage
- Only 26% believe a sleeping child should be left undisturbed
- Almost all recommend sponging or bathing to reduce fever



Saudi Med J. 2001 Feb;22(2):124-8



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## Alternating Ibuprofen and Acetaminophen?



- 0.27° C lower at 1 hour with combination
- No improvement in comfort
- AAP advise against routine combination
- May increase risk for kidney or liver injury
- Different doses and intervals

Pediatric Child Health, 2014 Dec; 19(10): 531-532



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## Treatment of Fever

- Fever is a physiologic response
- Most fevers self limited and benign
- No evidence that fever makes illness worse
- Treatment merited to aid comfort
- Fever response does not determine if illness is viral or bacterial
- Don't waken child to treat fever



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## PENICILLIN ALLERGY



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## Risk of Penicillin Allergy

- 10% of population reports PCN allergy
  - 90% of these have no IgE sensitivity
- Significant IgE mediated allergy less common due to less parenteral PCN
- Severe anaphylactic reactions to oral amoxicillin rare

Shenoy, EG et al. JAMA. 2019;321(2):188-199



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## Low Risk

- Gastrointestinal symptoms
- Solely based on family history
- Pruritus without rash
- Yeast infection
- Fine popular rash



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## Risk of Incorrect Dx of PCN Allergy

- Treatment failures for infections best treated with penicillin
- Increased use of broad spectrum antibiotics
- More health care associated-infections such as C. dif
- Adverse reactions to other antibiotics



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### VITAMINS?



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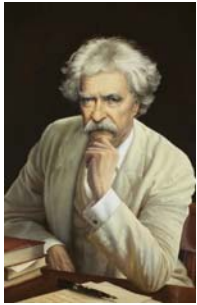
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**BE CAREFUL ABOUT  
READING HEALTH  
BOOKS. YOU MAY DIE  
OF A MISPRINT.**



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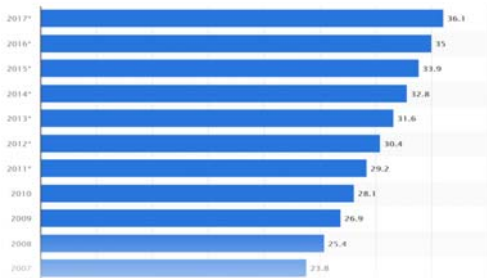
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### Vitamins, Big Business



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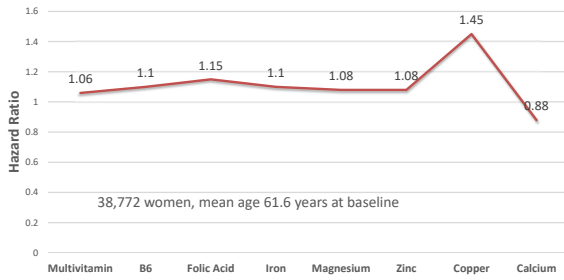
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## Multivitamins and Risk of Death



38,772 women, mean age 61.6 years at baseline

Arch Intern Med. 2011; Oct 10; 171(18): 1925-1933



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## Antioxidant Vitamins



- Vitamins A, C, and E plentiful in fruits, especially berries
- Male smokers taking vitamin A more likely to get lung cancer
- 2007 study of 68 randomized trials of antioxidant supplements showed 5% increase in mortality
- Wheat germ has highest vitamin E of any actual food, yet most vitamin E tablets have 10 times the E.



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## Physician Health Study II

- Trial of vitamin E and C in 14,641 male physicians 50 and older
  - 754 had CAD
  - 8 years follow-up
- Neither had effect on mortality
- Vitamin E increased risk of hemorrhagic stroke (HR 1.74)



JAMA. 2008;300(18):2123-2133



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## Women's Antioxidant CV Study

- 8,171 female health professionals at increased risk
- 40 years and older with 3 or more risk factors or hx of CVD
- Mean follow-up of 9.4 years
- No effect on CV events in high risk women



Arch Intern Med. 2007;167(15):1610-1618



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## High Dose Vitamin D and CV Disease

- Ages 50-84, 5110 randomized participants
- 200,000 unit initial dose, then 100,000 units monthly dose for mean of 3.3 years
- No help with CV outcomes (HR 1.02)



JAMA Cardiol. 2017 Jun 1;2(6):608-616



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## Vitamin E and Prostate Cancer

- Previous studies hinted at protection
- SELECT Trial
  - 17% increase in prostate cancer with 400 IU/day of Vitamin E
  - No help with selenium
- RDA for vitamin E is 22.5 IU/day



JAMA. 2011 Oct 12;306(14):1549-56



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## Beta-Carotene and Prostate Cancer

- ATBC Cancer Prevention Study
  - 23% increase in incidence
  - 15% increase in mortality
- Excess risk resolves when supplements stopped



Vivekananthan DP et al. Lancet. 2003;361(9374):2017



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## The Alpha-Tocopherol Beta Carotene Cancer Prevention Study Group

- Carotenoid-rich fruits and vegetables associated with reduced risk of lung cancer
- 29,133 male smokers in SW Finland
  - 18% higher risk of lung cancer with beta carotene
  - 8% higher total mortality in beta carotene
  - More deaths with alpha-tocopherol from hemorrhagic stroke

N Engl J Med 1994; 330:1029-1035



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## High Dose Vitamin B and Lung Cancer

- 808 participants of 77,118 developed lung invasive lung cancer
  - Male smokers on high dose B<sub>6</sub> three times as likely
  - Male smokers on high dose B<sub>12</sub> four times as likely
- No increased risk in females



Theodore M. Brasky, Emily White, and Chi-Ling Chen  
Journal of Clinical Oncology 2017 35:30, 3440-3448



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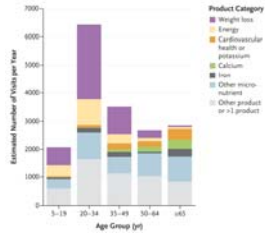
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## ER Visits and Dietary Supplements

- Estimated 23,000 visits per year, 2154 hospitalizations
  - 28% ages 20-34
  - 21% unsupervised children
  - 25.5% weight loss products
  - 10% energy products



N Engl J Med 2015; 373:1531-1540



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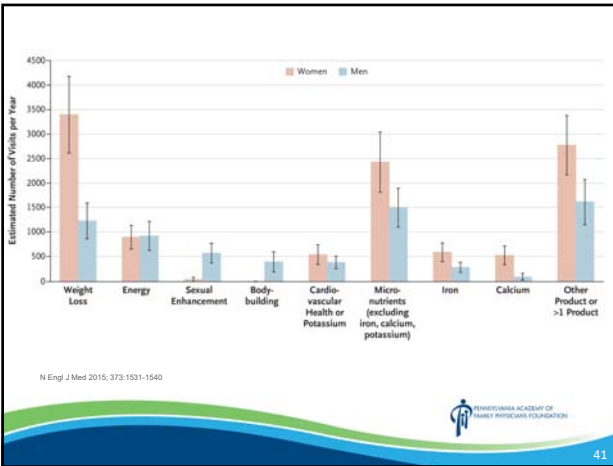
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N Engl J Med 2015; 373:1531-1540



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**Does the Public Care?**

- Only 25% would stop using supplement if we say it were ineffective
- 90% feel we need help to reach nutritional goals that food alone can't meet
- 31% had health professional recommendation to start supplement
- 38% of USA internists and rheumatologists prescribe them as placebos

Bendon RJ et al. JAMA Intern Med 2013;173:74-76

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## WATER MYTHS



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**I'M SURE GLAD SOMEONE FINALLY  
CAME OUT WITH A DIET WATER**

**MY WEIGHT WAS  
GETTING OUT OF CONTROL  
DRINKING THE REGULAR STUFF**



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## Eight Glasses Water per Day?

- No literature support
- Healthy people have thirst
- Caffeinated beverages and mild alcoholic beverages hydrate too
- Precise osmoregulatory system



Valtin H. Am J Physiol Regul Integr Comp Physiol. 2002 Nov;283(5)

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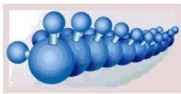
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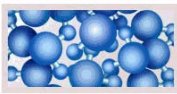
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## iH2O – Ultra-Hydrating Super Water



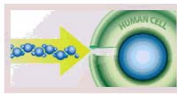
1. When we are born, the water molecules in our cells are aligned in a single-file. Our young body even converts any water we drink into that necessary single-file structure

**Nonsense!** Water just enters the cells single-file — all accomplished by the aquaporin channels without any help.



2. As we age, our body's ability to convert water into the single-file alignment dramatically decreases. Our body's hydration becomes increasingly compromised

**Misleading!** No clinical evidence that worn-out aquaporins contribute hydration problems in aging, and no reason to believe that this nostrum will help.



3. Through his discovery of Aquaporins, Nobel Prize Winner Dr. Peter Agre has proven that in order for water to be optimally effective in the body, the water molecules must be aligned in a single-file structure

**Rubbish!** The water molecules are single-file only **within** the aquaporin channels



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## i-H2O Combo Pack



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## Renewable Water

- Drinking water from sunshine and air
- Sustainable



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## Raw Water

- Unprocessed water from nature
- "Tap water? You're drinking toilet water with birth control drugs in them."
- Fluoride mind control drug
- \$60 per 2.5 gallons



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## Jenny McCarthy

"So basically, I don't know what I'm talking about. But maybe I do."



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## Combustible Cigarettes are Down



- Declining since 1996
  - 2.5% eighth graders
  - 5% tenth graders
  - 10.5% of twelfth graders
- Decline of 80% in last 20 years
- Lowest level in 42 years



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## Cigarettes v. E-Cigarettes

- Combustible Cigarettes
  - Age restriction
  - Regulated by FDA
  - No flavors (except menthol)
  - Advertising restrictions
- E-Cigarettes
  - No age restriction
  - No FDA regulations
  - Choice of flavors
  - No marketing restrictions



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## Vaping

- Contains glycerol, flavoring, propylene glycol (stage smoke)
- >7700 flavors, 242 new flavors monthly
- Has passed up every other nicotine product by 2016
- Clandestine use possible
- Can buy on internet



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## Dual Use

- Often used in those who have never smoked
- White, older, male
- 76% of vaping adolescents also use regular cigarettes
- Lower quit rates



Wills TA et al: Risk factors for exclusive e-cigarette use and dual e-cigarette use and tobacco use in adolescents. Pediatrics. 2015 Jan;135(1):e43-51.



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## Vaping is Not Benign

- Toxins, carcinogens, heavy metals (less than cigarettes)
- Flavorings have cytotoxic effects
- Ultrafine vapor penetrates deeper in lung
- Bronchiolitis obliterans (popcorn lung) from diacetyl
- Impairs antibacterial defense
- Fire or explosive risk



Rigotti NA. E-cigarette use and subsequent tobacco use by adolescents: new evidence about a potential risk of e-cigarettes. JAMA. 2015 Aug 18;314(7):873-4.



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## HOMEOPATHY



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## Brief History of Homeopathy

- Samuel Hahnemann 1796  
Ingested cinchona bark, experienced several hours of fever, shivering, joint pain – resembling malaria  
Created “laws of similar”  
Most important disease cause was psora (Greek for itch)
- Derived from suppressed scabies
  - Cause of epilepsy, cancer, jaundice, deafness, cataracts



Homeopathy Looks at the Horrors of Allopathy



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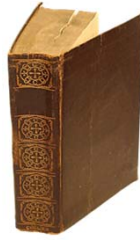
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## Basic Tenets

- “Like Cures Like”
  - Two diseases with similar symptoms – stronger will prevail
- Potentization
  - Diluent maintains “formative intelligence”, “coherence patterns”
  - C is 100 fold dilution
  - Succussion –vigorous shaking and striking on elastic surfaces, such as saddle or leather book




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## Dilutions



- Hahnemann advocates 60C dilution for most preparations
- 1/3 drop in all the water on earth would be 13C dilution
- Popular flu treatment with Oscillocochinum is 200C
  - $10^{80}$  atoms in entire universe
  - $10^{320}$  universes required for a single molecule

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## Table of Dilution

Dilution	Ratio	Notes
1C	1:100	
3C	$10^{-6}$	
12C	$10^{-24}$	Unlikely single molecule remains
30C	$10^{-60}$	Standard homeopathic dilution, to get single molecule, 2 billion doses per second to 6 billion people for 4 billion years
200C	$10^{-400}$	Dilution of Oscillocochinum

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Preparation of Oscilloccinum

Decapitate duck

Remove 35 grams of heart and 15 grams of liver

Mix with pancreatic juice and glucose

Allow to ferment for 40 days

Dilute , dilute, dilute ...

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BOOSTING IMMUNITY?

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Do We Need Immune “Support”?

- Most people have highly effective immune systems
- Most clinical problems we face are too powerful immunity
  - Asthma, eczema, cytokine storm
- Immune system can be misdirected
  - Inflammatory arthritis, DM- type 1
- Scant evidence that immunity can be boosted

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## Cold Mediators

### Bradykinin- Local Symptoms

- Sore throat
- Nasal congestion
- Watery eyes
- Cough

### Cytokines- Systemic Symptoms

- Fever and Chills
- Headache
- Fatigue
- Malaise
- Anorexia
- Nausea
- Depression



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The entire Baby Boom population  
alive today had the #Measles as kids  
Bring back our #ChildhoodDiseases  
they keep you healthy & fight cancer.



Darla Shine  
Wife of White House Communications Chief Bill Shine



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## Darla Spreading “fake news”?

- Natural measles causes depletion of B and T cells
- Disables immune memory for 2-3 years
- One 49 year old female cured of blood cancer with genetically modified measles virus



Mira MJ et al. Science 08 May 2015;



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100PCS

COFFEE ENEMAS

## DETOXIFICATION?



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## Gwyneth Paltrow's Jade Vagina Eggs

- SOLD Out!
- "increase chi, orgasms, vaginal muscle tone, hormonal balance, and feminine energy in general."
- Porous, can house bacteria
- Goop agreed to pay \$145,000 in civil claims

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## Toxifying Foot Pads

- Removes toxins, restore "balance" within the body, and boost energy.
- Strengthen the immune system, reduce stress, improve circulation, improve sleep, enhance mental focus, relieve headaches and arthritis pain.
- Distilled water also darkens pads.




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## Himalayan Salt

- 98% salt, then magnesium, potassium, and calcium
- Help seasonal affective disorder as a lamp
- Absorbs water from and releases negative ions
- Rids air of dust



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## SINUS HEADACHE?



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## “Sinus” Headache

- Common patient self diagnosis
- “The United States is the only country in the world to have such a thing as sinus headache,”
- No evidence that chronic, ongoing sinus infections are linked to recurring headaches
- Influence of Madison Avenue
- Self-diagnosed sinus headaches are ultimately determined to be migraine in up to 98% of cases



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## Why the Misconception?

- Both sinus headache and migraine attacks can be triggered by weather changes
- Sinus headaches and migraine attacks can produce pain in the same areas
- Both can cause drainage and other sinus symptoms such as teary eyes.
- TV ads tout the “sinus headache”



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## Self-Reported or Physician-Diagnosed “Sinus” Headache Study

- 2991 patient with self or physician diagnosed “sinus” headache
- Most common symptom sinus pressure (84%), sinus pain (82%), and nasal congestion (63%)
- 80% were migraine and 8% migrainous

*Arch Intern Med.* 2004;164(16):1769-1772



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## Autonomic Symptoms in Migraine

- 45% of migraine attacks have at least one autonomic symptom
  - 45% both nasal congestion and ocular symptoms
  - 21% nasal symptoms only
  - 34% ocular symptoms only
- Parasympathetic activation of the sphenopalatine ganglion
  - Innervates tear ducts and sinuses



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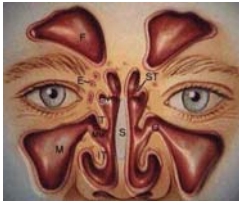
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## Anatomical Confusion



**Sinus Anatomy**



**Trigeminal Anatomy**



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## Acute Sinusitis v. Migraine

	<b>Sinusitis</b>	<b>Migraine</b>
<b>Family History</b>	No	Yes
<b>Headache Pattern</b>	Continuous	Intermittent
<b>Fever</b>	50%	0%
<b>Nasal Discharge</b>	Common (Colored)	Uncommon (Clear)
<b>Sinus Imaging</b>	Positive	Negative
<b>Disabling</b>	No	Yes



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**DIRECT TO  
CONSUMER  
ADVERTISING**



78

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### Why These Ads?

- Only USA and New Zealand
- Outlawed in most countries in 1940's
- Every one dollar spent on ads generates four dollars in sales
- Increases sales 9x over non-advertised meds
- 80 ads/hour
- Have ignored advise to fully informing physicians first
- Requested med is prescribed 44% of time



©2008b, 2011



80

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### Seldane Story – 1980's

- “pull the drug through the system”
- Only mention benefits of unnamed drug
- Sales went from \$34 million per year to \$800 million
- Pulled from market 1997
- Converted physician to business intermediary





81

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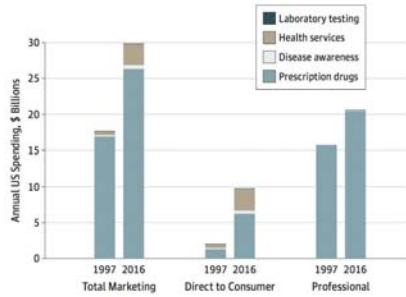
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## Medical Marketing 1997 v. 2016



Schwartz LM et al. JAMA 2019



82

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## Hallucinations in Parkinson's Disease



Poewe W. Practical Neurology 2008;8:230-241.

- 8% to 40%
- Associated with older, duration, cognitive impairment, sleep disturbance
- Occurs with eyes open
- People, animals, scenery, buildings
- Movement
- Brief in duration
- Often medication associated – amantadine, dopamine agonists
- May improve with rivastigmine



83

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## Pimavanserin (Nuplazid)

- Failed first two trials
- 199 patients, 6 week trial, 37% reduction in symptoms. v. 14% placebo
  - Changed criteria
- 52 centers
- Over \$37,000 per year



84

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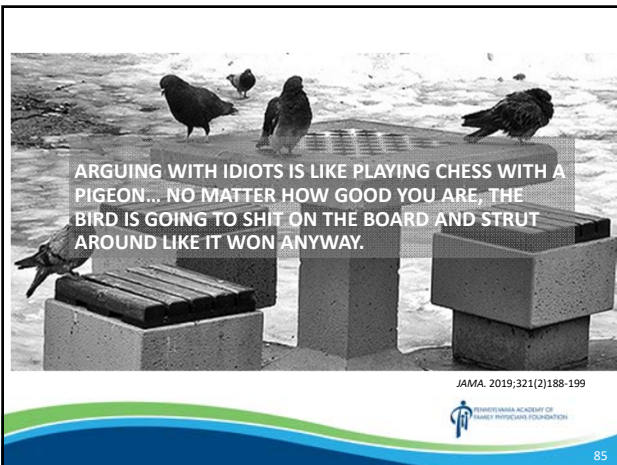
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