ANOTHER YEAR ANOTHER $50,000 DOLLAR DRUG.
REFRESHER COURSE, 2019

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IF THEY HAVE A NEGATIVE CT ANGIOGRAM, WHAT IS THE LIKELIHOOD THE PATIENT HAS NO PE?

• Meta-analysis of 22 studies with 12,000 patients being evaluated for PE.
• Overall missed 2.4% that showed up during hospitalization or within 3 months
• Not bad…. 
• In those studies with high risk patients (>40% positive scans).
• 8.1% had a VTE in light of a negative CT.

• Bayes theorem: The performance of a test depends on the population to which it is being applied (positive and negative predictive value).
• If they are HIGH probability, a negative CT may be a false negative.
IF THEY HAVE A POSITIVE CT-ANGIO, WHAT IS THE LIKELIHOOD THE PATIENT HAS A PE?

• PIOPED II (2018) showed that CT
  • High specificity for PE (in high risk patients)
    - 83% sensitivity.
  - False negative in 1% of patients with low to moderate pretest probability (based on Wells, etc.)
  - What about false positives?
• 937 CT-angiograms for rule out pulmonary embolism. Of these, 174 (18%) were read as positive.
• They had 3 additional chest radiologists review all of the films.
• They were blinded to the results.
• 26% of the time, all three radiologists read the CT as negative.
• They claim breathing was the most problematic problem.
• Also subsegmental and lower lobe PE, single PE.
WHAT THIS MEANS TO US?

• If you have low risk patients, and see a positive CT for a subsegmental PE, it may be false-positive.
• Do you really want to anticoagulate these patients given real risk of hemorrhage (more later…)?
• Don’t work up “no risk” patients.
COULDN’T GET AWAY WITHOUT AT LEAST ONE GODZILLA PICTURE

**PCN allergy**

- 8-10% prevalence
  - Increase antibiotic costs
  - Prolong hospitalizations
  - Expose pts to broad-spectrum antibiotics

- 80-90% have negative allergy testing results
  - IgE Ab wane over time
  - PCN misidentified as culprit
  - Underlying illness caused the symptoms or interacted with abx
THAT PCN ALLERGY PROBABLY ISN’T

- Do details about reaction sound IgE-mediated?
  - Signs/symptoms
  - Chronology
  - Prior exposure?
- When did this happen?
- Why was the abx used?
- Other medications? NSAIDs? Opiates?
- Has drug been used since? (may require chart review)
- Other similar symptoms since?
SO, IS IT OR NOT?

- Just order the test
- ...and remember 2% of PCN allergic are also allergic to cephalosporins
PCN ALLERGY TESTING

- **Skin**
  - **Step 1**: prick test (histamine and saline controls)
    - Major determinant: penicilloyl-polylysine
    - Minor determinants: benzylPCN, benzylpenicilloate…
  - **Step 2**: Intradermal test to confirm negative results
  - Positive test is wheal 3 mm or more greater than negative control
  - Low incidence of systemic reactions
  - NPV 97-99%
- Serum IgE tests have unknown predictive value
NEW GUIDELINES FOR CHOLESTEROL

Grundy SM et al.
HIGHLIGHTS

• Screening: Non-fasting or fasting samples (no difference in risk assessment)
• For clinical ASCVD:
  • Aim for LDL reduction of \( \geq 50\% \)
  • For **high-risk**, aim for LDL < 70 mg/dl
  • Consider ezetimibe if not at goal with high-intensity statin
  • Consider PCSK9 inhibitor if not at goal with statin + ezetimibe
• If LDL \( \geq 190\) mg/dl, start high-intensity statin (don’t worry about ASCVD risk calculators)
HIGHLIGHTS

• 40-75 years of age with diabetes mellitus and an LDL-C ≥70 mg/dl, start moderate-intensity statins without calculating 10-year ASCVD risk.

• In patients with diabetes mellitus at higher risk, especially those with multiple risk factors or those 50-75 years of age, consider high-intensity statin to reduce the LDL-C level by ≥50%.

• Assess adherence and percentage response with repeat lipid measurement 4-12 weeks after statin initiation or dose adjustment, repeated every 3-12 months as needed. (Seriously?!??!??)
PRIMARY PREVENTION

- Age 40-75 y and LDL-C ≥70 to <190 mg/dL (≥1.8 - <4.9 mmol/L) without diabetes mellitus
- 10-year ASCVD risk percent begins risk discussion

Clinical assessment, risk discussion

- <5% “Low Risk”
  - Risk Discussion: Emphasize lifestyle to reduce risk factors
    Class (I)
- 5% - <7.5% “Borderline Risk”
  - If Risk enhancers present then risk discussion regarding moderate-intensity statin therapy
    Class (IIb)
- ≥7.5% - <20% “Intermediate Risk”
  - Risk Discussion: If risk estimate + risk enhancers favor statin, initiate moderate-intensity statin to reduce LDL-C by 30% - 49%
    Class (I)
- ≥20% “High Risk”
  - Risk Discussion: initiate statin to reduce LDL-C ≥50%
    Class (I)
WHAT IS HIGH-INTENSITY STATIN THERAPY, ANYWAY?

- Rosuvastatin 20-40 mg per day
- Atorvastatin 40-80 mg per day

And what’s a “risk enhancer”? Maybe better to ask what’s not?!?!

- family history of premature ASCVD; persistently elevated LDL-C levels ≥160 mg/dl (≥4.1 mmol/L); metabolic syndrome; chronic kidney disease; history of preeclampsia or premature menopause (age <40 years); chronic inflammatory disorders (e.g., rheumatoid arthritis, psoriasis, or chronic HIV); high-risk ethnic groups (e.g., South Asian); persistent elevations of triglycerides ≥175 mg/dl (≥1.97 mmol/L); and, if measured in selected individuals, apolipoprotein B ≥130 mg/dl or ≥2500 nmol/L, high-sensitivity C-reactive protein ≥2.0 mg/L (190 nmol/L), ABI <0.9, and lipoprotein (a) ≥50 mg/dl or 125 nmol/L, especially at higher values of lipoprotein (a).
WHAT ABOUT STATINS IN OLDER PATIENTS?

Note that all those cholesterol guidelines (at least the prevention ones) end at age 75.

ABOUT THIS STUDY...

- Meta-analysis of 28 studies of satins for primary and secondary prevention
- 14,500 participants age ≥75 (but that’s only 8% of all participants)
- Subject-level data available from the trials
- For combined primary/secondary prevention group:
  - 13% RRR for CVEs for every 39mg/dl decrement in LDL
  - Corresponds to an ARR of 0.5% in CVE per year
BUT WHAT ABOUT PRIMARY PREVENTION?

• For patients $\geq 75$ and no h/o ASCVD, there was no difference in CVEs combined endpoint or vascular mortality
• So, gotta revert to that good, ’ol clinical judgment, patient preferences, etc.

• Of note, there is a large-scale (18,000 patients) study of primary prevention with statins currently in progress in Australia…so, stay tuned…
CAN I HAVE THAT PENTUM THING FOR MY PAIN?

Goodman CW and Brett AS. A clinical overview of off-label use of gabapentinoid drugs. JAMA Intern Med 2019 Mar 25; [e-pub].
(https://doi.org/10.1001/jamainternmed.2019.0086)
PREGABLIN/GABAPENTIN

• FDA approved indications:
  • Postherpetic neuralgia: gabapentin and pregabalin (Lyrica)
  • Diabetic neuropathy, spinal cord injury, fibromyalgia: Pregabalin only
  • Authors looked at 34 randomized controlled trials, approx. 4200 patients. Looked at non-cancer and non-FDA approved indications.
WHAT DID THEY FIND?

- Weak evidence for gabapentin in diabetic neuropathy (NNT from other papers 6-8)
- Minimal evidence for gabapentin in non-diabetic neuropathy
- Low back pain: Nah
- Fibromyalgia: minimal data for gabapentin
- Post herpetic neuralgia: Do not work for the acute pain of shingles.
• Other pain syndromes (sickle cell, complex regional pain syndrome, etc): No.

ERGO: THESE DRUGS (WHICH AREN’T BENIGN) ARE WAY OVERUSED.
DOUBLE OR TRIPLE THERAPY IN PATIENTS WITH ATRIAL FIBRILLATION + PCI

PROBLEM: WE USE TWO ANTIPLATELET AGENTS + ANTICOAGULATION IN A-FIB. SHOULD WE USE ALL THREE?
• 4600 patients with atrial fibrillation + ACS with PCI (symptomatic) or elective PCI
• Randomized to: (weakness is that every combination included clopidogrel)
  • Aspirin, clopidogrel, apixaban [Eliquis]
  • Aspirin, clopidogrel, VKA
  • Clopidogrel, apixaban
  • Clopidogrel, VKA
- **Outcome at 6 months:**
  - Major or clinically relevant bleeding,
  - MI, stroke or death
- **Outcome:**
  - More bleeding with triple therapy (16% vs 9%) (and most if warfarin)
  - Myocardial infarction, stroke, and death were similar in the two-drug and three-drug groups
• The best outcome was clopidogrel + apixaban (and not warfarin/VKA (23% vs. 27%).

• Aspirin didn’t add much. But they didn’t do an aspirin and no clopidogrel group! This would have been helpful.

• Bottom line: Dual therapy prevents cardiac, stroke, etc. events just as well as triple therapy. Saves bleeds.
SHOULD I PUT A VENA CAVA FILTER IN PATIENTS WHO CANNOT BE ANTICOAGULATED?

CHEST GUIDELINES SUGGEST VENA CAVA FILTER ONLY FOR THOSE WHO CANNOT BE ANTICOAGULATED. (CLASS I; LEVEL OF EVIDENCE B)

Now some data....
DATA

- Retrospective study of California, New York, and Florida of patients with VTE and contraindications to anticoagulation (Basically 2005-2013)
- 126,030 patients with VTE, 48.6% were male and the mean age was 66.9
- 45,771 (36.3%) were treated with an IVC filter, 80,259 (63.7%) not.
VENA CAVA FILTER CONT'D.

- Adjusted using propensity scoring.
- 30-day mortality HR 18. at 30 (CI, 1.13-1.22; \( P < .001 \)).
SHOULD I ANTICOAGULATE PATIENTS WITH SUB-SEGMENTAL PE?

• Chest guidelines (the bible of anticoagulation).
  • For low-risk subsegmental PE with no proximal DVT, clinical surveillance is preferred over anticoagulation (2C). High-risk patients should be anticoagulated (2C).
  • So if previous PE, multiple DVTs, etc. anticoagulate.
THIS STUDY

• Systematic review/meta-analysis of 15,500 patients
• Subsegmental PE in 4.6%
• 82% anticoagulated
• 5.3% vs 3.9% had recurrence (anticoag/coag)
• NNT=70 to prevent one event
• NNT=111 to prevent one death
• Take into account bleeding risk, proximal DVT, etc.
ATHLETIC Oligomenorrhea AND BONE HEALTH

- Oligomenorrhea effects on BMD persist despite WBE and resumption of menses
- 78 young WB athletes 14-25 years old: 27 OA, 29 EA, 22 NA
- 12 month FU: BMD, BMC, failure load (estimate of strength) at tibia, radius by CT
- 39% resumed menses in study period
ATHLETIC OLIGOMENORRHEA
EATING DISORDERS AND BONE HEALTH

- Transdermal estradiol plus oral progesterone increases bone mass more than OCP
  - Ackerman KE et al. Br J Sport Med 2018
  - 121 O/A normal weight athletes, 14-25 years randomized to OCP, TE + oral P, or no tx
  - Consider transdermal estradiol + LNG IUD if contraception is also needed
GUIDELINE UPDATE FOR ATRIAL FIBRILLATION/FLUTTER

SOME SIGNIFICANT CHANGES

• If it is the **only factor**, female sex is **no longer** considered a risk factor in the CHA\textsubscript{2}DS\textsubscript{2}-Vasc calculation.

• Men with a CHA\textsubscript{2}DS\textsubscript{2}-Vasc score of \( \geq 2 \) and women with a CHA\textsubscript{2}DS\textsubscript{2}-Vasc score \( \geq 3 \) should be anticoagulated unless contraindicated.

• Men with a CHA\textsubscript{2}DS\textsubscript{2}-Vasc score of 1 and women with a CHA\textsubscript{2}DS\textsubscript{2}-Vasc score 2 should “might be reasonable” candidates for anticoagulation.

• Aspirin is out.

• DOACs are preferred over warfarin (except in valvular disease and where contraindicated, such as with advanced renal disease for some).

• Apixiban is an alternative to warfarin in ESRD (2 retrospective, case-control studies and a meta-analysis demonstrated safety superior to warfarin).
DO THE NEW INSULINS REDUCE HYPOGLYCEMIA (THEIR PURPORTED BENEFIT)

BACKGROUND: INSULIN COSTS HAVE INCREASED BY 300% IN THE LAST SEVERAL YEARS: IT IS YOUR FAULT.
Some newer insulins: $500/month.
”Old” NPH – about $25/month at Walmart
The purported benefit is lower rates of hypoglycemia.

THIS STUDY

- Lantus or Levemir vs. NPH
- Looked at control as well as hypoglycemia.
- Kaiser Permanente database of 25,000 patients taking basal insulin (type II diabetics) started between 2006 and 2014
- Follow-up 1.7 years. More hypoglycemic events with Lantus or Levemir vs. NPH (12 vs. 9 events/1000 favoring NPH …didn’t reach statistical significance but didn’t really have to….the claim of benefit with Lantus/Levemir didn’t pan out)
• Drop in HbA1C: 1.3% vs. 1.5% favoring NPH (essentially no difference)
• Did another 2000 propensity matched patients. No difference.

• Ergo….use the cheap stuff. No benefit to more expensive.
OPTIMIZING IUD’S

- Postpartum placement
- Pain control
- Emergency Contraception
POSTPARTUM IUD PLACEMENT

- Colwill AC et al. Contraception 97(3); 2018 March
  - Copper IUD inserted <10 minutes after placental delivery
    - VD: 84% retention at 6 weeks
    - CD: 100% retention (more likely to need US to eval, less likely to detect strings)

- Carr SL et al. Contraception 97(3); 2018 March
  - Immediate postpartum IUD associated with
    - Lower than expected pain score (especially with epidural) on VAS and likert scale, Immediate and recall
    - High satisfaction
    - No regrets
PAIN CONTROL FOR IUD PLACEMENT

- *Mody Sk et al, Obstetrics Gynec 132(3); 2018 September.*
- RCT to evaluate paracervical block (vs sham) for IUD insertion pain
  - 64 women
  - 18 mL 1% lidocaine buffered with 2 mL 8.4% sodium bicarbonate
    - Inject 2 mL on anterior lip of cervix for tenaculum placement
    - 9 mL each at 4 and 8 o’clock in vaginal fornices
  - VAS pain scores (block vs. sham)
    - IUD placement (33 mm vs 54 mm)
    - Sounding (30 mm vs 47 mm)
    - 5 minute post-procedure (12 mm vs 27 mm)
    - Cervical block (30 mm vs 8 mm)

- Cost-effectiveness analysis of EC options (direct costs and unintended pregnancies)

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<tr>
<th>Per 1000</th>
<th>Direct cost</th>
<th>Unintended pregnancy</th>
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<tbody>
<tr>
<td>Ulipristal acetate (Ella)</td>
<td>$1,228,000</td>
<td>137</td>
</tr>
<tr>
<td>LNG oral (Plan B)</td>
<td>$1,279,000</td>
<td>150</td>
</tr>
<tr>
<td>Copper IUD</td>
<td>$1,376,000</td>
<td>61</td>
</tr>
<tr>
<td>LNG IUD plus oral LNG</td>
<td>$1,558,000</td>
<td>63</td>
</tr>
</tbody>
</table>

- Copper IUD vs. Ulipristal: $1957 per additional pregnancy prevented
  - Copper IUD more cost effective in 63.9% of models
  - Effects more pronounced in populations with high obesity rates
As in, “I wonder if it is any good for primary prevention?”
ASPIRIN IN REDUCING EVENTS IN THE ELDERLY (ASPREE) TRIAL—A TRILOGY

• From 2010 through 2014 (median 4.7 yrs), researchers enrolled men and women in Australia and the United States who were 70 years of age or older (or ≥65 years of age among blacks and Hispanics in the United States)
  • Community-dwelling and without cardiovascular disease, dementia, or disability.
• 19,114 persons who were enrolled in the trial, 9525 were assigned to receive 100 mg of enteric coated aspirin and 9589 to receive placebo
• Primary end points: death, dementia, persistent physical disability
  • Secondary end points: major hemorrhage and cardiovascular disease
• Published 3 papers on CVD events and bleeding, all-cause mortality and disability-free survival
ASPREE

- CVD events - 10.7/1000 person-years in the aspirin group vs. 11.3/1000 person-years in the placebo group (hazard ratio, 0.95; 95% confidence interval [CI], 0.83 to 1.08).
- Major hemorrhage - 8.6/1000 person-years in aspirin group vs 6.2/1000 person-years in placebo group (hazard ratio, 1.38; 95% CI, 1.18 to 1.62; P<0.001).
- There was a higher mortality rate in the aspirin group (12.7 vs 11.1 per 1000), mostly due to cancer (hazard ratio, 1.14; 95% confidence interval [CI], 1.01 to 1.29)
- No significant difference of disability-free survival between aspirin and placebo groups
ARIVE

- Multi-center trial that evaluated aspirin 100 mg daily vs. placebo in patients with moderate risk of cardiovascular disease (ASCVD risk 10-20%)
  - 12,546 patients total
    - Patients $\geq$55 years (men) or $\geq$60 years (women)
    - $\geq$3 cardiovascular risk factors (dyslipidemia, current smoking, high blood pressure, positive family history of cardiovascular disease
  - EXCLUDED diabetics, people with history of vascular (coronary, cerebral, or peripheral) disease, patients with history of GI bleed
- Primary efficacy outcome was cardiovascular death, myocardial infarction, unstable angina, stroke, or transient ischemic attack
  - Occurred in 4.3% of the aspirin group vs. 4.5% of the placebo group ($p = 0.60$).
- Primary safety outcome was gastrointestinal bleeding
  - Occurred in 0.97% of patients in the aspirin group vs. 0.46% in the placebo group ($p = 0.0007$)
Total of 15,480 participants in the UK, all with diabetes with no evident cardiovascular disease, were randomized to ASA 100 mg daily or placebo

- Participants were aged 40 or older, mean age was ~63 years
- Mean follow-up of 7.4 years
- Relative risk of serious vascular events was 12% lower in aspirin group, but risk of major bleeding was 29% higher (NNT=91, NNH=111)
- Found no significant effect of aspirin on cancer risk (particularly GI cancer risk) despite 7 year follow-up time
WHAT’S THIS SAY ABOUT ASPIRIN AS PRIMARY PREVENTION?

• It’s probably dead.
• Despite the previous meta-analyses and the USPSTF recommendation, there is now substantial RCT level data showing no benefit to daily low-dose aspirin as primary prevention
ASPIRIN + CLOPIDOGREL FOR TIA/MINOR STROKE PRACTICE CHANGING!

Hao Q et al. Cl + A plus versus A alone for acute minor ischaemic stroke or high risk transient ischaemic attack: Systematic review and meta-analysis. BMJ 2018 Dec 18; 363:k5108. (https://doi.org/10.1136/bmj.k5108)

• 4881 patients with: Very Important) TIA; +ABCD² score ≥4 or minor stroke (NIH stroke scale score ≤3)
• Randomized to 300mg load clopidogrel/75/d + ASA or ASA alone for 90 days
• Outcomes: stroke, myocardial infarction, or vascular death within 90 days.
• 5.0% with both drugs vs. 6.5% for ASA alone
• Benefit most pronounced 7-30 days (21 days may be golden)
• Increased bleed rate but not intracranial. NNT 1000 to prevent 15 strokes vs 5 noncerebral bleeds.
FLUCONAZOLE IN PREGNANCY

- Quebec Pregnancy Cohort (1998-2015) nested case control series
  - 320,868 SAB
  - 226,599 major congenital malformations
  - 7,832 still births
- Fluconazole exposure
  - 69.5% 150 mg (low dose)
  - 30.5% >150 mg (high dose)
<table>
<thead>
<tr>
<th>Condition</th>
<th>Low dose (&lt;=150 mg)</th>
<th>High dose (&gt;150 mg)</th>
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<tbody>
<tr>
<td>Spontaneous abortion</td>
<td>OR 2.3 (1.96-2.54)</td>
<td>OR 3.20 (2.73-3.75)</td>
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<tr>
<td>Congenital malformations</td>
<td>NS</td>
<td>OR 1.81 (1.04-3.14)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cardiac septal defects</td>
</tr>
<tr>
<td>Stillbirth</td>
<td>NS</td>
<td>NS</td>
</tr>
</tbody>
</table>
THESE THINGS HAVE BECOME POPULAR!


WHAT DID WE LEARN?

- Sondergaard study:
  - Followed low-risk patients 6 years after traditional surgical AVR or TAVR (randomized, 50 patients in each group).
  - Valve deterioration (basically, high trans-valve gradients) was 4% in TAVR group and 24% in traditional AVR group
  - No differences in outcomes that matter to patients (e.g., death, re-intervention)
  - Note: Industry funded
WHAT DID WE LEARN?

• Blackman study:
  • UK registry of 214 patients who underwent TAVI, but no comparison group
  • Median f/u of 5.8 years
  • Structural valve deterioration: moderate in 8.7%, severe in 0.4%

• Trials in low-risk patients are currently being conducted.
• But these findings are encouraging for patients who are more appropriate for TAVR – still, the higher-risk surgical patients – TAVR is a class I recommendation for high-risk patients and IIA for intermediate risk patients
DOCTOR I’VE GOT A HEADACHE AGAIN…. NEW MIGRAINE PROPHYLAXIS?

Stauffer VL et al. Evaluation of galcanezumab for the prevention of episodic migraine: The EVOLVE-I randomized clinical trial JAMA Neurol 2018 May 29; [e-pub]
NOT SO FAST…
• Galcanezumab is a monoclonal antibody for the prevention of migraine against calcitonin gene-related peptide (CGRP)
• It prevents migraine….but how well?
• 862 participants fulfilled criteria for episodic migraine of 4 to 14 migraine headache days per month...**not allowed to be on other antimigraine meds.**
• People who did *not* respond to prophylactic meds in the past were excluded (so why would you use this drug if they responded to prophylaxis)?
• Net reduction in headaches by about 2/month.
• At a cost of over $5000.00/year. About $250/day of no headache.
• Even then NNT = 9

• We also have: erenumab-aooe, a CGRP-receptor mAb
• . Basically the same data.
PARENTAL GUIDANCE IN WC VISITS

- Dental care
- Solid foods
- Fast food
- HPV vaccine
**Too Much Toothpaste**

  
  - RECOMMENDATION: Start brushing when first tooth erupts (6-12 mos)
    - 20% start before age 1
    - 14% start after age 3
  
  - RECOMMENDATION: Brush twice daily
    - 60% brush twice daily
    - Excessive brushing and delayed brushing associated with lower SES, lower household education, Mexican-American ethnicity
  
  - RECOMMENDATION: Use the right amount of paste. Too much toothpaste causes fluorosis. 38% use too much.
    - NO toothpaste prior to age 2
    - <3 years: rice grain-size amount
    - 3-6 years: pea-size amount (40% use excessive) WITH SUPERVISION
SOLID FOODS MAYBE DO PROMOTE BETTER SLEEP?

- **Enquiring About Tolerance (EAT) study**
  
  *Perkin MR et al., JAMA Pediatr. 2018 Aug 6; 172 (8).*

- UK RCT of 1303 breastfed infants 2008-2015; 3 year follow-up
  
  - Early introduction: breastfeeding + solids at 3* mos (nonallergenic, then 6 allergenic)
  
  - Standard introduction: exclusive breastfeeding to 6 mos

- **Outcomes:**
  
  - Sleep duration increased 16.6 minutes with EIG
  
  - Night wakings decreased 2.01-1.74 per night with EIG
  
  - Serious sleep problems (maternal QOL) higher in SIG (OR 1.8)
FAST FOOD LINKED TO ASTHMA

- Systematic review and meta-analysis including 16 studies (13 cross-sect, 3 case-control)

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<td>Asthma ever</td>
<td>1.36</td>
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<tr>
<td>severe rhinitis</td>
<td>1.54</td>
</tr>
<tr>
<td>Severe eczema</td>
<td>1.51</td>
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</tbody>
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- Frequent consumption (3 or more per week) even worse than 1-2 per week
- Especially hamburgers
HPV VACCINATION RATES

- Shay LA et al. *Pediatrics* 2018 June; 141 (6)
- 43 visits with unvaccinated adolescents (72% Hispanic; 28% AA)
  - Parental hesitation:
    - Assertive
    - Questions
    - Concerns
  - Provider response
    - Persistence: emphasized importance, recommended, or probed concerns
    - Acquiescence: no response, or yielded to parent
PERSISTENCE PAYS
EGGS ARE BAD AGAIN…

JAMA | Original Investigation
Associations of Dietary Cholesterol or Egg Consumption With Incident Cardiovascular Disease and Mortality

Victor W. Zhong, PhD; Linda Van Horn, PhD; Marilyn C. Cornelis, PhD; John T. Wilkins, MD, MS; Hongyan Ning, MD, MS; Mercedes R. Carnethon, PhD; Philip Greenland, MD; Robert J. Mentz, MD; Katherine L. Tucker, PhD; Linhui Zhao, PhD; Arnita F. Norwood, PhD; Donald M. Lloyd-Jones, MD, ScM; Norrina B. Allen, PhD
STUDY SPECIFICS

• 6 heterogeneous cohorts, geographically and ethnically diverse
• >29,000 participants, >500,000 person-years
• Mean age at study entry: 51 years
• Median follow up: 17 years
• Outcomes:
  • Incident cardiovascular disease
  • All-cause mortality
RESULTS

- Direct correlation between dietary cholesterol intake and CVD and all-cause mortality
  - Each additional 300 mg of dietary cholesterol consumed per day was significantly associated with higher risk of incident CVD (adjusted HR, 1.17) and all-cause mortality (adjusted HR, 1.18).
- Cholesterol effect is independent of dietary fat intake and overall quality of diet
- Direct correlation between egg consumption and CVD and all-cause mortality
  - Each additional half an egg consumed per day was significantly associated with higher risk of incident CVD (adjusted HR, 1.06) and all-cause mortality (adjusted HR, 1.08)
  - This finding was no longer significant after adjusting for cholesterol intake
Figure 1. Associations Between Dietary Cholesterol Consumption and Incident CVD and All-Cause Mortality

A Incident CVD

- Dietary Cholesterol Consumed per Day, mg
- Participants, %
- Hazard Ratio (95% CI)
WHAT NEXT?

• Will USDA guidelines change? (Currently no quantitative limit on cholesterol but recommends eating as little cholesterol as possible.)
• The potential for confounding, selection and recall biases are high in this study, but a large RCT seems unlikely if not impossible.
SHOULD I USE DIGOXIN IN PATIENTS WITH ATRIAL FIBRILLATION?

Digoxin and Mortality in Patients With Atrial Fibrillation. Journal of the American College of Cardiology
Volume 71, Issue 10, March 2018
• 18,000 patients in ARISTOTLE trial.
• 32% getting dig already and overall no worse outcome unless dig concentration was >1.2 ng/ml (56% increase: HR: 1.56; 95% CI: 1.20 to 2.04).....
• For NEW users of dig: the risk of death HR: 1.78; (CI: 1.37 to 2.31) and sudden death HR: 2.14; (CI: 1.11 to 4.12)
• So you just kill off the weak ones…..
• Holds for those with and without heart failure
• So, avoid dig if possible. We already know it is only useful for symptom reduction in CHF and doesn’t change mortality.
GUESS WHAT? EXERCISE IS GOOD FOR YOUR BRAIN!


RESULTS

• Najar study:
  • 800 Swedish women followed for 44 years
  • Dichotomized physical activity at baseline the measured cognition over time
  • 28% RRR for dementia in the physically active group

• Stern study:
  • 132 adults 20-67 years old; mean age 40 years
  • Randomized to aerobic exercise regimen or stretching
  • Executive function improved in the aerobic exercise group compared to the control
STRESS ULCER PROPHYLAXIS DOESN’T CHANGE OUTCOMES

Intensive Care Med 2018; 44:1).
ONE META-ANALYSIS AND ONE STUDY

• 3300 patients requiring ventilation for > 24 hours, shock, coagulopathy, liver or renal disease etc. → If stress ulcer prophylaxis is going to help someone, it is these folks.

• GI bleed 2.5% versus 4.2%, NNT 59.

• No difference in 90 day mortality, pneumonia, etc.

• Meta-analysis: NNT to prevent one bleed 63. NNH 33 (pneumonia)

• So…certainly not needed in floor patients.

• If very high risk, consider but realize not changing outcomes.
WHAT TO DO WITH THE OLDER PATIENT IN THE ED WITH NONSPECIFIC SYMPTOMS – MENTAL STATUS CHANGE, FATIGUE, MALAISE, ETC?

JAGS 67:484–492, 2019

Nonspecific Symptoms Lack Diagnostic Accuracy for Infection in Older Patients in the Emergency Department

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STUDY BACKGROUND

• Older patients are known to have atypical symptoms of serious bacterial infections – estimated at 1/3 of pneumonia presentations and 2/3 of UTIs.
• Lack of focal symptoms with potential for high-acuity illness represents a clinical conundrum for these patients presenting to the ED.
• This study sought to determine if any symptoms or constellation of symptoms are predictive of serious bacterial infection.
RESULTS

• The short answer is, “No.”

• 424 patients seen in academic ED, 18% ultimately diagnosed with bacterial infection; positive and negative likelihood ratios calculated for symptoms/signs

• The only thing that helped was presence of fever.
  • If ED T>38°C, positive LR for bacterial infection was 18
  • Lack of fever was not predictive
RECHECK THE BLOOD PRESSURE

- 80,864 HTN patient visits at urban safety net clinic in Ohio 2016
  - 31,521 BP were elevated initially (39%)
    - 26,0089 remeasured (with EHR reminder) (83%)
      - 9358 (36%) were in the normal range
      - Median improvement in systolic BP 8 mm Hg
  - This brings the total from 61 to 73% control.
QUICK NOTES
Canagliflozin SGLT2 drugs are still associated with amputations. Not sure about whole class and ketoacidosis.


FLUOROQUINOLONES ARE ASSOCIATED WITH AORTIC RUPTURE SOURCE: ANOTHER FDA WARNING

Along with neurologic problems, hypoglycemia, etc. etc.
NEW GUIDELINES FOR ULCERATIVE COLITIS

DOES A V/Q SCAN ADD ANYTHING IF MY CT IS INDETERMINATE?

Curtis BR et al. Low yield of ventilation and perfusion imaging for the evaluation of pulmonary embolism after indeterminate CT pulmonary angiography. Emerg Radiol 2017 Apr 12; [e-pub].
NAH... ONLY 2% POSITIVE