Top Ten Updates in Evidence-Based Medicine

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Predictors of Postpartum Depression

- 343 pregnant women with major depressive disorder tested @ 60 days before and 60 days after delivery
- 17 item Hamilton depression rating scale
- Pre-partum depression ↑ risk for postpartum depression (24% vs 11%, P=0.013)
- For pregnant non-depressed women, predictors of PPD in 3rd trimester were elevations in "Work Activities" (anhedonia/loss of interest in activities, hobbies or work), early insomnia (difficult falling asleep), and suicidality ("life is not working")
- Pre-partum antidepressants to non-depressed women in 3rd trimester did not prevent postpartum depression
- Conclusion: assess women who have a history of depression in 3rd trimester: working activity, sleep difficulty and suicidal thoughts, to identify those at highest risk for postpartum depression

Infants to Pee with Quick Wee

- 344 infants (aged 1-12 months) required urine sample
- RCT: Quick-Wee method (n=174) (gentle suprapubic cutaneous stimulation using gauze soaked in cold fluid) or clean catch urine with no stimulation (n=170) for five minutes
- Results: The Quick-Wee method had a higher rate of voiding within five minutes compared w/ standard clean catch urine (31% v 12%, P<0.001), had a higher rate of successful urine sample collection (93% v 9%, P=0.001) and greater parental and clinician satisfaction
- No difference in contamination (27% v 45%, P=0.29)
- The number needed to PEE (NNE = 4.7 [95% CI: 3.4 to 7.7]) to successfully collect one additional urine sample within five minutes

Picky Eaters & Psychological Outcomes

- Cohort study of 900 children aged 2-6 years.
- Structured interview re: eating habits, psychiatric symptoms, functional status, and home environment.
- "Moderate/severe selective eating" (SE) on outcomes.
- Both: moderate and severe SE associated with anxiety, depression, ADHD, both concurrently and prospectively.
- Conditions worsened with severity of SE.
- SE: impaired family functioning
- Conclusion: SE associated with significant psychiatric disorders in young life and is an opportunity. Query child & parent and address dysfunction.
7%??? Really?

- US Dairy Council: "7% of American adults believe chocolate milk comes from brown cows" = 16.4 mil Americans
- Recommend Chocolate Milk
- DIY: Chocolate Syrup Recipes OR Yellow Pea Chocolate Milk or Nut Chocolate Milk
- A little commercial product
- "Quik" NOT Milk

Milk Does NOT Increase Adverse CV Outcomes

- Meta-analysis: 29 observational studies (780,000 persons, Australia, US & Europe) follow-up: mean of 13 years milk consumption & CV outcomes
- Total milk intake was NOT associated with increased mortality, coronary heart disease or cardiovascular disease risk.
- High and low fat dairy continued to show no association with mortality, coronary heart disease or cardiovascular disease.
- Fermented dairy intake found a slight reduction in risk for mortality but there was a high risk for heterogeneity.

Diet Soda Increases Stroke Risk

- Framingham Heart Study: Beverage Intake Risk of Stroke & Dementia
- Adjusting for age, sex, education (dementia analysis), caloric intake, diet, physical activity, smoking, DM, HTN
- Artificially sweetened drinks associated with an increased risk of ischemic stroke
- Compared to 0 per week, Hazard Ratios were:
  - Ischemic Stroke: 2.96 (95% CI, 1.26–6.97)
- Without DM or HTN, increased risk all-cause Dementia, Alzheimer's disease
  - Dementia: 2.89 (95% CI, 1.18–7.07)
- Sugar-sweetened beverages not associated with stroke or dementia.

Pediatric Cough and Cold Medication is Rarely Dangerous

- Adverse event data on commonly used cough and cold medications for children age 12 (majority) and under; 4,500 cases reviewed
- Most: accidental, unsupervised ingestions (67%) & med errors (13%)
- Adverse events: tachycardia, somnolence, hallucinations, mydriasis, agitation.
- 20 cases (0.6%) resulted in death, mostly < 2 yrs; none associated with therapeutic dosage of the medicine.
- Overall adverse event rate was 1 case per 1.75 million units.
- Conclusion: Adverse events are very uncommon and rarely fatal.

Dietary Changes

- 0 Drinks
- 1-6/Wk
- > 1/day

0 Drinks
- 0 Drinks
- 1-6/Wk
- > 1/day
**Diet Soda Makes You Fat**

RCT of overweight/obese women:

- Replace *diet soda with water* in 24-week weight loss program
- Goal: 7-10% weight loss + 60 min exercise 5 days/week

**Water Outcomes:**

- Greater weight loss (8.8 kg versus 7.6 kg)
- ↓ Fasting insulin, HOMA levels, 2 hr pp glucose
- No difference: waist, fasting glucose or lipid profiles
- Highly controlled exercise/dietary program; ? control group would have done as well.


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**Microbiome: Bugs Among Us**

- Skin, Gut, Lung, GU, Vagina
- “Personalized” Microbiome analysis
- Obesity ↔ Bacteroidetes and ↑ Firmicutes
- Modulate gut microbiome: diet, pre- and probiotics, antibiotics, surgery, and fecal transplantation to treat obesity epidemic

*Curr Oncol Rep* 2016 Jul;18(7):45

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**PURE: FAT (all types) are good**

- The Prospective Urban Rural Epidemiology (PURE) study; Cohort 35–70 Yrs; F/U 7-4 years; Dietary intake of 135 335 using FFQ.
- Higher carbohydrate intake associated with increased risk of total mortality (highest quintile vs lowest, HR 1.28 [95% CI 1.12–1.46] not CV disease or CV disease mortality).
- Total fat and each type of fat associated with lower risk of total mortality (total fat: HR 0.77 [95% CI 0.67–0.87]; saturated fat: HR 0.86 [0.76–0.99]; monounsaturated fat: HR 0.81 [0.71–0.92]; and polyunsaturated fat: HR 0.80 [0.71–0.90]).
- Higher saturated fat intake associated lower risk of stroke, HR 0.79 [95% CI 0.64–0.98]).
- Total fat (and fat types) were NOT significantly associated with ↑ risk of MI or cardiovascular disease mortality.

**Conclusion:**

- High carbohydrate → higher risk of total mortality, whereas total fat and individual types of fat were related to lower total mortality.

www.fhalional.com Published online August 28, 2015

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**Fermentable Carbohydrates Decrease Appetite**

- *Mouse Models:* High fat diets plus inulin (fermentable carbohydrate) protected against obesity and reduced adiposity.
- *Humans:* Microbiome ferments non-digestible carbohydrates → short chain fatty acids → signal FFAR2 receptor in colon → ↓ Appetite


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**If I have seen further than others, it is by standing upon the shoulders of giants.**

*Sir Isaac Newton*
“I Hate to Exercise”

Weekend Warrior
- Cohort study x 18 years: Exercise types on CV & AC Mortality
- Inactive (no moderate or vigorous activities) vs
- Insufficiently active (<150 minutes per week moderate intensity or <75 minutes per week of vigorous intensity activities 2 times per week)
- Regularly active (>150 minutes per week of moderate intensity or >75 minutes per week of vigorous intensity activities 3 sessions)
- Outcomes: Compared to Inactive: Insufficiently active, Weekend warrior and Regularly active all similarly reduced CV disease, cancer & all cause mortality.
- Exercising 1 or 2 times per week may provide the same risk reduction benefits as more aggressive exercise pattern

JAMA Intern Med. 2017 Mar 1;177(3):335-342

Forearm Blood Pressure Measurement for Severe Obesity
- RCT 51 Obese patients comparing using large BP cuff upper arm vs standard BP cuff on a forearm in vs Arterial line.
- Outcomes: Standard cuff on forearm blood pressure method (measurements taken 3 cm from above the triceps brachii) SBP by 8 mmHg underestimated, DBP by 18 mmHg underestimated.
- Conclusions: Standard cuff on forearm blood pressure determination more accurate at determining mean arm BP, higher risk for hypertensive adverse outcomes in the morbidly obese.

Obesity 2013; 21: E533-E541

Self Glucose Monitoring (SGM) Still Does Not Improve Outcomes in Type II Diabetes
- RCT 15 primary care practices, Type II diabetics older than 30 W/OUT on insulin, A1C: 6.5-9.5%
- Intervention: No self glucose monitoring vs once daily SGM vs once daily SGM with enhanced feedback by automated messages delivered via meter x 52 weeks
- Outcomes: There were no significant differences in hemoglobin A1 levels across all three groups. There were no significant differences in health-related QOL scores and no differences in adverse events (hypoglycemia, healthcare utilization or insulin use).

JAMA Internal Medicine June 10 2017

What is Upper A1c Level that INCREASES Mortality?
- 7.5%
- 8.0%
- 8.5%
- 9.0%

US: HbA1c and all-cause mortality risk among patients with type 2 diabetes
- Prospective 13,334 men /21,927 women wT2DM in US on influence of HbA1c on all-cause mortality; x > 8 Yrs
- J-shaped association of HbA1c with all-cause mortality
- Both high and low levels of HbA1c were associated with an increased risk of all-cause mortality.

Int J Cardiol. 2016 Jan 1; 202: 490–496
### SR & MA: Sulphonylureas → Mortality

- 82 randomized controlled trials (RCTs) and 26 observational studies.

- Meta-analyses of RCT data showed an increased risk of all-cause mortality and cardiovascular-related mortality for Sulphonylureas (SUs) compared with all other treatments combined (HR 1.26, 95% CI 1.10-1.44 and HR 1.46, 95% CI 1.21-1.77, respectively).

- Myocardial infarction was significantly higher for SUs compared with DPP-4 inhibitors & SGLT-2 inhibitors (HR 2.54, 95% CI 1.14-5.67, HR 41.80, 95% CI 1.64-360.4).

- Risk of stroke significantly higher for SUs than DPP-4 inhibitors, GLP-1 ag, TZD’s & insulin.

- **Conclusions:** SU therapy increases the risk of major cardiovascular disease-related events vs other glucose lowering drugs.

### In the Gluten Free Craze, Should we Screen for Celiac?

- The U.S. Preventive Services Task Force has concluded evidence is insufficient to recommend for or against screening for celiac disease in asymptomatic people.

- Editorialists: "Recognizing most celiac disease is undetected and may present with diverse symptoms, it is reasonable that clinicians should have a low threshold for testing for celiac disease.

- High-risk populations: + family Hx, type 1 diabetes mellitus, auto-immune.

- Symptoms:
  - GI: Diarrhea, cramping are the most common GI symptoms, Steatorrhea, Flatulence, Abd. Pain/N/V, hemorrhoids, Recurrent aphthous stomatitis
  - Muscles: cramps, Iron deficiency anemia, paresthesias (hands, feet)
  - CNS: Anxiety/depression, Weight loss, weakness, Migraine, arthralgias/myalgias, Delayed puberty

### USPSTF: Prostate Cancer Screening

- U.S. Preventive Services Task Force considering changing their recommendation for prostate cancer screening from a grade B to a C grade (offer selectively based on professional judgment and patient preference). Screen benefits are small for men aged 55 to 69 and is not recommended for men aged 70 and older.

- Over-diagnosis (where screening increases rate of diagnosis but has no impact on mortality) - up to 50% of screening detected cancers were over-diagnosed.

- No statistical difference in prostate cancer mortality between treatments.

- No benefit for digital rectal exam: "during follow-up of 8 years after initial cancer... rectal exam did not influence the chance for detection of cancer" European Urology 2009; 55 (1):139-146
Prostate Cancer Outcomes
ProtecT Trial
- RCT: PSA screen prostate cancer: surgery, radiotherapy, or “active monitoring” v. cancer and all-cause mortality for 10 years.
- Outcomes: Most cancers low risk (76% stage T1) and 77% had a Gleason score of 6;
- All-cause death rates were less than 10%.
- At 10 years, across all 3 arms: All-cause mortality ~10%; Prostate cancer specific mortality ~1%.

<table>
<thead>
<tr>
<th>Disease Progress (per year)</th>
<th>Prostatectomy</th>
<th>Radiotherapy</th>
<th>Active Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metastatic Disease</td>
<td>2.3%</td>
<td>3%</td>
<td>6.3%</td>
</tr>
<tr>
<td>Sexual Function (72 month)</td>
<td>14.5%</td>
<td>27.1%</td>
<td>28.9%</td>
</tr>
<tr>
<td>Urinary Continence (72 month)</td>
<td>31.2%</td>
<td>50.8%</td>
<td>9.9%</td>
</tr>
</tbody>
</table>

- Conclusions: Mortality was uniform across treatment methods, adverse patient outcomes varied.


Uromycitis poisoning

- "Urology & Nephrology Open Access Journal" invited him to submit a paper.
- "Case Report" about a man who suffers from "uromycitis poisoning," a fake condition from Seinfeld episode where Jerry caught by a security guard while urinating on a wall.
- Mr. McCool submitted as Dr. Martin van Nostrand (alter-ego of Cosmo Kramer).
- All references were made up.
- Urology & Nephrology Open Access Journal informed him the report had been sent out for peer review and was accepted with requests for a few minor revisions. The journal also requested a "nominal" payment of $799 plus tax.

How Effective Is Lung Cancer Screening?
- The USPSTF recommends annual screening for lung cancer with low-dose computed tomography (LDCT) in adults aged 55 to 80 years who have a 30-pack-year smoking history and currently smoke or have quit within the past 15 years.
- Screening should be discontinued once a person has not smoked for 15 years or develops a health problem that substantially limits life expectancy or the ability or willingness to have curative lung surgery. [B]

Eat & Drink Carefully & Don’t Smoke
- Health and Retirement Study- Influence of tobacco, obesity and alcohol on adults over age 50.
- ~80 percent of Americans at 50 have smoked cigarettes, been obese, or both.
- Those with best behaviors at 50 lived 7 years longer, and experienced a delay in the onset of disability of up to six years.
  Health Affairs 2017; 36(8)
**Alcohol Summary 2017**

- Light and moderate (21-14) alcohol intake has a protective effect on all-cause and CVD-specific mortality in U.S. & heavy or binge drinking (≥1 risk of all-cause and cancer-specific mortality).
- **High EtOH** increased hippocampal atrophy and dementia risk; *BMJ* 2017;357:j2353 [http://dx.doi.org/10.1136/bmj.j2353](http://dx.doi.org/10.1136/bmj.j2353)
- Danish Diabetes Cohort study: lowest risk of diabetes observed at 14 drinks/week in men (HR 0.57 [95% CI 0.47, 0.70]) and at 9 drinks/week in women (HR 0.42 [95% CI 0.35, 0.51] vs no EtOH).
- **SUMMARY:** Men <21 and Women ≤14 drinks per week.

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**Statins Provide No Benefit For Seniors**

- Secondary analysis of ALLHAT-Lipid Lowering Trial ≥65 without CV disease but with hyperlipidemia and HTN.
- At 6 years, no difference in all-cause mortality (actually higher in statin group vs usual care).
- There were also no significant differences in secondary outcomes, including coronary heart disease events.
- **SUMMARY:** In seniors without CV disease did not help.

**Opioids for Less Than 5 Days**

- CDC review 2006-2015 patients without cancer or substance abuse history to determine influence of 1st opioid use on long-term use (commercially insured, opioid naïve patients).
- Largest predictors of continued use:
  - Rx for >5 or 31 days
  - 2nd Rx was given (which doubles the risk for opioid use at 1 year)
  - Cumulative dose of 710 mg of morphine equivalence (6 days 10-325 acetaminophen-oxycodone; 2 QOD)
  - Long-Action Agents - Highest probability of continued use at 1 and 3 years
- **SAFEST:** Short acting for less than 5 days

**Non-Daily Statins**

- Review Article: non-daily dosing of statins; 10 pub
- Non-daily dosing from every other day to once a week
- **Outcomes:**
  - 70% previously unable to tolerate medication now could.
  - LDL reductions 12-38%.
  - Majority of patients able to meet old NCEP LDL goals.
  - Longer half life statins ➔ Non daily dosing
  - Save $$$
  - Any time of day dosing

Sex in 2015

- 2015: Internet-based, U.S. probability survey of 2,021 adults (975 men, 1,046 women) focused on sexual behaviors, took 12 to 15 minutes.
- Romantic/affectionate behaviors common for both men & women
- >80% reported: masturbation, vaginal sex, and oral sex
- Anal sex was reported by 43% of men (receptive) and 37% of women (receptive)
- Wearing sexy lingerie/underwear (75% women, 26% men)
- Public sex (≥30%), role-playing (≥22%), tying/being tied up (≥20%), spanking (≥20%), and watching sexually explicit videos/DVDs (80% women, 62% men)
- Three-somes (10% women, 18% men) and playful whipping (≥13)
- Sending/receiving digital nude/semi-nude photos (54% women, 65% men)

Burn Out: Sleep & Change YOUR Behavior

- Sleep: Physicians sleep fewer hours than general & not restful/restorative.
- Risk factors: Depression, Restlessness; ≥7 Hr/NT Sleep, Female

6 RULES TO BEAT BURNOUT:
1. After it: direct communication, time mgmt;
2. Avoid it: Delegate, limit setting, or walk away;
3. Change your perceptions
4. SLEEP: Short breaks, vacation, exercise, hobbies, counseling, & ... Buy a Bird Feeder

Sauna Bathing Lowers Risk of Dementia

- Prospective observation study frequency of sauna bathing on healthy men and all cause dementia
- After 20 years and adjusting for age, alcohol, BMI, BP, tobacco, type II diabetes, CV disease, heart rate and lipids
- Hazard ratio for dementia by sauna bathing 2 to 3 times per week (HR=0.78) and for 4-7 times per week (HR=0.34)
- Hazard ratio for Alzheimer's was 0.80 for 2-3 times per week and 0.35 for 4-7 times per week.

JAMA Internal Medicine 2015;175(4):542-8

5. Buy a Bird Feeder

- Survey of 1000 adults living in the UK
- Authors found people living in neighborhoods with higher levels of vegetation cover and afternoon bird populations had reduced degrees of depression, anxiety and stress
- No relationship between varieties of birds and outcomes; just the bird’s presence
- Conclusion: Visibility of birds and ground cover in urban settings can lower rates of depression and anxiety


How Many Hours/Night Do YOU Sleep?

- > 7
- 6-7 Hours
- < 6 Hours

6. Learn to Meditate

- SR of BRIEF (< 4 hrs training) Mindfulness Training in hospital based Physicians
- 15 studies met inclusion criteria; 7 RCTs
- Openness, patience, and acceptance can improve anxiety, burnout, and depression
- Change in Well-being (stress) or Behavior (attention or errors)
- Outcomes: Meditation improved stress, anxiety, mindfulness, resiliency, and burnout
- No studies found an effect on provider behavior

Learn: Meditation & Mindfulness
You are the sum product of your choices;
Choose happiness

Happiness comes through taming the
mind; without taming the mind there is
no way to be happy.
Dalai Lama

Burnout & Us
1. Sleep & Exercise & Wine
2. Alter what you do; CHANGE (Einstein)
3. Delegate, Set Limits, Say ‘NO’
4. Change Your Perceptions & Get Birdfeeder
5. Learn to Meditate; everyone can
6. Post Emerson in your office!

Meditation Resources for US & Patients
• Jay Winner’s: http://stressremedy.com/ FREE
• Kaiser Permanente: Guided Imagery
  http://members.kaiserpermanente.org/redirects/listen
• Entire Course: pabusemindfulness.com/MBSR/ataglance.html
• Apps: Breath2relax (VA), White Noise (Timer),
  Calm, GPS for the Soul

Summarize
1. Screen for Postpartum Depression/High Risk
2. Address Picky Eating; Milk is OK
3. Obesity: ? Inulin, Water, 2 days Exercise
4. T2DM: SGM No Benefit; Broaden Goals (6-9)
5. Screening: No Pelvic or Rectal Exams
6. Understand Prostate & Lung Ca Screening Outcomes
7. Statins: No >/= 65 & Non Daily Dosing
8. Opioids: < 5 Days of Short Acting Agents
9. Do not Sext!
10. Sauna (for men, for now…)

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