



# Practical Talks for Family Docs

May 2nd, 2023

1

## Faculty/Presenter Disclosures

**Faculty: Dr. Jennifer Young**

- Part-time employee of the College of Family Physicians of Canada
- Occasional speaker or physician advisor for Ontario College of Family Physicians

2

Upcoming Webinars – Tuesdays at 12:00 p.m.

<p><b>Les grands et petits moments de la dernière année:</b> <b>Revue de publications récentes et de nouveaux médicaments</b> May 2, 2023 Dr. Nicolas Dugré (French)</p>	<p><b>Short Snappers for Pride Month: Caring for 2SLGBTQ+ patients in primary care</b> June 20, 2023 Panel discussion (English)</p>
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3

**Top Studies of 2022**

**Mike Allan**  
College of Family Physicians of Canada  
U of A

4

# Faculty/Presenter Disclosure

- **Faculty/Presenter: G. Michael Allan**
- **Relationships with financial sponsors:**
  - **Any direct financial relationships including receipt of honoraria:** Chapters of CFPC (ACFP, OCFP, PEICFP), HMO & Hospitals (Sharp Rees Stealy, Peterborough & Osler), Universities, CPD Departments (UBC), Conferences & Groups (Rx Files & BS Medicine).
  - **Memberships on advisory boards of speakers bureau: N/A**
  - **Patents for drugs or devices: N/A**
  - **Other: CIHR, PRIHS – Funding for clinical trials,**
  - **Pay: CFPC – Employee (Previous U of A), Podcast (stipend)**



5

# Objectives

- 1) Describe **What's New** information relevant to family medicine
- 2) Describe **What's True** diagnosis, prevention, or treatment relevant to family medicine
- 3) Describe newly determined **What's Poo** help or information relevant to family medicine



6

## RCT: Does TIME-ing of BP meds matter?



21,104 (mean 1.5 BP Med)  
- Age ~65, 58% male, 13% past CVD



x5.2 years



BP meds at bedtime (HS) vs morning (AM)



CVD: 3.4% HS dose 3.7% AM dose



All-cause death & other endpoints: no difference

Adverse events: 69% HS vs 71% AM dose (e.g. dizzy, upset stomach, etc).

- Excess (?) toilet: HS (40%) vs AM(36%) dose

**Bottom-Line:** Appears BP med timing does not matter. Earlier results maybe *too good to be true*. Tie-breaker (BedMed) coming.

Lancet. 2022;400: 1417-25

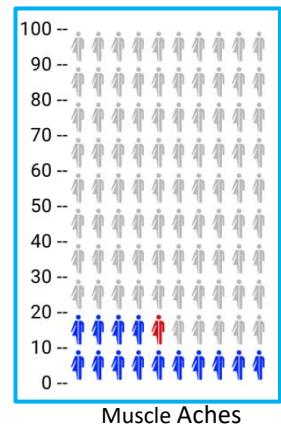
7

## “Those pills make my legs hurt.”

Meta-analysis: 23 RCTs, 154,664 pts x4.3 yrs

- Any muscle symptom at any time: 27.1% vs 26.6% (ss)
- 1st year: 14.8% statins vs 14% placebo
  - Slightly higher: Higher potency & females
- After 1 year, similar event rates (~15.0%)
- Mean CK ~2% higher
- Muscle injury + CK 10x normal – 7.7 vs 4.4 in 100,000

**Bottom-Line:** Statins unlikely (~1 in 15) the cause of most muscle symptoms.



1) Lancet 2022, [https://doi.org/10.1016/S0140-6736\(22\)01545-8](https://doi.org/10.1016/S0140-6736(22)01545-8).

8

## Low Sodium for Heart Failure: RCT



806

Mean age 67, 67% male, class II (71%)/ III (27%), EF 36%.

- Baseline Sodium: ~2200mg/day



1 year



Normal vs low sodium <100 mmol (<1500 mg/day).

Sodium at 12 months 1658 mg/d low vs 2073 mg/d usual



CVD admission/ER visit & death: 15% Low vs 17% usual (not diff)

- All-cause death: 6% vs 4% (not diff) & other individual outcomes.
- KCCQ (HF QoL)=3.4 better with low sodium. Unblinded so risk of bias.
- No diff in 6 minute walk test.

**Bottom-Line:** Pushing low sodium (beyond already pretty low), does not help heart failure.

Lancet 2022; 399: 1391–400

9

## 2 RCTs Linking Steroids & Relievers in Asthma



3132 & 1201

Late 40's, ~¼ male, ≥80% on maintenance puffers. Poorly controlled (by scores & exacerbations)



1-2 yrs.



Maintenance plus for Sx or exercise prn: Combo 180µg albuterol (as 2 puffs)+

- 160µg budesonide or
- 80µg budesonide or
- none.

Take Beclomethasone 80µg with every reliever puff vs usual



1<sup>st</sup> RCT: ≥1 exacerbation: 35% (placebo) vs 30% (moderate) vs 25% (high).

- Asthma Score: MCID 62% vs 67%

2<sup>nd</sup> RCT: Exacerbation Rate 0.82 vs 0.69

- Asthma score (span 20): 2.5 vs 3.4 better
- Workdays missed 3.4 less (from 17)

**Bottom-Line:** Linking reliever and steroids, on top of maintenance, can help poorly controlled asthmatics.

NEJM 2022;386:2071-83. NEJM 2022;386:1505-18.

10

## Influenza Vaccine after MI: RCT



2532 (cross-over)

Post MI within last 72 hrs

- Age ~60, ~80% male, 55% with STEMI



1 year



Influenza Vaccine vs Placebo

Limitations: Trial stopped early due to COVID, short, industry funded



Composite death, MI or stent thrombosis: **5.3% vaccine vs 7.2% placebo**

Any death & CV death: each ~2% lower

Pooled results of RCTs of CV death (4 RCTs, 3921 pts) at 1 year: HR = 0.51 (0.36, 0.71)

**Bottom-Line:** Flu vaccine shortly after MI may reduce composite outcome of death, MI and stent thrombosis by ~2% vs placebo driven by CVD death.

Circulation. 2021;144:1476-1484

11



12

## Some things confirmed this year

### IBS & FODMAPs

- RCT 459 primary care IBS patients: Low FODMAP vs otilonium bromide 40 mg TID
  - Responders @24 wks: 71% (diet) vs 61%
    - no subtype differences
- Bottom-Line: FODMAPS diet again

Carbone F. Gut 2022; 28;gutjnl-2021-325821.

Delgado-List Lancet, May 4, 2022 [https://doi.org/10.1016/S0140-6736\(22\)00122-2](https://doi.org/10.1016/S0140-6736(22)00122-2)

Paskins Z, Bromley K, Lewis M, et al. BMJ. 2022;377:e068446 .

Chou et al. AHRQ Publication No. 22-EHC044. Rockville, MD: Agency for Healthcare Research and Quality; September 2022. DOI: <https://doi.org/10.23970/AHROEPCFER250.2022UPDATESR1>

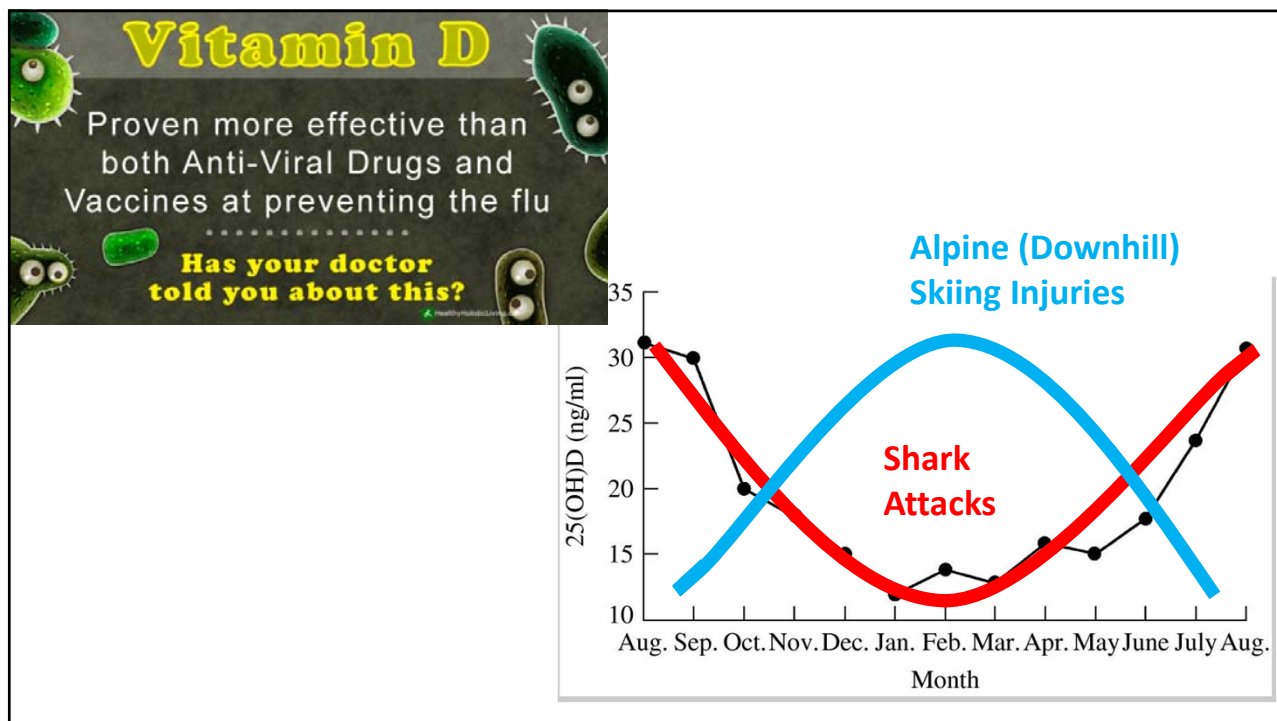
13

## Vitamin D 2021 Randomized Trials

- Mortality, 60,000 IU/month in 21,315 older patients x 5y:
  - No effect
- Vital RCT (2019): 2,000 IU/day vs placebo in 25,871 healthy older adults x5.3y.
  - No effect on mortality, CVD, or cancer.
  - Fracture, urinary incontinence, progression of frailty, preventing depression, macular degeneration, etc. – All negative
  - Does it prevent autoimmune disease? (e.g., RA, PMR, thyroid, psoriasis, IBD, other): 0.95% vs 1.2% placebo (NNT 400).

1. N Engl J Med 2019; 380:33-44. LeBoff MS. NEJM 2022; 387 (4): 299-309. 2. Neale RE; Lancet Diabetes Endocrinol 2022; 10;120-28. 5. Pinzon RT. J Pain Research 2021; 14: 3865-75. 6. Hahn J et al. BMJ 2022; 376: e066452. 7. O'Connor EA. JAMA 2022; 327 (23): 2334-2347. Markland AD. Am J Obstet Gynecol 2022; 226: 535. e1-12. 3. Kawahara T. BMJ 2022; 377: e066222. 4.

14



15

## Vitamin D for URTI & COVID-19: RCTs

6200 UK adults: usual care or test/treat (if Vit D <75nmol/L) – 800 or 3200 IU/day.

- Age ~60, 97% Vit D <75nmol/L (mean 41)

Vit D level (at 6 months): usual (67) vs low (79) vs high dose (103). No difference

- Confirmed URTI: Usual 4.6% vs low 5.7% vs high 5%
- All outcomes – no diff (even Compliers)

34,600 Norway adults: cod liver oil (400 IU vit D) vs corn oil (placebo) daily x6 months

- Age ~45y, vit D level ≥50: 86%

All outcomes - no differences:

- Positive COVID test (1.3% vs 1.3% placebo), serious COVID (0.7 vs 0.6%), acute RTI (23% vs 22%).

• Past Sys Rev (46 RCTs, 75,541 pts), Any URTI: Odds Ratio 0.92 (0.86-0.99)

- 61% vs 62% had ≥1 URTI - Driven by small RCTs & Odds Ratio (RR=0.98 (0.95-1.00))

**Bottom-Line:** Vitamin D does not prevent Respiratory Tract Infection, including COVID, in anyone.

BMJ 2022;378:e071230.  
BMJ 2022;378: e071245.

16



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## Multivitamins: Meta-analysis

### USPTF 2022 Evidence Report:

Outcome	Evidence	Odds Ratio (95% CI)	Findings
All-cause mortality	9 RCTS, 51,550 patients	0.94 (0.87-1.01)	No benefit across any outcome
Cancer mortality	4 RCTS; 37,400 patients	0.94 (0.81-1.09)	
CV events	1 RCT; 21,442 patients	0.98 (0.86-1.12)	

Cancer events (4 RCTS, 49,000): 8.5% vs 9%, OR 0.93 (0.87-0.99), NNT ~200 for 4-11y  
*“Current evidence is insufficient to assess the balance of benefits/harms of multivitamins for prevention of CV disease or cancer.”*

**Bottom Line:** Multivitamins do not reduce all-cause mortality, cancer mortality or CV events. It is unclear if the decrease in cancer incidence, if real, is meaningful.

O'Connor EA. JAMA 2022; 327 (23): 2334-2347.

17

## Getting the most out of your Vitamins



*Take your Vitamins to a friends' or family members' house 2.5 km away. Each day, walk over, take one and walk back.*

*For higher doses, take to a friends' or family members' house 5 km away. Each day run over, take two, and run back.*



*Instead of taking the vitamins, place them directly in the toilet. That's where their headed and this spares your kidneys the extra work.*



18

## Diabetes RCT: Tying surrogate endpoints to hard outcomes



5047

On metformin (DM x4 yrs), Age ~57, starting HbA1c 6.8-8.5%



X 5 years



Average doses: Sitagliptin 100mg vs glimepiride 5mg, vs liraglutide 1.6mg vs glargine 50 units



A1C  $\geq$ 7%: Insulin (67%) & GLP-1 (68%) < Sulfonylurea (72%) < DPP-4 (77%)



Microvascular: No difference in any outcome (ACR, GFR, combined renal, neuropathy) for any treatment

- Risk of any CVD outcomes was 9-9.6% for insulin, sulfonylurea versus DPP-4 vs 6.6% for liraglutide (NNT 33-42).
- Individual outcomes not different

**Bottom-Line:** No surprises. Medications that have no shown CVD benefit continue to no show benefit.

NEJM 2022; 387(12); 1063-74. NEJM 2022; 387 (12): 1075-1088.

19

## Acetaminophen and Blood Pressure: RCT



110 (cross-over)

Hypertensives (controlled on  $\geq$ 1 med or no meds + ambulatory BP 135-150)

- Age ~62, 42% male, mean daytime SBP~133mmHg



6 weeks



Acetaminophen 1g qid vs placebo x 2-week cycles.

- wash-out and repeat



Daytime Systolic BP: Placebo 133 vs acetaminophen 137mmHg

- Mean difference between groups, accounting for baseline = **4.7 mmHg**
- 24hr SBP: mean difference 4.2mmHg
- Varying DBP ~ 1.5 mmHg mean difference

**Bottom-Line:** Acetaminophen may increase BP ~5mmHg in 2 weeks (who knows after).

Circulation. 2022;145:416-423

20

## Providing the majority of care with the best outcomes takes a little time,...

- Simulation study of preventative, chronic and acute care to hypothetical panels of 2500 patients based on US adult population survey (NHANES)
  - “Our calculations represent a lower bound estimate for PCP time.”

Family physicians need **26.7hrs/day** to provide care. Each day has,...

-Preventative care = 14.1hrs (e.g. counselling for weight loss); Chronic disease care = 7.2 hrs (e.g. HTN, anxiety/mood); Acute care = 2.2 hrs; Document & inbox = 3.2 hrs/d

With team-based care, time decreased to **~9.3hrs/day**

- **Bottom Line:** An impossible job; done impossibly well.

Porter J. J Gen Intern Med. 2022 Jul 1 . DOI: 10.1007/s11606-022-07707-x

21

## Top 3 “*You Don’t Say*” quotes from the Discussion,...

Based on the gap in guideline recommendations and reality:

1. “Many clinicians are likely not completing specific services, not completing them according to the guidelines, or working overtime.”
2. “It may also drive physician burnout”
3. “If clinical guidelines do not consider the time opportunity cost of an intervention, the gap between guideline-based and clinical medicine will persist.”

Porter J. J Gen Intern Med. 2022 Jul 1 . DOI: 10.1007/s11606-022-07707-x

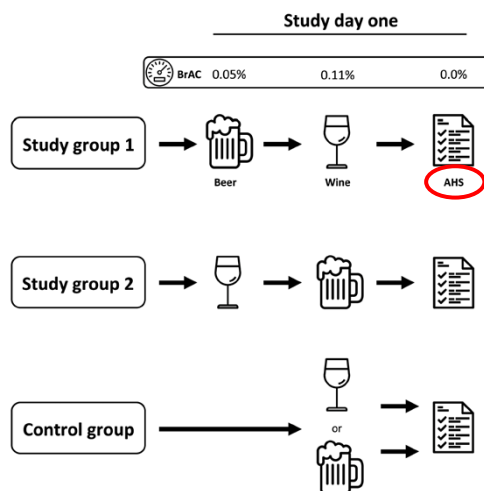
22



23

## Hang-overs: It must be what I drank, not the amount!

90 Europeans, age ~24,  
~50% male



- Premium Pilsner Lager (Carlsberg)
- Edelgräfler quality white wine
- Could stop for safety concerns: impaired LOC or balance, nystagmus, feeling unwell, etc,.... + illusionary misjudgment.
- Rate perceived drunkenness (0-10) & Acute Hangover Scale next day (0-56)
- Drank ~1.3 Lt beer + 0.7 of wine over 4 hrs.
- If only beer or wine, 2.6 or 1.4Lt respectively (~4 hours)

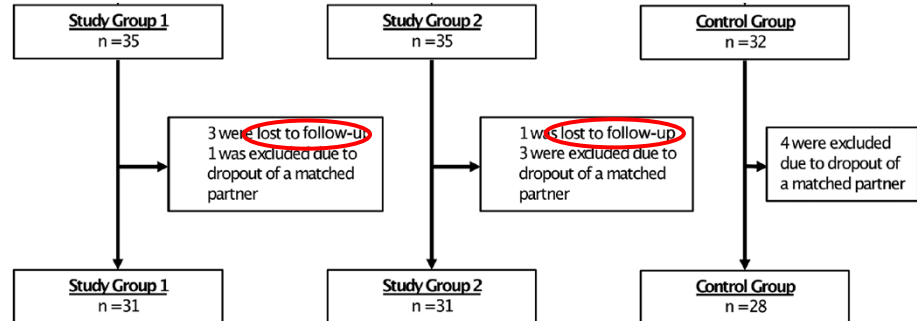
Am J Clin Nutr 2019;109:345–352.

24

## Hang-overs: It must be what I drank, not the amount!

Actually started  
with 105,... but

**Per Protocol**



- Hangover was not predicted by type of alcohol or by the order in which they were consumed
- Predictor of Hangover: Perceived drunkenness and vomiting (like most reliable)

**Bottom-Line:** Signs of how drunk you the best predictors of hangover (especially when you control for individuals' alcohol level)

Am J Clin Nutr 2019;109:345–352.

25

Questions?



Thanks for Janice Harvey

26