Unusual papers that might change your practice: Grand Rounds 2018

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Please go to PollEv.com/unusualpapers

1

Testing PollEverywhere

- Open browser to pollev.com
- To participate, join: PollEv.com/unusualpapers

2

Conflicts of Interest

No one usually pays me to do this

I am interested in conflict but have no conflicts of interest

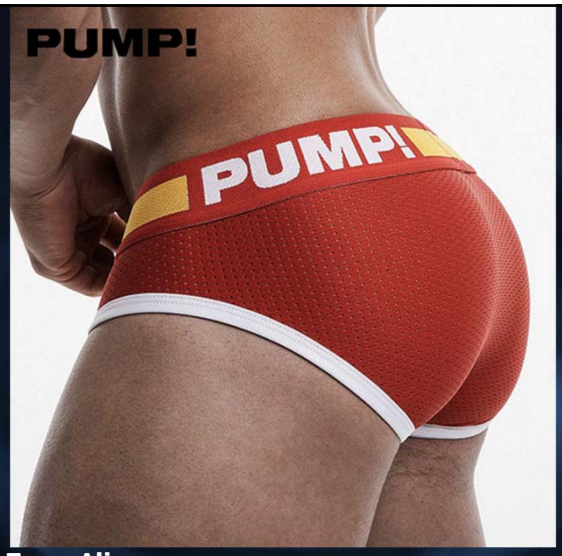
"I'm afraid I can't treat you, Mr. Fisk. I have a conflict of interest."

3

Someone called me "callipygian". What did they mean?

A) Having poor penmanship
B) Having thick eyebrows
C) Musically-inclined
D) Having shapely buttocks
E) Confusing

4



From Aliexpress.com

ORLVS 2019 New designed Brand Men Underwear Briefs Slip Mesh Shorts Cueca Gay men Underwear sexy Male panties Discount Price: US $2.01 - 3.49 / piece -30%

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Callipygian

- (ˌkalɪˈpɪdʒɪən)
- Adj.: *Having well-shaped buttocks*.
- Late 18th century: from Greek kallipūgos (used to describe a famous statue of Venus), from kallos ‘beauty’ + pūgē ‘buttocks’, + -ian.

6

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7

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8

Case Resolution

- I thanked them with a coupon

9

Objectives

- Will review several papers that actually have some potential relevance to YOUR practice
- Interactive (pollev.com)
- Bottom line
- Hopefully will inspire some curiosity and wonder

10

I Purten-Schenn

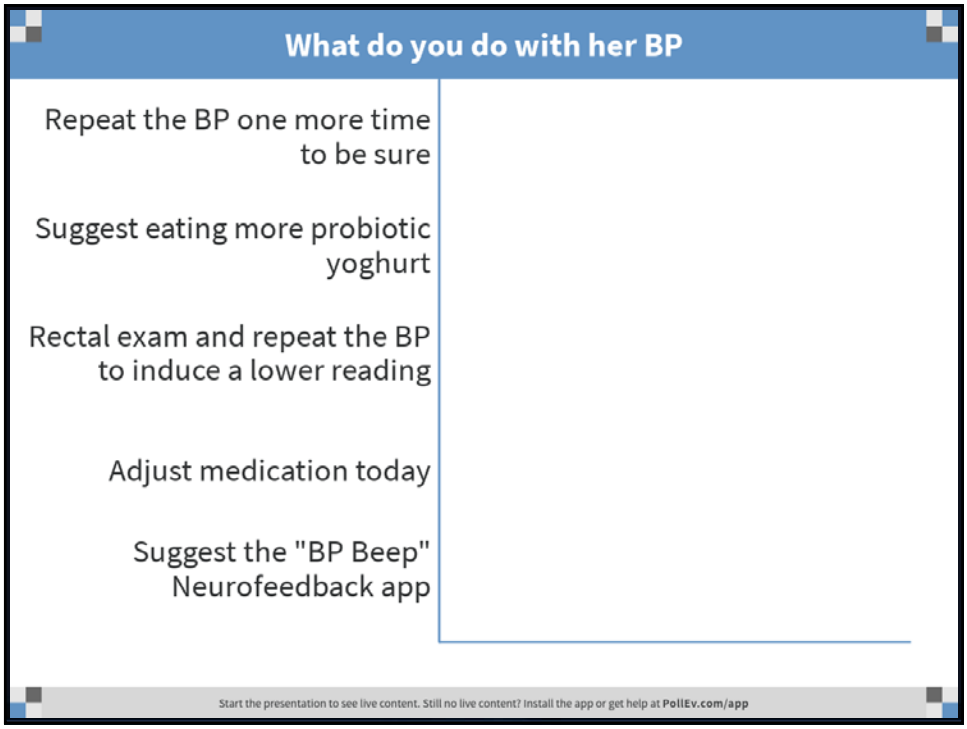
- Indigo is a 45 yo woman on HCTZ 12.5 mg who had a BP of around 148/92 the last two visits over 3 months
- She has made significant lifestyle changes
- Your nurse rechecks her BP today: 142/92

11

What do you do?

A) Repeat the BP one more time, to be sure
B) Suggest eating more probiotic yoghurt
C) Rectal exam and repeat the BP to get a lower reading
D) Adjust medication today
E) Suggest the BP Beep Neurofeedback app

12



13

I Purten-Schenn

- Einstadter, D et al, **Association of Repeated Measurements With Blood Pressure Control in Primary Care**, JAMA Intern Med . 2018 June 01; 178(6): 858-860. doi:10.1001/jamainternmed.2018.0315.
- N=38260 patients with hypertension at 80864 primary care office visits, identified by HER
- Prior to study, EHR had an advisory alert put in to remind staff to check a second BP if the first one was elevated
- Reviewed EHR and pulled those with two readings

14

Repeat BP

- Primary outcomes:
  - Change in sBP on repeat reading if elevated first one (≥140/90)
  - Proportion of patients whose BP was controlled on final reading of the visit
- 59% female, mix of ethnicity and socioeconomic status

15

Measurements

- Initial BP elevated on 31531 visits (39%)
- Repeated on only 26089 visits (83%)
- Median change was -8 mm Hg
- Higher the initial BP, greater the change
- 9358 (36%) of final BP ≤140/90

16

Caveats

- EHR-based
- How were BPs taken?
- Some regression to the mean? (65% effect possibly)
- Which number really matters?
  - Maybe the first one predicts stroke better?
- External validity? (done in Cleveland)

17

Bottom Line

- Repeat the BP!
- From personal experience, this is especially true in the ER (don't diagnose hypertension there!)
- Have you been overtreating HTN?
  - This study suggests that about a 1/3 who read high are actually well controlled!

18

Case Resolution

- You repeat the BP and it is normal
- She is happy to not have to change meds and decides to listen to your lifestyle advice and starts cycling
- On her first ride, she chokes on her kale smoothie, veers into traffic and gets hit by a truck and dies

19

From BP to Alcohol

20

Molson Chardonnay

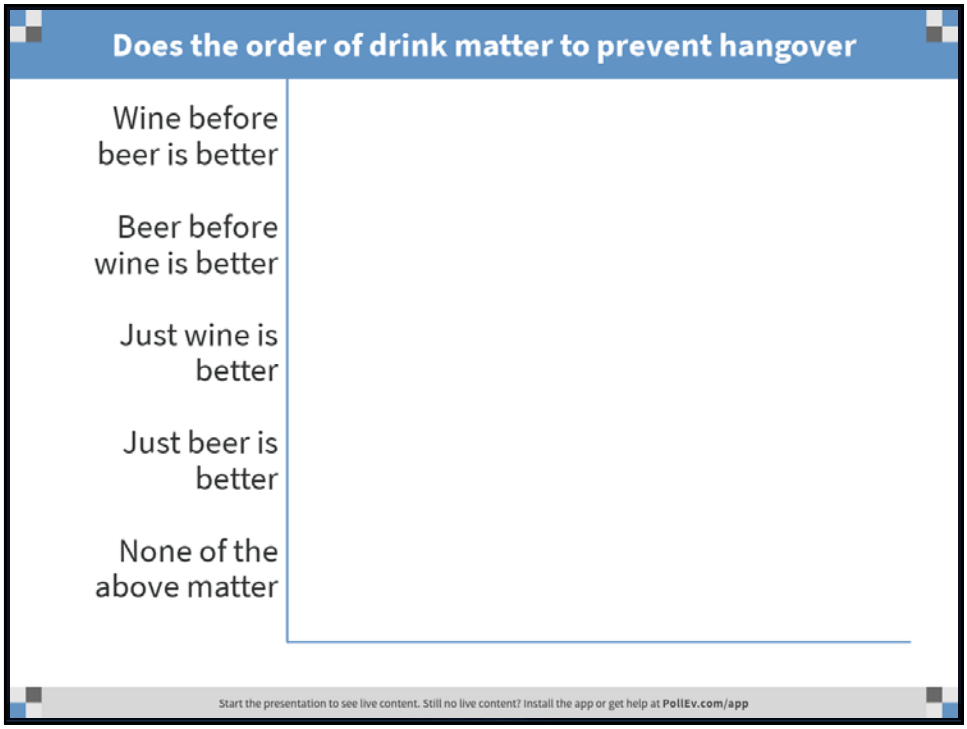
- 25 yo male who says, "I'm really just hungover because I had wine before I had beer and I usually have beer before I have wine".
- Is there any truth to: "Beer before wine and you'll feel fine, wine before beer and you'll feel queer."?
- "Wein auf Bier, das rat' ich Dir—Bier auf Wein, das lass' sein."
- "Bière sur vin est venin, vin sur bière est belle manière."

21

Does the order of drink matter to prevent hangover?

A) Wine before beer is better
B) Beer before wine is better
C) Just wine is better
D) Just beer is better
E) None of the above matter

22



23

Molson Chardonnay

- Jöran Köchling, et al; Grape or grain but never the twain? A randomized controlled multiarm matched-triplet crossover trial of beer and wine, *The American Journal of Clinical Nutrition*, Volume 109, Issue 2, 1 February 2019, Pages 345-352, https://doi.org/10.1093/ajcn/nqy309
- N=105 19-40 yo healthy University students in Germany, without history of abuse disorder or abstinent from alcohol, or Asian, or pregnant, etc.
- Looked to see if order of consumption affected hangover severity (Acute Hangover Scale)

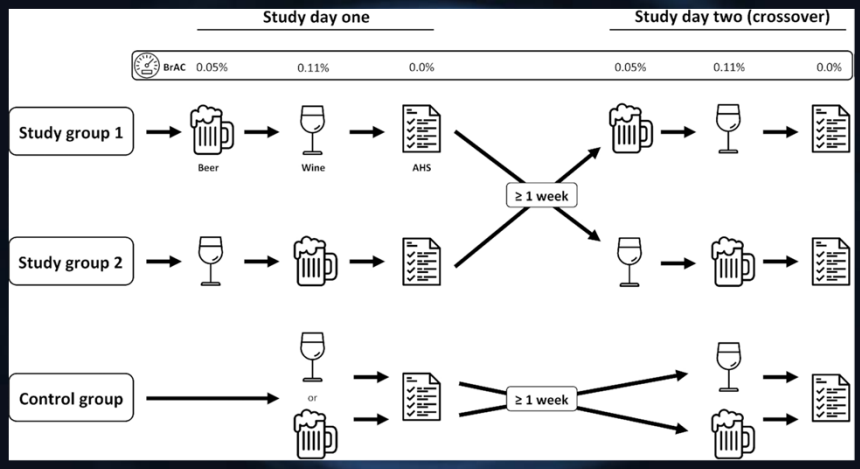
24

Interventions (matched 3X crossover)

- Group 1:
  - Day 1: consumed Etoh to breath alcohol concentration of ≥ 0.05% then wine to ≥ 0.11%
  - Day 2 (>1wk later): consumed wine first then beer
- Group 2:
  - Day 1: Wine, then beer
  - Day 2: Beer, then wine
- Group 3:
  - Wine or beer day 1 then the opposite day 2

25

FIGURE 1 Study design. On the first day, group 1 consumed beer until a breath alcohol concentration (BrAC) ≥0.05% was ...



The American Journal of Clinical Nutrition, Volume 109, Issue 2, 08 February 2019, Pages 345–352, https://doi.org/10.1093/ajcn/nqy309

OXFORD UNIVERSITY PRESS

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Methods

- Measured the Acute Hangover Scale after breath Etoh back to normal.
- Pilsner lager from 1847 Carlsberg 5%, served cold
- 2015 Edelgräfler quality white wine, 11.1%, served cold
- Slept in a lab, controlled fluids

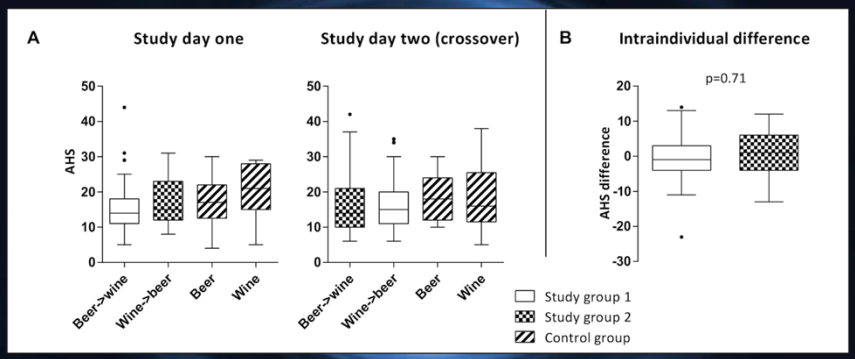
27

Methods

- Powered 80% to detect a 14% difference in AHS
- Not truly blinded although did not know what they were getting until just before drinking.

28

FIGURE 3 Hangover severity in relation to alcohol consumption. (A) "Grape or grain but never the twain?"—AHS ratings ...



The American Journal of Clinical Nutrition, Volume 109, Issue 2, 08 February 2019, Pages 345–352, https://doi.org/10.1093/ajcn/nqy309

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Results

- No matter how it was sliced and diced, no difference in anything (by gender, size, preference, etc.)

30

Caveats

- FREE booze on campus and only N=105?!
- German beer and wine in Germans (external validity)
- Carlsberg donated the beer
- What about longer term use?
- Blinding?
- Cider?

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Bottom Line

- Drunk is drunk, hangovers happen
- Drink what you want, but don't expect less of a hangover
- Go to Germany to get free booze in a study because apparently they don't want it!

32

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34

Case Resolution

- Molson is very happy to have read the study and signs up to be a participant in multiple similar studies
- Turns out he is a bomb disposal expert and the radial nerve palsy he develops on the fourth such study causes him to unable to diffuse the bomb, with fatal results...

35

Moving from alcohol to OBS/Gyne

36

Beattie Kidd

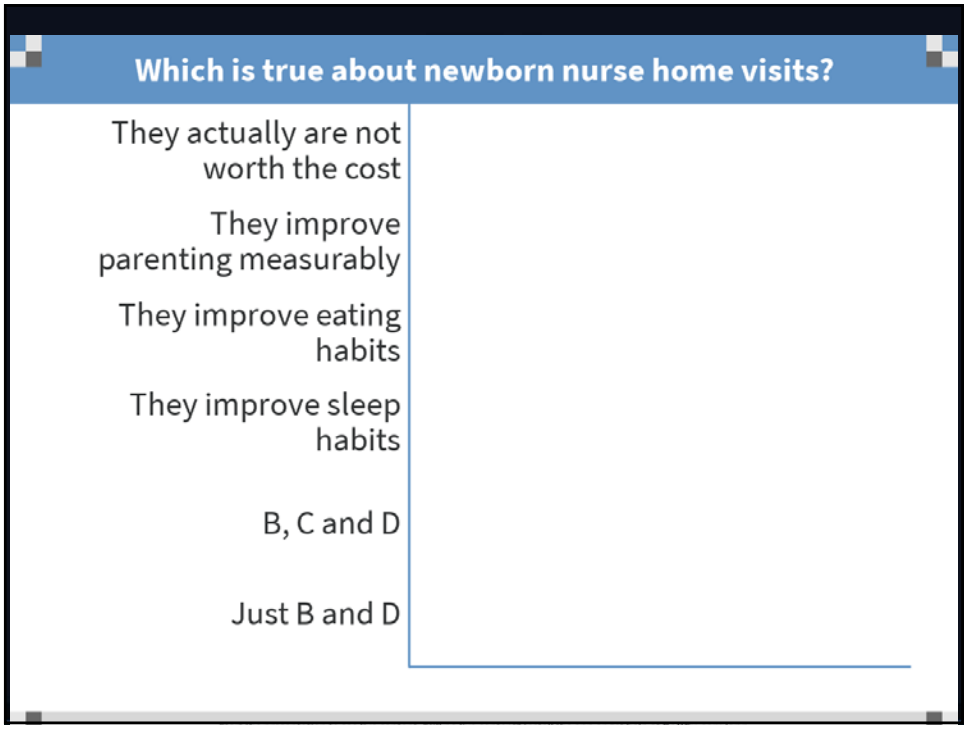
- Beattie, a 20 yo single mom, smoker, unemployed, poor, unplanned pregnancy
- Denies Intimate partner violence

37

Which of the following is true about regular nurse home visits?

A) They actually are not worth the cost
B) They improve parenting measurably
C) They improve eating habits
D) They improve sleep habits
E) B, C and D
F) Just B and D

38



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Beattie Kidd

- Goldfeld, S, et al, **Nurse Home Visiting for Families Experiencing Adversity: A Randomized Trial,** Pediatrics, January 2019, VOLUME 143 / ISSUE 1
- N= 722 women with significant social risk (screened), randomized during pregnancy to usual care vs regular nurse/social work home visits
- English-speaking, Tasmanian

40

Risk Factors

- Poorer global health (measured 6 item self-report)
- Long-term illness
- Smoking
- Young maternal age (<23)
- Not living with another adult
- No support in pregnancy
- Anxious mood
- Education <gr 12
- No household outcome or never worked

41

Intervention

- Usual care nurses and Outcomes assessment blinded to interventions
- Focused on:
  - Sleep, safety, nutrition, regulation, and bonding/relationship
- Offered up to 25 visits, 60-90 min
  - 3 antenatal, weekly to 6 weeks then q 6-8 wks

42

Parental Care

- Safety: kidsafe audit of home
- Sleep:
  - 0-6 mos, anticipatory guidance, >6 months behavioral sleep intervention
- Nutrition:
  - Get up and Grow healthy eating guidelines

43

Parent Responsivity

- Promoting early bonding and verbal responsivity
  - "Promoting First Relationships" programme

44

Home Learning Environment

- “Learning to Communicate” program
  - Tools to help, books, activities, etc.

45

Key differences from usual care

- Starts antenatally
- Same nurse for 2+ years
- Nurses have extra training in the modules
- Proactive rather than needs based
- Social worker dedicated to issues
- Group activities tailored to program

46

Outcome

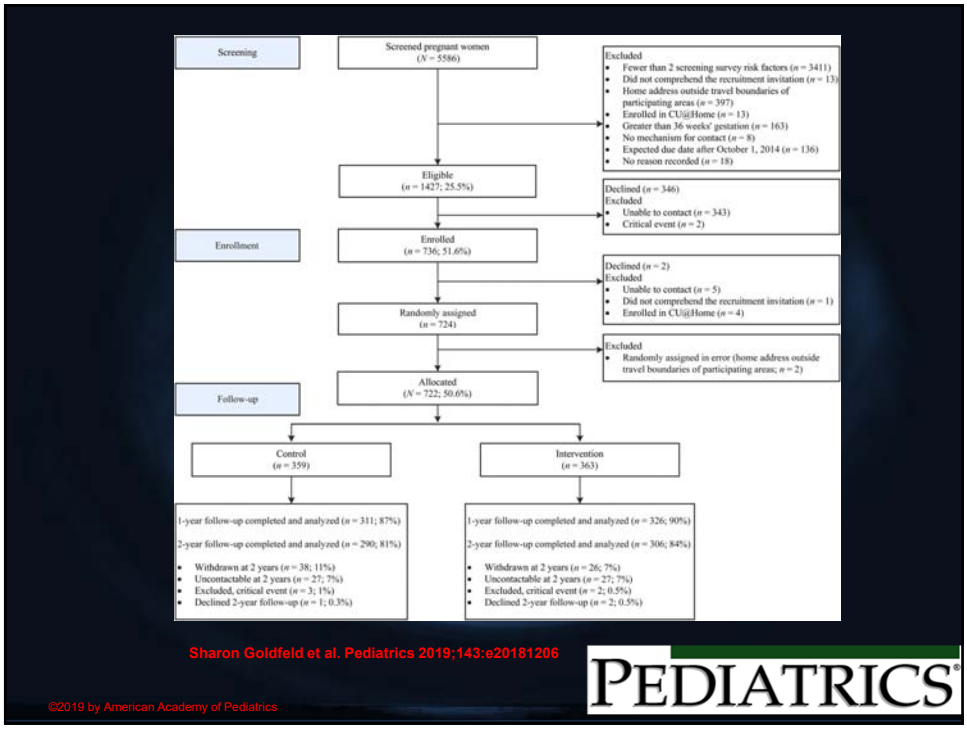
- Primary outcome observed, measured multiple factors at 2 year visit:
  - Regular meal times
  - Food choices (over past 24 hours)
  - Regular bedtime and routine
  - Safety of environment
  - Warm parenting
  - Hostile parenting
  - HOME learning enviroment

47

Secondary outcomes

- Also at 2 years self-reported
  - Breastfeeding, age started solids, drink choices, feeding issues, eating breakfast, sleep issues, child-parent relationship, parenting efficacy, global health, life satisfaction, maternal QOL, education, employment, smoking, stress, etc.
- Sample size was based on HOME score alone (power 80% for a 0.3 SD difference)

48



Sharon Goldfeld et al. Pediatrics 2019;143:e20181206

PEDIATRICS

49

Intervention

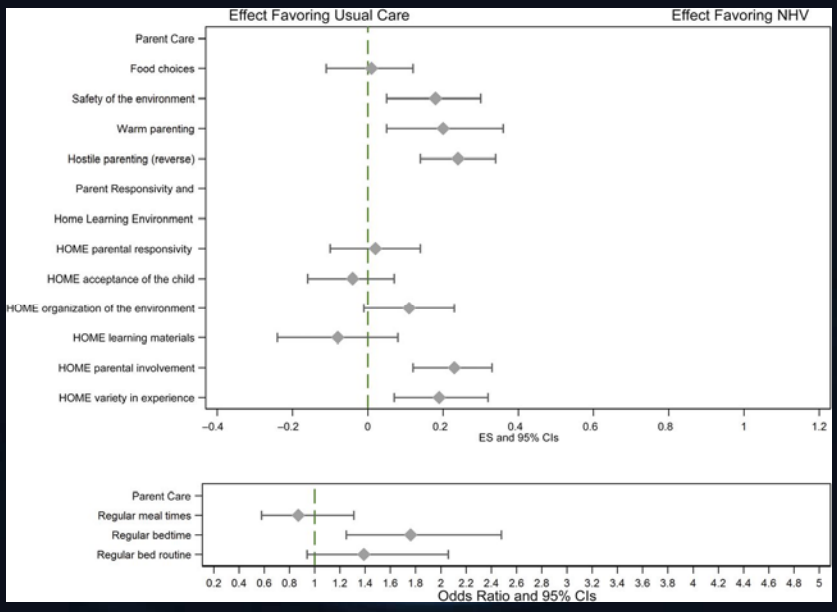
- Similar lost to follow up just under 20%
- Only 71% got 75% of the 25 visits (mostly missed antenatally due to late recruitment in pregnancy)
- Averaged 22 visits in intervention
- Cost $9385 per participant vs $1879 for usual care

50

Results

- Compared to general population, clearly more socially disadvantaged by geography (41% vs 19%), lack of a partner (89% vs 73%), lower level of post-secondary education (29% vs 11%)
- Higher rates of poor health (72%), no household income (33%), smoking (33%), young pregnancy (27%)

51



Sharon Goldfeld et al. Pediatrics 2019;143:e20181206

PEDIATRICS

52

Results

- It worked on 6 of the 13 (!!!!) primary outcome measures:
  - Safety, warm parenting, reduced hostile parenting, parental involvement, variety of home experiences and regular bedtime.
- Most secondary outcomes improved too
- Number of visits:
  - 22.7 home visits in intervention (SD 7.4)
  - 7.6 total visits in control (SD 4.3), only 1.4 at home

53

Secondary outcomes

- Mom's reported better child health
- Kid did more to make mom laugh
- Parents felt more enabled and satisfied (Mikey likes it)
- Did not report important other outcomes:
  - Injuries, behavioral issues, post-partum depression,

54

Caveats

- Not hard outcomes
- Although good, almost 20% lost f/u
- Excluded language and learning issues
- Intervention vs just lots of home visits?
- External validity?
- Ideal number of visits?
- Could families do much of this from office visit? (give them checklists to bring back?)

55

Bottom Line

- Regular home visits probably have some meaningful impact in socioeconomically disadvantaged families with newborns
- Not clear if this is the most effectve program, but consider an "identify" and "home check" type of program for your setting

56

Some Resources

Safety:

https://www.kidsafetas.com.au/

Nutrition:

http://www.health.gov.au/internet/main/publishing.nsf/Content/phd-gug-child-familybook

Communication:

https://www.slhd.nsw.gov.au/learningtocommunicate/pdf/LtC_ParentHandbook.pdf

57

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58

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59

Case Resolution

- Beattie becomes a model parent
- Unfortunately the baby disappears
- They are found many years later, jumping around with a group of kangaroos, having been raised by them in the wild

60

From kids to hallucinations

61

Hal O'Cinnation

- Hal is a 73 year old male with DM II, HTN, cataracts pending surgery, OA of the knees and remote alcoholism
- He has become housebound recently
- In the last two months, he has been seeing many "little elves and strange creatures" in his house, and is worried he is going crazy

62

Further info

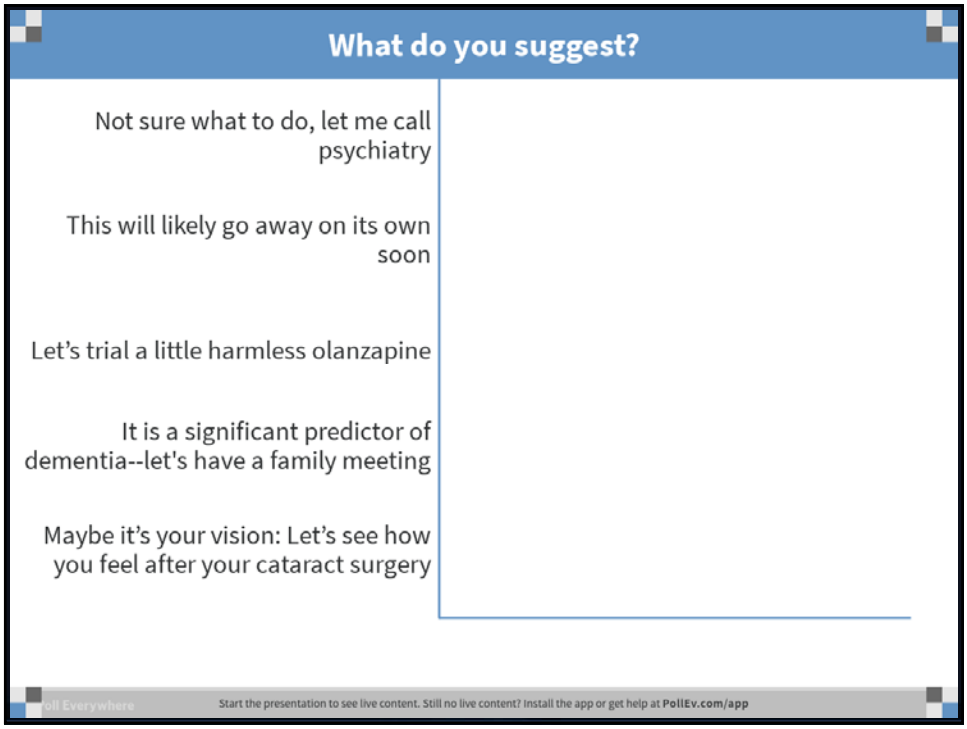
- CT head shows chronic small vessel disease, blood work normal
- MMSE 27/30 (could not remember the date and missed two out of three words on recall)
- No auditory hallucinations, normal mood, but anxious
- No visual field loss or neuro findings other than cataract-induced visual loss

63

You suggest

A) Not sure what to do, let me **call psychiatry**
B) This may be delirium, let's admit you
C) Let's trial a little **harmless olanzapine**
D) I'm worried this is a **significant predictor of dementia**, let's have a family meeting
E) Maybe **it's your vision**: Let's see how you feel after your cataract surgery

64



65

Hal O'Cinnation

- Gordon, K, Prevalence of visual hallucinations in a national low vision client population Can J Ophthalmol. 2016 Feb;51(1):3-6. doi: 10.1016/j.jcjo.2015.10.006
- N=2565 patients in a CNIB low vision rehab clinic (total 2721 were offered survey)
- Cross-sectional self-report survey to estimate prevalence of visual hallucinations
- Assumption is that most are Charles Bonnet Syndrome

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Charles Bonnet Syndrome

- Visual hallucinations, usually benign (often Lilliputian) directly related to visual loss
- Patients usually have insight
- Not usually directly associated with cognitive or psychiatric symptoms
- Only visual, not auditory or other senses
- Often go away over 12-18 months but can last years

67

One important question

- "Many people who come to CNIB tell us that they see things they know are not there. Some see patterns or shapes. Others see images of people or animals. Have you ever experienced this? "

68

Results

- 18.8% of respondents reported visual hallucinations
- Consistent with glaucoma study by Jackson et al 2011
- Homogeneous results are more believable
- Probably underreported if anything

69

Age and Sex

Table 2—Prevalence of hallucinations by subgroup

	Number (%)	% With Hallucinations
Total new clients	2565 (100)	18.8
Age, y		
40–80	1048 (41)	16.9
81+	1517 (59)	20.2
Sex		
Female	1612 (63)	20.1
Male	892 (35)	16.8
Missing	61 (2)	14.8

70

Results

Eye disease		
AMD	1562 (61)	19.9
Glaucoma	315 (12)	18.7
Diabetic retinopathy	168 (7)	17.3
Other eye disease	520 (20)	16.2

71

Case Report

- Smith, C et al, Remission of Charles Bonnet syndrome after cataract extraction Can J Ophthalmol 2018
- 84 yo who said “you took away my little friends” after her bilateral cataract surgery
- Noticed them more on blank walls in low lighting

72

Caveats

- Very select population
- No attempt made to confirm diagnosis of Charles Bonnet
  - They did not ask about other hallucinations, neuropsychiatric, etc
- What is the prevalence in the general population without visual loss?

73

Bottom Line

- This was just to highlight the frequency of this—it is often misdiagnosed
- Important to ask even in young people
- Does not generally respond to antipsychotics or benzos

74

You suggest

A) Not sure what to do, let me **call psychiatry**
B) This will likely **go away on its own** soon
C) Let's trial a little **harmless olanzapine**
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76

Case Resolution

- Hal has his cataract surgery and the visual hallucinations disappear!
- He is so excited to see you after the surgery that his heart can't handle the extra adrenaline and he dies in your office with a smile on his face

77

From visions to couples

78

Waylo Sugar

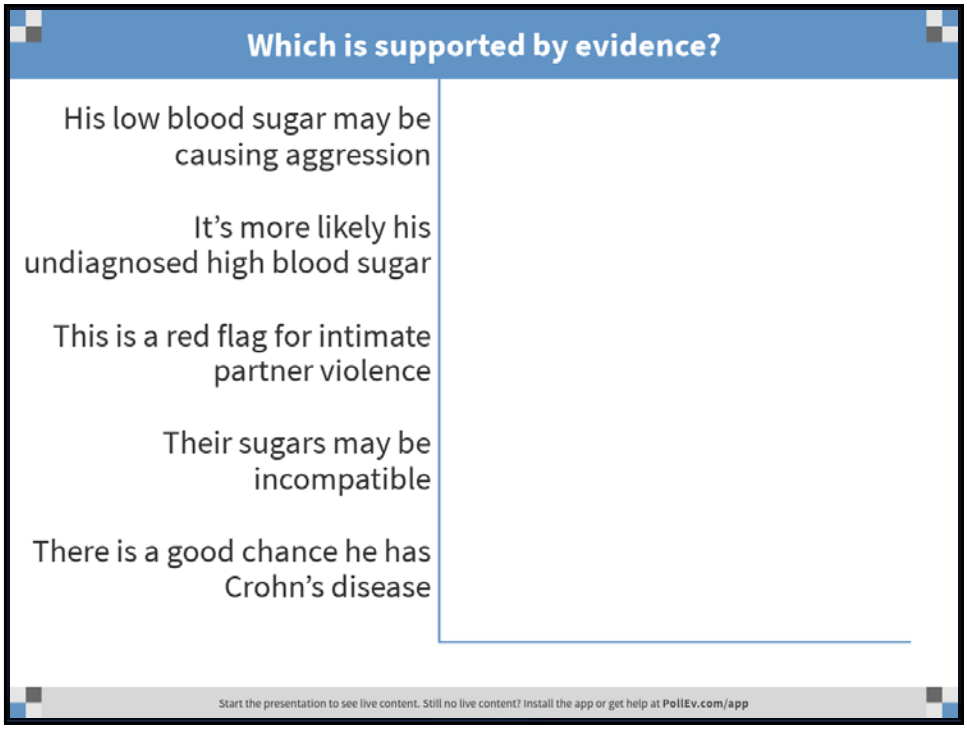
- Flo (35 yo) and Waylo (36 yo) are seeing you for a relationship conflict
- They are convinced their relationship issues will be better if you can solve Waylo's problem with being "hangry"
- Neither is diabetic and neither take any medication

79

Which is supported by evidence?

A) His low blood sugar may be causing aggression
B) In fact, it's more likely his undiagnosed high blood sugar causing problems
C) This is a red flag for intimate partner violence
D) Their sugars may be incompatible
E) There is a good chance he has Crohn's

80



81

Waylo Sugar

- Bushman, B, et al, Low glucose relates to greater aggression in married couples, Proc Natl Acad Sci USA 2014 Apr 29;111(17):6254-7. doi: 10.1073/pnas.1400619111. Epub 2014 Apr 14.

- N=107 heterosexual couples recruited via ads and paid $100
- Married an average of 12 years, mean age 35±11, 80% caucasian (19-82 yrs old)
- Tested in couples but responded individually

82

Method

- Relationship satisfaction questionnaire
- Glucometers for 21 days am and hs
- Given a voodoo doll and instructed to stick up to 51 pins in it each day to describe "how angry you are" at them
  - Instructed to do alone without spouse
- (This is validated!!)

83

Method

- After 21 days couple is tested in lab
- "Competed with spouse" to press a button when something appeared on screen
  - In fact, were competing with a computer
- Winner got to blast spouse with a loud noise (up to level of fire alarm)
  - Sound was a mix of metal on chalk board, dentist drill and ambulance siren
- Could choose from 0.5 to 5 seconds!

84

Method

- In fact, 13 out of 25 were automatic losses, randomly determined
- Computer randomly chose punishment given to test subject
- Validated measure of aggression!
- Attempted to correlate glucose levels to measured levels of aggression

85

Results

- Mean number of pins: 1.35 ± 4.13
- Relative to their mean glucose, lower glucose predicted more aggression!
- Same even controlling for relationship satisfaction
- Lower relative glucose = more pins and longer, louder blasts of noise!

86

Results

- “low glucose levels might be one factor that contributes to intimate partner violence”
- They try to argue that self-control requires glucose so low glucose reduces self-control???
- Author could not send me pics or video due to consent issues!

87

Caveats

- Methodology is artificial and odd (but difficult to measure otherwise)
- Effect size?
- Age group variations?
- Medical confounders?
- Dietary factors?

88

Bottom Line

- There may be a physiologic basis for being “hangry”
- Not robust but suggests nutrition, food security *might* help with societal violence (i.e. prisons, psychiatric hospitals, schools)
- If there is conflict, check for “hangriness”!!!

89

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91

Case Resolution

- They decide to take a trip to Florida
- While there, they both yell at the author of this paper for suggesting intimate partner violence could be a result of hangriness
- The yelling is cathartic
- Waylo does CBT, and they work out their issues without further aggression
- Flo leaves him for a carnie

92

From couples to opioids

93

OP Oydishu

- OP is a 34 year old guy recently moved to your small town with chronic low back pain from an old accident who is on ms contin 90 mg po bid
- He comes in saying, “I don’t want more pills like methadone or suboxone. Is there some other kind of therapy available to me here?”

94

OP Oydishu

- Imaging was normal
- Did physio/chiro/massage/acupuncture/naturopathy/etc without effect
- He was given label of “chronic pain”
- Off work for two years now

95

OP Oydishu

- You have access to a single chronic pain psychologist by teleconsult but the wait time is long
- He admits to frequently using more breakthrough than prescribed when his pain gets “real bad” and then runs out early.

96

What intervention might help OP in this situation?

A) Sleeping on an inversion table
B) An Iphone app for sleep
C) A bath in warm olive oil
D) An online chronic pain course
E) Sleeping in a hammock

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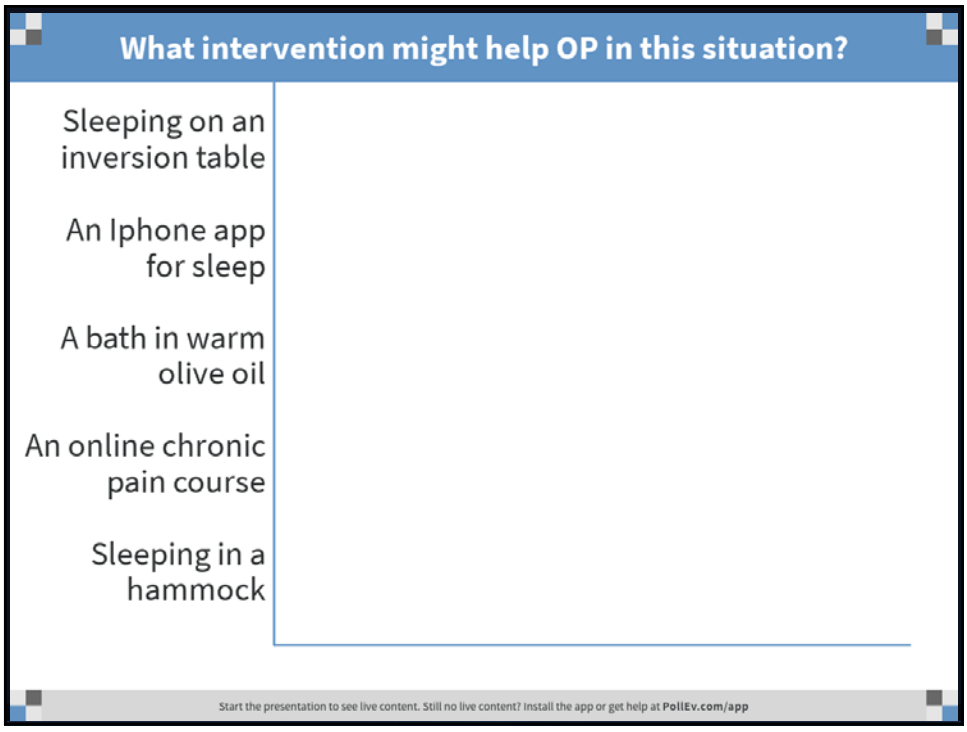


98

OP Oydishu

- Guarino, Honoria, Fong, Chunki, Marsch, Lisa, et al, **Web-Based Cognitive Behavior Therapy for Chronic Pain Patients with Aberrant Drug-Related Behavior: Outcomes from a Randomized Controlled Trial**, Pain Medicine 2018; 0: 1-15 doi: 10.1093/pm/pnx334.
- N=110 (80% power) adults recruited from chronic pain clinics by referral or self-referral from pamphlets
- ≥5/10 pain in the past week
- 4 items + of Current Opioid Misuse Measure (COMM)

99

COMM (Suggested sensitivity 77% at ≥9)

Please answer the questions using the following scale:	Never	Seldom	Sometimes	Often	Very Often
	0	1	2	3	4
1. In the past 30 days, how often have you had trouble with thinking clearly or had memory problems?	O	O	O	O	O
2. In the past 30 days, how often do people complain that you are not completing necessary tasks? (i.e., doing things that need to be done, such as going to class, work or appointments)	O	O	O	O	O
3. In the past 30 days, how often have you had to go to someone other than your prescribing physician to get sufficient pain relief from medications? (i.e., another doctor, the Emergency Room, friends, street sources)	O	O	O	O	O
4. In the past 30 days, how often have you taken your medications differently from how they are prescribed?	O	O	O	O	O
5. In the past 30 days, how often have you seriously thought about hurting yourself?	O	O	O	O	O
6. In the past 30 days, how much of your time was spent thinking about opioid medications (having enough, taking them, dosing schedule, etc.)?	O	O	O	O	O

100

	0	1	2	3	4
7. In the past 30 days, how often have you been in an argument?	O	O	O	O	O
8. In the past 30 days, how often have you had trouble controlling your anger (e.g., road rage, screaming, etc.)?	O	O	O	O	O
9. In the past 30 days, how often have you needed to take pain medications belonging to someone else?	O	O	O	O	O
10. In the past 30 days, how often have you been worried about how you're handling your medications?	O	O	O	O	O
11. In the past 30 days, how often have others been worried about how you're handling your medications?	O	O	O	O	O
12. In the past 30 days, how often have you had to make an emergency phone call or show up at the clinic without an appointment?	O	O	O	O	O
13. In the past 30 days, how often have you gotten angry with people?	O	O	O	O	O
14. In the past 30 days, how often have you had to take more of your medication than prescribed?	O	O	O	O	O
15. In the past 30 days, how often have you borrowed pain medication from someone else?	O	O	O	O	O
16. In the past 30 days, how often have you used your pain medicine for symptoms other than for pain (e.g., to help you sleep, improve your mood, or relieve stress)?	O	O	O	O	O
17. In the past 30 days, how often have you had to visit the Emergency Room?	O	O	O	O	O

101

Exclusions

- Insufficient English (NY)
- Mental illness induced inability to consent
- Planned major surgery in < 6 mos
- Chronic headache or cancer-pain
- Likely to die with a year or move soon

102

Intervention

- Randomized to:
  - Treatment as usual (TAU)
    - Multidiscip. Team without CBT
  - Web-based CBT
    - 27 self-paced modules, 20-30 minutes
    - Mostly CBT exercises/tools but also some education about pain and opioids and meds
    - Voice over for low literacy
    - 12 weeks, regular prompts to do modules

103

Patients

- Mostly female, unemployed, economically disadvantaged
  - (1/2 receiving public assistance, 80% Medicaid)
- 69% had chronic pain >5 years
- Average worst pain in past week 8.45
- Mean MED: 297mg/d, SD=545mg!!!
  - median 124
- Other meds same, few previous CBT

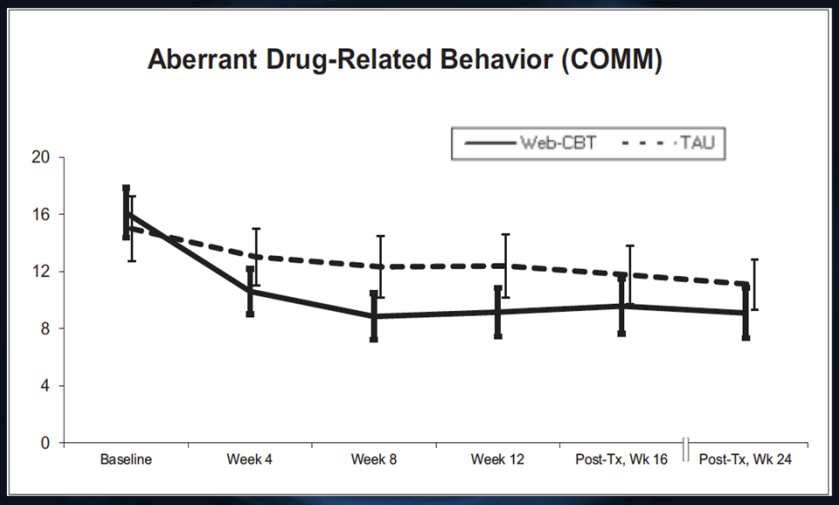
104

Patients

- Scored mean 15.7 on COMM, SD 7.57
  - Cutoff is usually 9 or higher for aberrant drug-related behavior (ADRB)
- No difference between the two groups at baseline

105

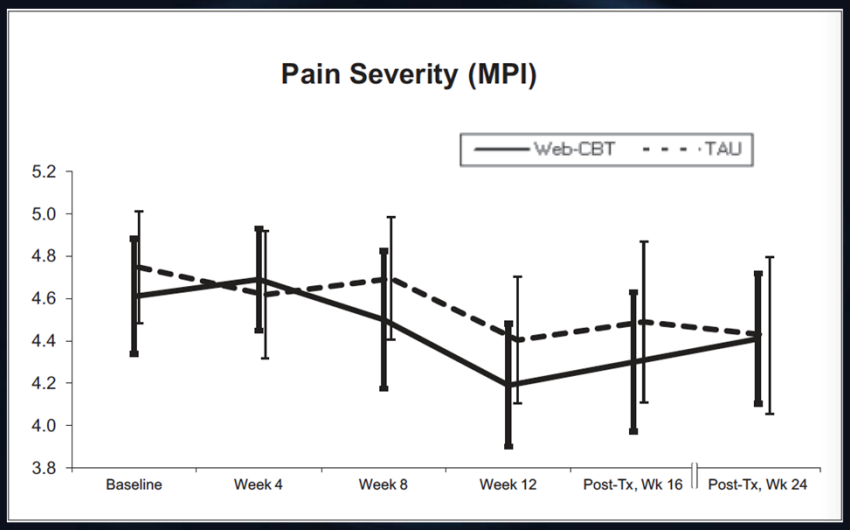
Results



- COMM reduced by 6.96 vs 2.55 (4.41)

106

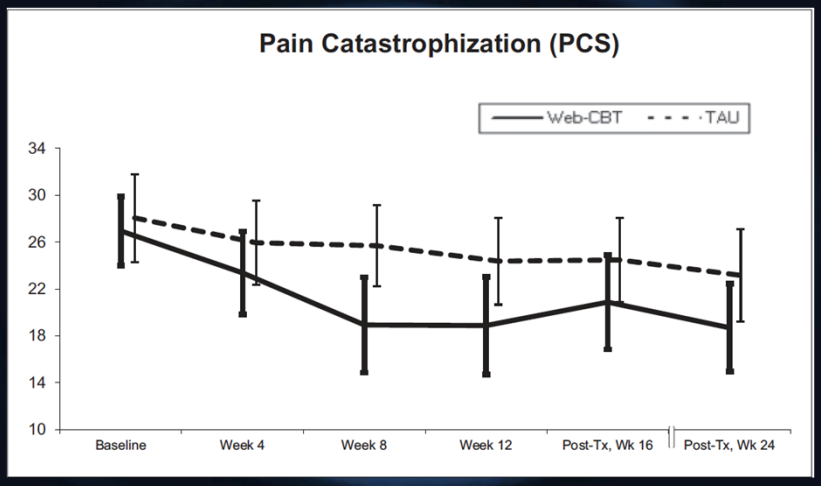
Results



G No significant difference

107

Results



G No significant difference

108

Secondary outcomes

- Less pain catastrophization
- Fewer visits to ED for pain related things (same for all other visits)
- No harms identified

109

Caveats

- 3 primary outcomes, 2 negative!
- Self-reports
- Is it specific to this intervention?
- Site not available to the public
- External validity
- What about real outcomes like getting back to function? Mood? Anxiety?

110

Bottom Line

- Pills aren't enough
- Probably CBT does something, and online is an option for remote communities or at least a starting point
- What about telepsychologists doing CBT in person if not directly available?

111

For some info, consider Alberta's programme

- https://www.albertahealthservices.ca/info/Page16083.aspx

112

What intervention might help OP in this situation?

A) Sleeping on an inversion table
B) An Iphone app for sleep
C) A bath in warm olive oil
D) An online chronic pain course
E) Sleeping in a hammock

113

What intervention might help OP in this situation?

A) Sleeping on an inversion table
B) An Iphone app for sleep
C) A bath in warm olive oil
D) An online chronic pain course (maybe)
E) Sleeping in a hammock

114

Case Resolution

- You respectfully suggest some CBT for OP's chronic pain
- He agrees, does the course, does a taper and gets off the meds completely
- He is back to work, feeling good about himself for the first time in years.
- He is struck by a rogue meteor and dies

115

I couldn't find a good slide to segue into the next topic so...

116

117

Walker Sweetman

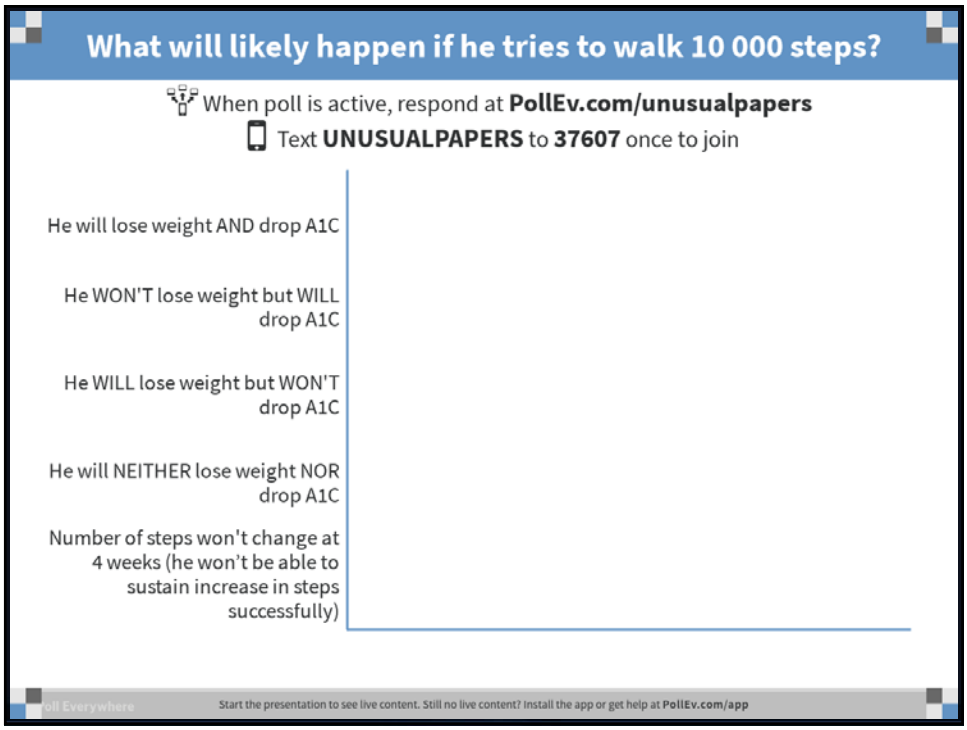
- Walker is a 45 year old with type II DM
  - Last A1C is 7.5%
- Father had diabetic foot amputation
- He averages around 5000 steps a day already (on his pedometer)
- He asks, "What if I just walk more?" and repeat my A1C

118

What will likely happen if he tries to walk 10 000 steps?

A) He will lose weight and drop A1C
B) He won't lose weight but will drop A1C
C) He will likely lose weight but not A1C
D) He will lose neither weight nor drop A1C
E) Number of steps won't change at 4 weeks (he won't be able to sustain increase in steps successfully)

119



120

Walker Sweetman

- Fayehun, A, et al, Walking prescription of 10 000 steps per day in patients with type 2 diabetes mellitus: a randomised trial in Nigerian general practice, Br J Gen Pract 2018; DOI: https://doi.org/10.3399/bjgp18X694613
- N=46 otherwise healthy 18-64 year old Nigerian adults
- Although small study, it was powered 80% to detect an A1C difference of 0.75% (primary outcome)
- Excluded pregnant women and walking-impaired

121

Intervention

- Randomized via an envelope to:
- Usual activities with a pedometer

OR

- Walking prescription:10000 steps/day
  - counselling on barriers to walking
  - Increase 20% per week to 10000 steps
- Groups comparable at baseline

122

Intervention

- Everyone had telephone and in person F/U q1-2 weeks until 11 weeks
- Intervention group had additional counseling week 4 and 8
- 5 did not complete control
  - (3 got tired of step counting!)
- 2 did not complete intervention
  - Still did intention to treat

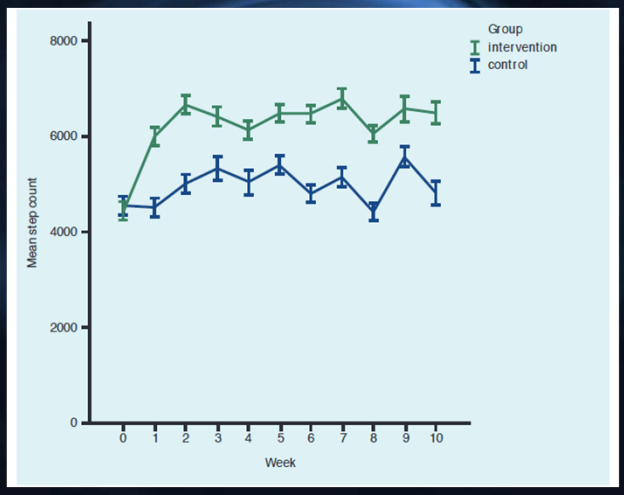
123

Results

	Intervention	Control	P value
Baseline steps	4551	4431	
10 Week Steps	6507	4944	
Mean Change	2913 (>65%)	513	0.001
Baseline A1C	6.84%	6.26%	
10 Week A1C	6.36%	6.82%	
Effect size (adjusted)	**-0.74%**		**0.015**

124

Results Step Count



125

Other Results

- No change in:
  - BP, weight, BMI, weight/hip circumference and ratio, HR
- Intervention group increase in steps:
  - 31% had <1000 step increase
  - 16% had 1000-1999
  - 26% had 2000-2999
  - 20% had 3000-3999
  - 2.6% >5000

126

Other Results Intervention Group

- In the last 4 weeks of the study:
  - 6.1% achieved 10000
  - 18.7% achieved 7500

127

Caveats

- External validity? Nigerian, barely diabetic!
- Longer term sustainability?
- Lost to Followup with small numbers? (similar attrition to other pedometer studies)
- A1C drop marginal with confidence intervals
- Was the counseling followup more important than the Rx?

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Bottom Line

- A simple, inexpensive combination of pedometer and followup may help some diabetics achieve better A1C
- It would not be surprising if your patient does not follow through, but more people are successful than one might think

129

What will likely happen if he tries to walk 10 000 steps?

A) He will lose weight and drop A1C
B) He won't lose weight but will drop A1C
C) He will likely lose weight but not A1C
D) He will lose neither weight nor drop A1C
E) Number of steps won't change at 4 weeks (he won't be able to sustain increase in steps successfully)

130

What will likely happen if he tries to walk 10 000 steps?

A) He will lose weight and drop A1C
B) He won't lose weight but will drop A1C (maybe)
C) He will likely lose weight but not A1C
D) He will lose neither weight nor drop A1C
E) Number of steps won't change at 4 weeks (he won't be able to sustain increase in steps successfully)

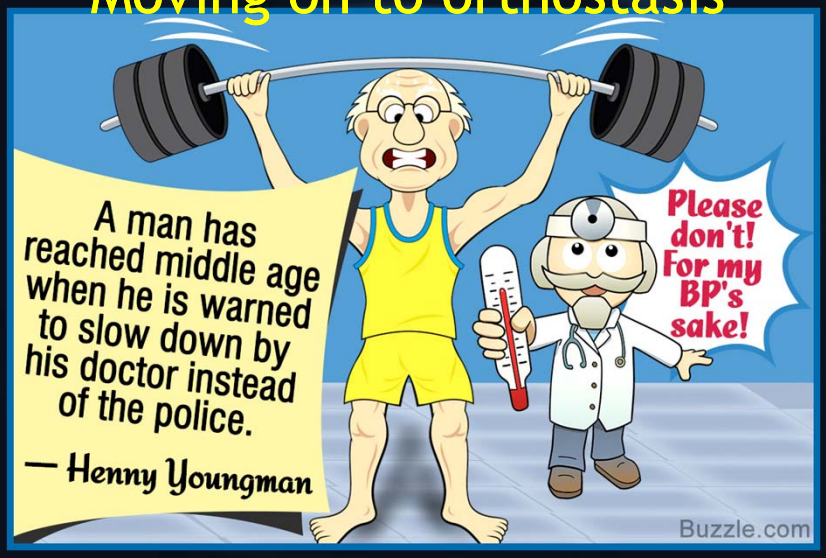
131

Case Resolution

- Walker gets his pedometer out and walks so much that he gets to a normal weight and his diabetes gets back to normal
- Bristol-Meyers-Squibb hears about his success and send assassins to kill him so no one else realizes lifestyle changes actually work

132

Moving on to orthostasis



133

Jaime Falling

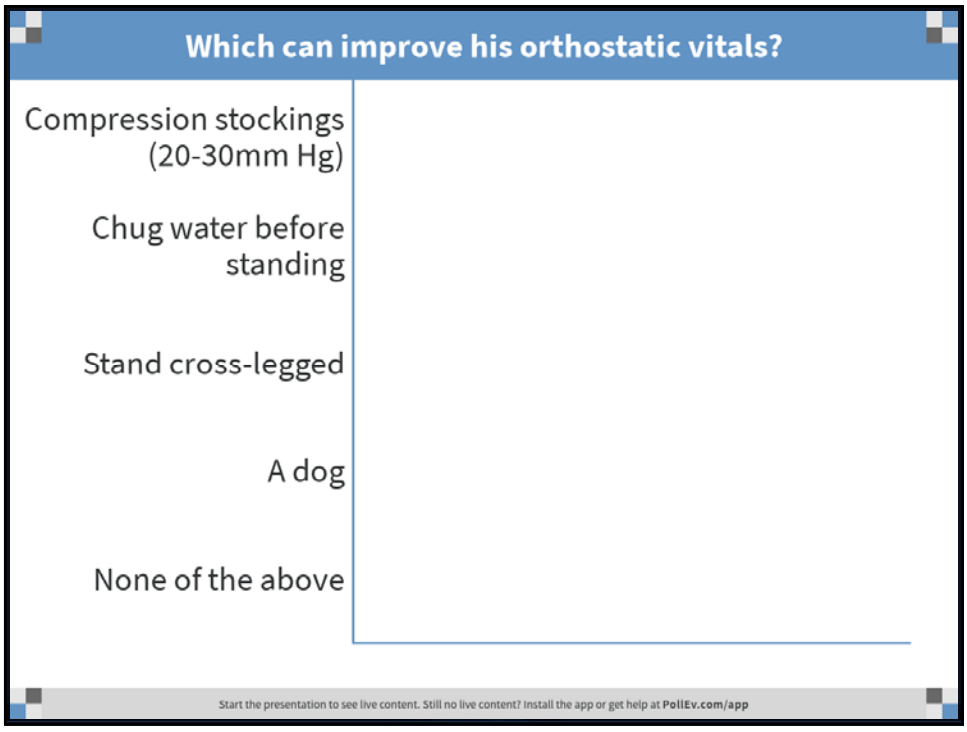
- Jaime is a 75 year old who gets dizzy when he gets up
- No red flags, workup normal and diagnosis is orthostatic hypotension

134

Which intervention can improve his orthostatic vitals?

A) Compression stockings (20-30mm Hg)
B) Chug water before standing
C) Stand cross-legged
D) A dog
E) None of the above

135



136

Jaime Falling

- Newton J, et al, **The efficacy of nonpharmacologic intervention for orthostatic hypotension associated with aging**, Neurology. 2018 Aug 14;91(7):e652-e656. doi: 10.1212/WNL.0000000000005994. Epub 2018 Jul 13.
- N=25 British people (60-92 yo) with orthostatic hypotension at syncope clinic
- Objective criteria, and ruled out other Dx
- Excluded fluid restriction, dysphagia, inability to wear stockings

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Intervention

- No meds or coffee or nicotine X 12 hrs
- Visit 1 (am):
  - Orthostatic vitals before and after water bolus po (480mL tap water in 5 minutes)

138

Interventions

- Visit 2 (am):
  - 3 interventions randomly with 20 min washout period between
    - Abdominal compression with elastic band
    - Leg Compression (stockings)
    - Standing cross-legged (physical counterpressure)

139

Outcomes

- Primary outcome:
  - Rate of response to intervention
  - (≥10 mmHg improvement in BP from pre)
- Secondary:
  - Nadir standing sBP
  - Symptom assessment questionnaire (/6)
    - Dizziness, weakness, fatigue, trouble concentrating, head/neck discomfort

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Sample size

- 80% power to detect a 30% response rate and a 95% chance of rejecting a response rate ≤10%

141

Response rates % (N) + Mean improvement in BP drop mmHg (SD)

Bolus water:	46% (14)	↑ 12 (4-20) *
Stand cross legs:	44% (11)	↑ 7.5 (-1-16)
Abdo compression:	52% (13)	↑ 10 (2-18)
Stockings:	32% (8)	↑ 6 (-1-13)

None helped diastolic or symptom scores

No adverse events

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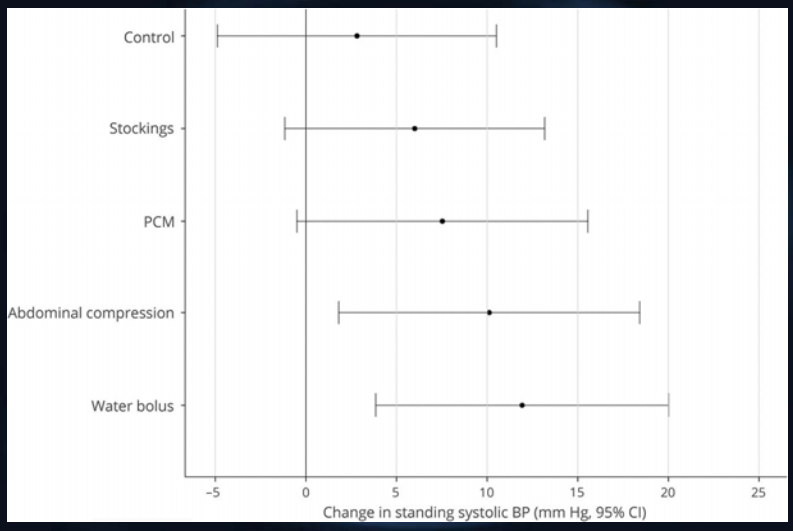
Figure 2 Change in standing systolic BP



Julia L. Newton, and James Frith Neurology 2018;91:e652-e656

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Caveats

- Artificial setting
- What about getting off the toilet?
- What about fall risk?
- What about harms of excess water or compression?

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Bottom Line

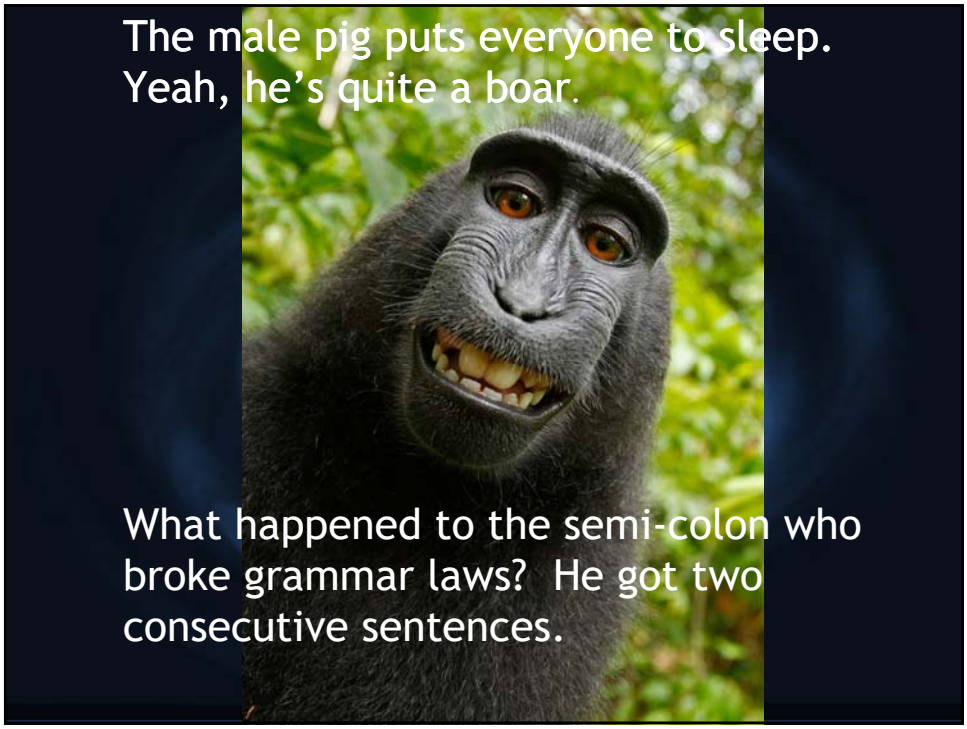
- This suggests that bolus water is the most effective intervention for the *disease-oriented* outcome of orthostatic hypotension
- However, it suggests that hydration may play a role
- Not ready to conclude much else, but reasonable to try counterpressure

145

Case Resolution

- Jaime starts chugging water before he gets up and his symptoms improve
- He finally feels well enough to realize his dream of skydiving and books a trip
- Unfortunately, his parachute does not deploy and he dies

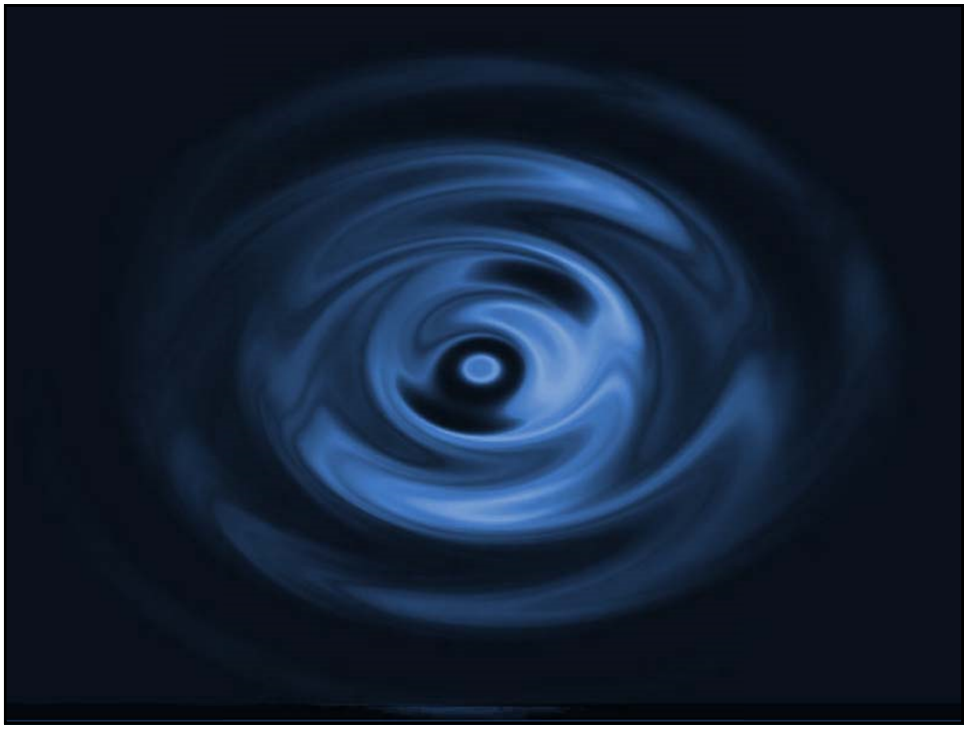
146


The male pig puts everyone to sleep.
Yeah, he's quite a boar.
What happened to the semi-colon who broke grammar laws? He got two consecutive sentences.

147


Any questions or comments?
Start the presentation to see live content. Still no live content? Install the app or get help at PollEv.com/app
Total Results

148



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