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7th EMIRATES FAMILY MEDICINE SOCIETY CONGRESS 2024

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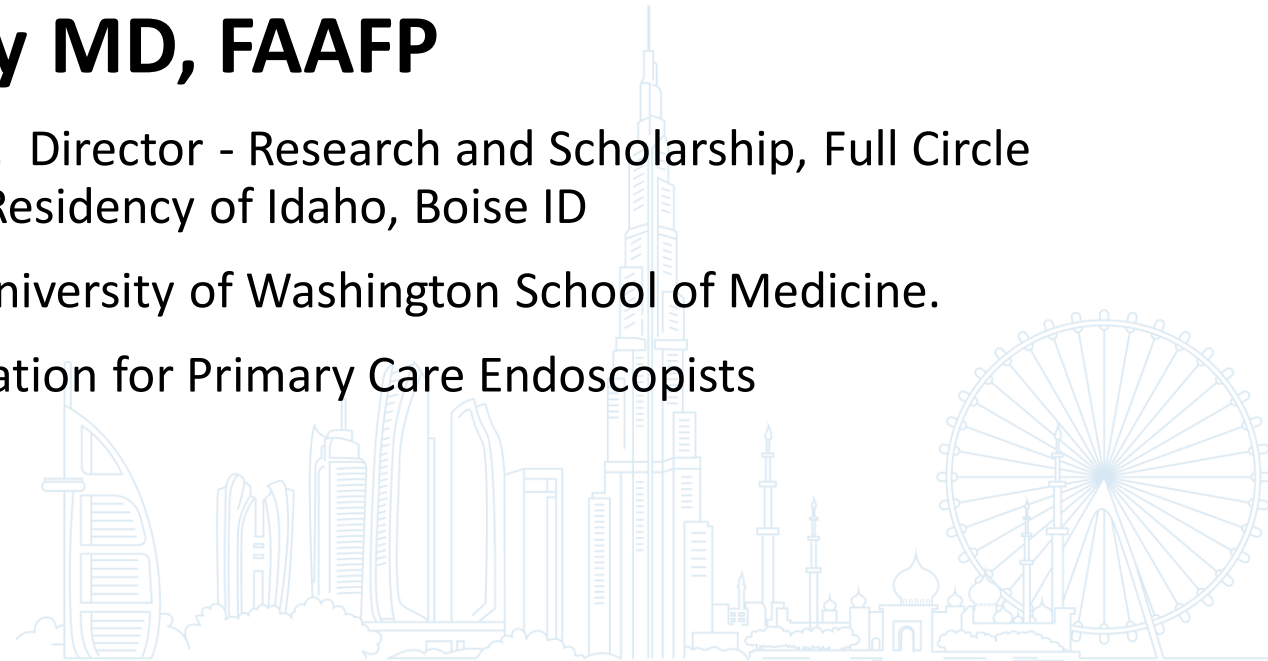
Top 10 Practice Changing Papers for 2024

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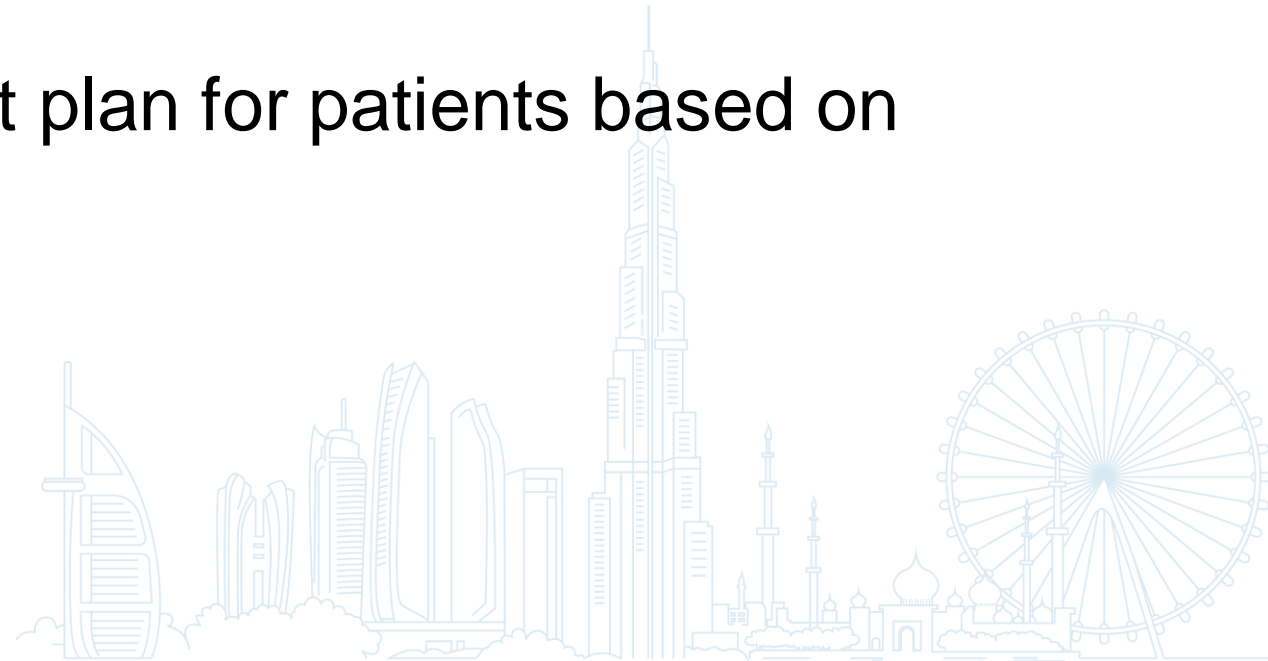




Learning Objectives

Learners will be able to

1. Review current research in Primary Care
2. Apply research finding to practice
3. Create individualize treatment plan for patients based on current literature.





What Makes A Good Practice-Changing Paper?

Someone else told you it was a good paper?

Does it answers a clinical question you have?

Can you implement it?

Does it improve your patients lives?

Does it change your practice?



Case #1

- 55 y/o male presents for follow up from a hospitalization for HFrEF.
- He has been admitted 4 times in the last year.
- He is on GDMT and furosemide for a diuretic
- You wonder is there anything that you could do to reduce his number of admission?





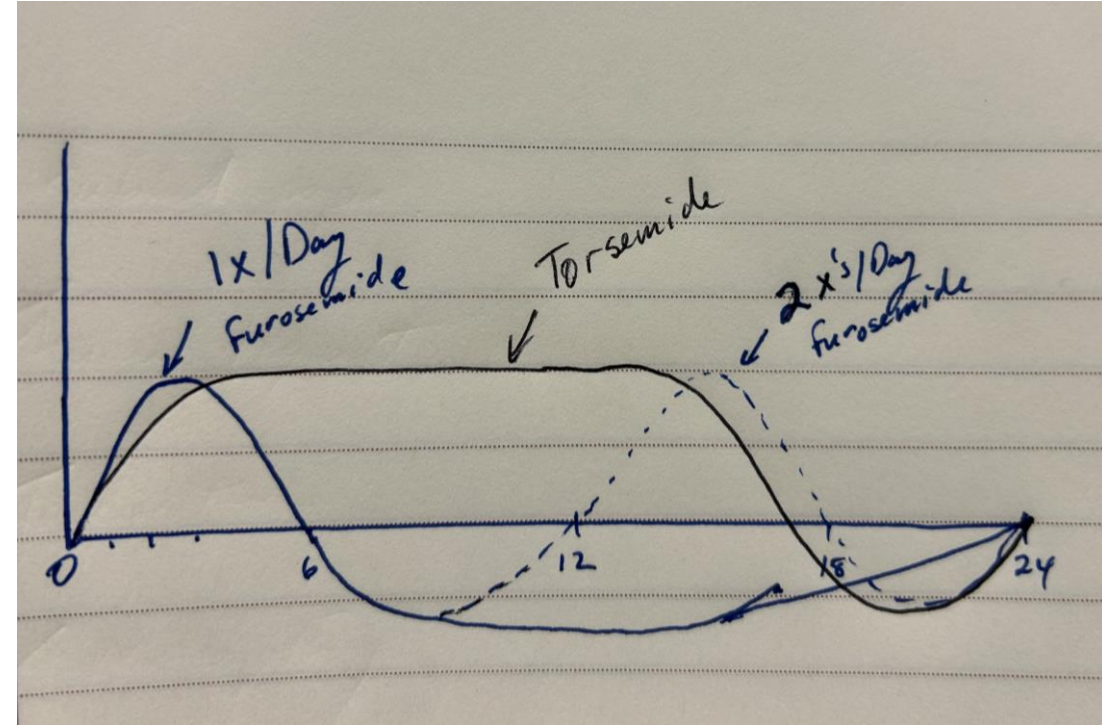
Torsemide Better Than Furosemide for Heart Failure?

- Meta-analysis n=8127
 - Torsemide was superior to furosemide in reducing heart failure admissions, OR 2.16 CI 1.28 to 2.64
 - Improvement in heart failure class. OR 0.73 CI 0.58 to 0.93
 - No difference in mortality However...
 - RCT n-1377 secondary outcome 51% reduction in overall mortality risk, 59.7% reduction in cardiac mortality. NNT=50
- Bottom line: torsemide = reduction in readmissions and improved class without a change in side effects. NNT=6 to prevent one hospitalization over 10.5 months



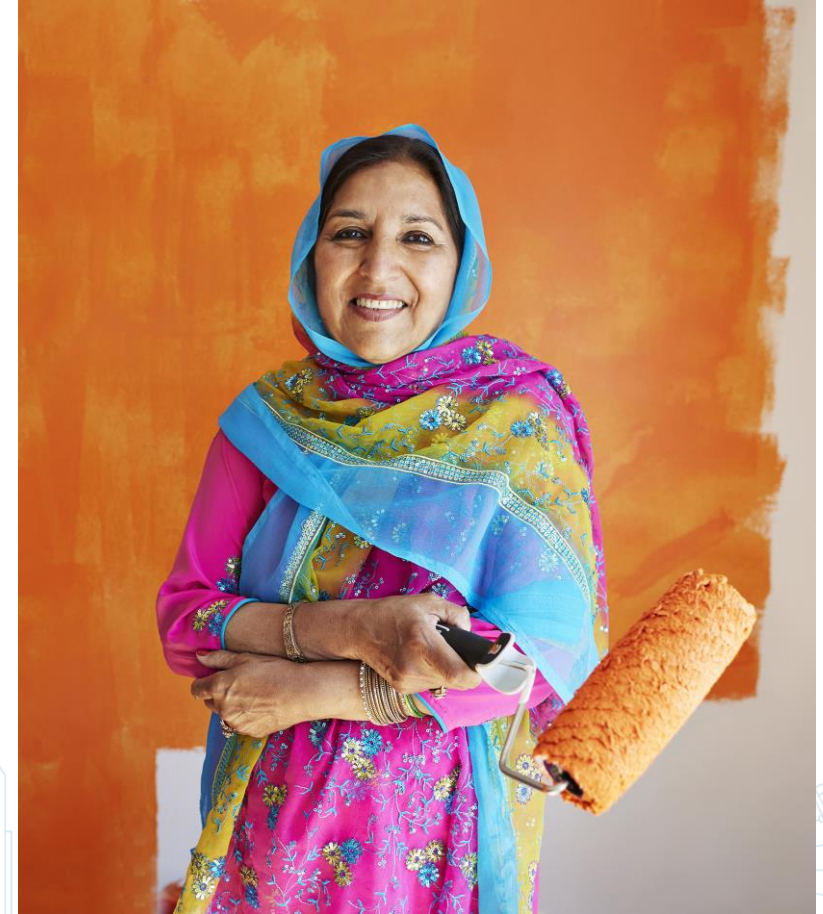


- Why might this be?
 - Better bioavailability (80-100% vs 10-100%)
 - Once daily dosing
 - Longer half life (16 vs 6 hours)
 - Torsemide absorption not affected by gut edema
 - Metabolized in liver and kidney
 - Does not cause kaliuresis like furosemide.
- Bottom Line= Consider switching diuretics to torsemide for heart failure.



Case #2

- 60 y/o Sofia presents for her annual visit.
- She eats a health diet and is active
- She has a family history of diabetes and requests to be screened
- Her A1c is 6.1 = Pre-Diabetes
- She wants to know if she should be worried about progressions to diabetes
- What are Sofia's chances of developing diabetes?





So Why Do We Care About Diabetes and Prediabetes

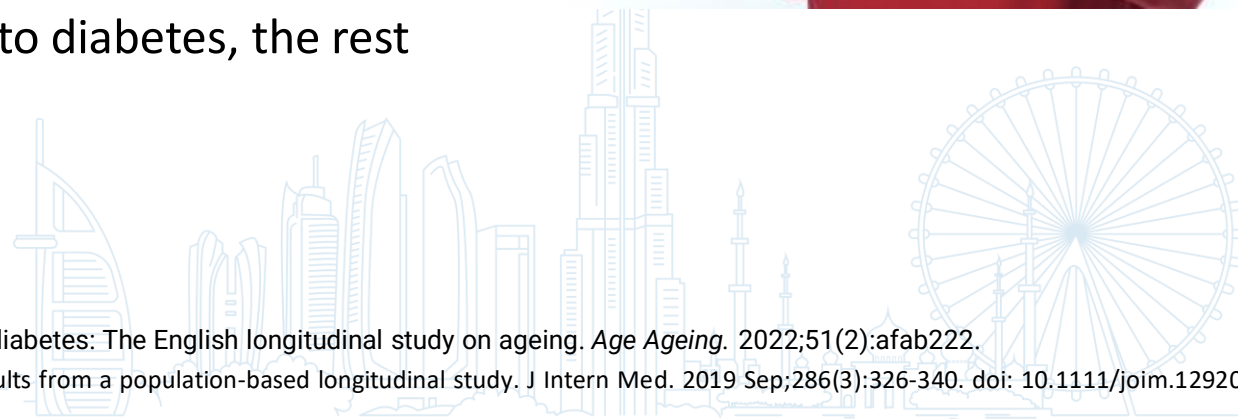
- We need to stop Heart disease!
- Do we know how do to that?
 - 51% of Americans don't know heart disease is the #1 cause of death in adults
 - Many are more concerned with lower cholesterol than lower the risk of heart disease
- Diabetes increases our risk of heart disease
- So, does stopping the progression to diabetes lowers the risk of heart disease?
- But do we stop it?





How Many Older Patient With Pre-diabetes Go On to Develop Diabetes

- Cohort n >2000, mean age 70, Age 60 , 55% female
 - Only 13-15% progressed to diabetes
 - More likely to revert to normal glycemia or die of other causes
 - No excess mortality over 8 yrs [HR 1.15, (95% CI, 0.85-1.55)] for Pre-Diabetes
- A separate study showed similar outcomes
 - N=2575
 - 918 pre-diabetic
 - 22% were normoglycemic in 8 years, 13% progressed to diabetes, the rest were unchanged or died
- Bottom line - don't screen older adults for Pre- Diabetes





But Does it Help?

- Diabetes Prevention Program trial
 - Intensive Lifestyle management vs metformin 850 bid in pre diabetics
 - Cardiac mortality after over 18 years
- No difference in cardiac mortality
 - Metformin HR 1.03 (95% CI, 0.78-1.37; $P = 0.81$)
 - High intensity exercise HR 1.14 (95% CI, 0.87-1.50; $P = 0.34$)
 - Did reduce progression to DM (LS 58%, Met 31%)
 - Everyone got semi annual low intensity lifestyle education
 - Extensive statin and BP med use was noted through out groups
 - Metformin in 40% started by the end of study
 - 60% on statins and HTN meds
- Bottom line = Focused pre-diabetes treatment didn't dramatically affect outcomes





Type 2 Diabetes? Mortality Benefit

- Network Meta Analysis
 - 816 RCT's
 - N= 471 038 patients T2DM Rx on Clinical Outcomes
- All Cause Mortality:
 - SGLT-2 OR 0.88 95% CI 0.83-0.94
 - GLP-1 OR 0.88 95% CI 0.82-0.93
 - Non-steroid mineral corticoid receptor in chronic kidney disease + DM 0.89 95% CI 0.79-1.00
- End-stage kidney disease
 - SGLT-2
- Non-fatal stroke
 - GLP-1
- Weight Gain
 - Basal Insulin (2.5 kg) Thiazolidinediones (2.81kg)
- Weight Loss:
 - Tripeptide (8.57 kg loss, Semaglitide (SQ > oral ~ 7 kg), metformin (0.7-4.6kg)
- But Wait... What about **Metformin**?
 - 0.84, CI 0.67 to 1.04; low certainty



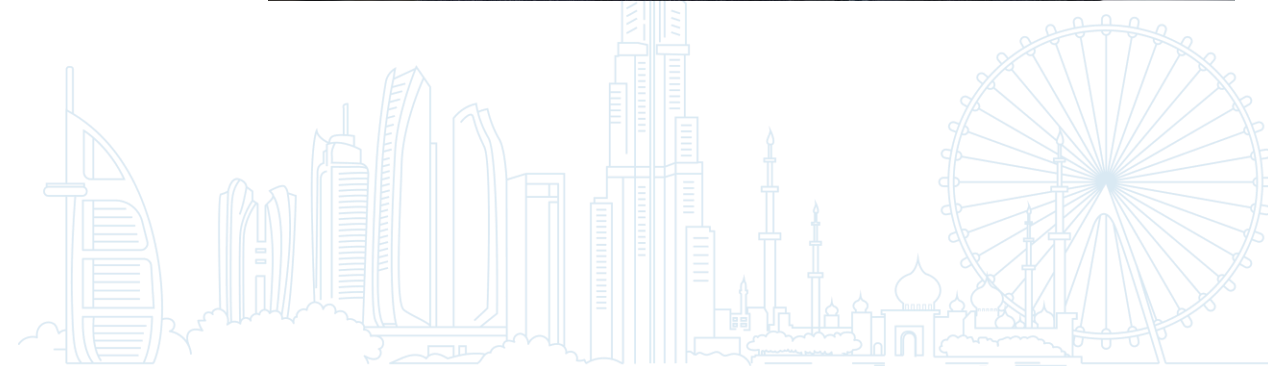
BMJ 2023;381:e074068





Case 3- Omar

- 61 y/o presents for a follow-up for Hypertension
- His BP 144/92
- His home readings have been averaging 134/86
- He is on a combo ACE/HCTZ
- Should we adjust his medication today?





Have We Defined What is the Ideal BP?

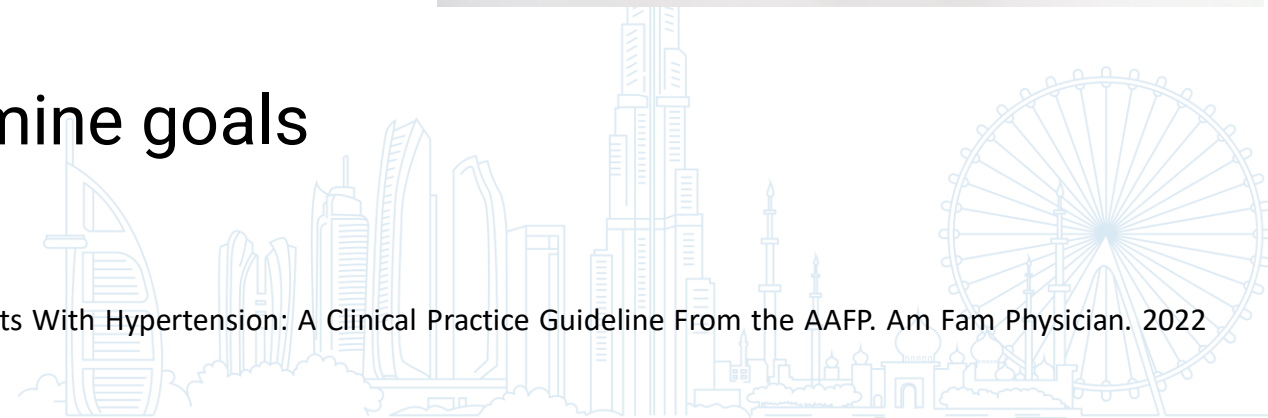
- JNC 8:
 - $<140/90$ for pts <60 + DM 2 or CKD
 - >60 y/o $150/90$
- ACC / AHA: $<130/80$





New AAFP Clinical Practice BP Guideline

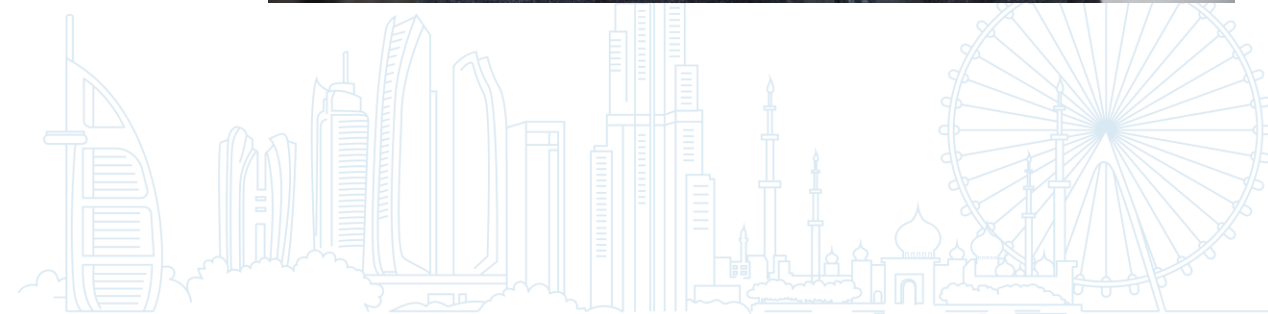
- All Cause Mortality-
 - $<140/90$ Blood = leveling out of reduction in cardiovascular and all-cause mortality
 - More aggressive targets did NOT produce better outcomes and increased adverse effects.
- Myocardial infarction-
 - $<130/85$ = reduction in MI without changes in mortality
 - NNT = 137 over 3.7 years
- Goals and values discussion to determine goals for your patient





Case 4- Omar But With Diabetes

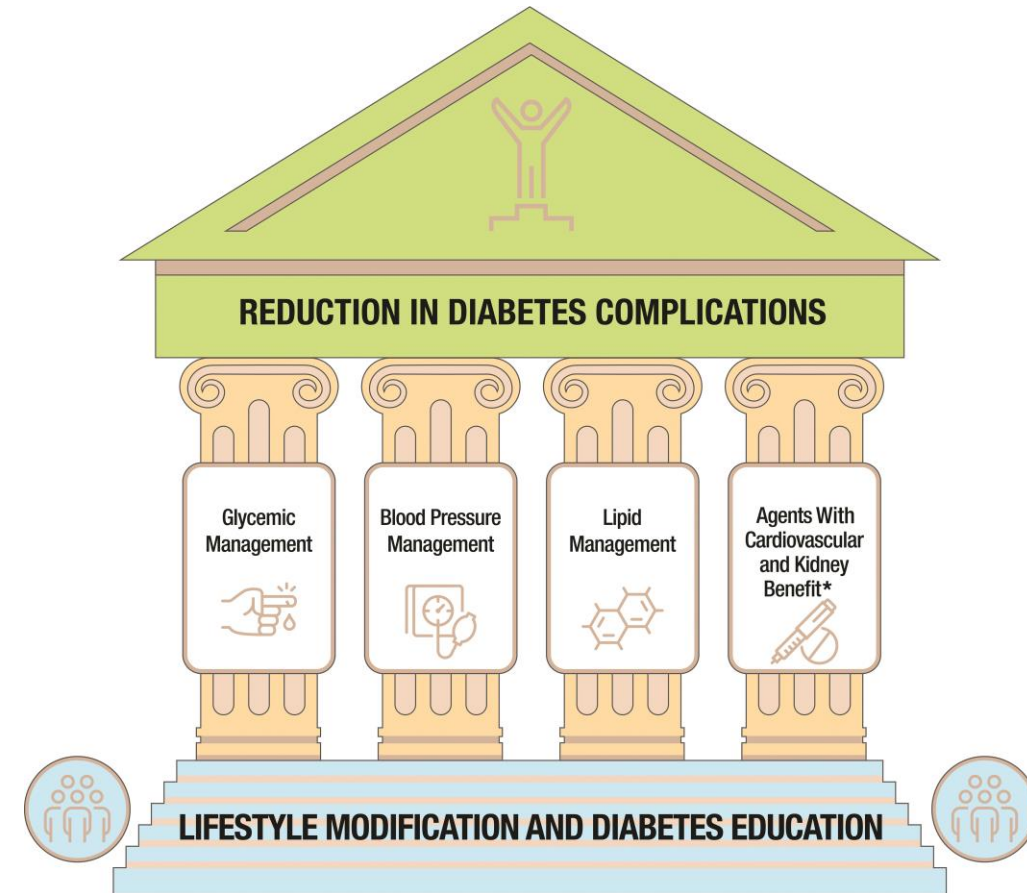
- 61 y/o presents for a follow up for Hypertension & Diabetes
- His BP 144/92
- His home readings have been averaging 134/86
- He is on a combo ACE/HCTZ
- Should we adjust his medication today?





ADA Updated Guideline

- 2023 Change BP goal from <math><140/90</math>
- 2023 New Goal <math><130/80</math>
- 2024 Continued <math><130/80</math>
- Come into alignment with AHA/ACC which are based on Sprint and STEP



[://diabetesjournals.org/view-large/figure/4734516/dc24S010f1.tif](https://diabetesjournals.org/view-large/figure/4734516/dc24S010f1.tif)





Systolic Blood Pressure Intervention Trial

- Sprint review
 - N=2636, followed for 3.14 yrs
 - Patient > 75 years old
 - Intense BP control <120 systolic vs relax <140 Systolic
 - Evaluated a composite outcome of nonfatal MI, ACS, stroke, heart failure, death from cardiovascular causes.
 - Death from all causes, secondary outcome
 - Lower
- Primary outcome at 3 years 7.7% in treatment group vs 11.2% (NNT = 28)
 - All Cause Mortality (8% vs 5 % NNT = 38)
 - No difference between groups on adverse events





Strategy of Blood Pressure Intervention

- STEP Chinese RCT n = 9264 <math><140/90</math> vs <math><130/85</math>
- Results favored intensive treatment
 - Favors intensive
 - Stroke HR 0.67 (95% CI, 0.47 to 0.97)
 - Acute Coronary Syndrome 0.67 (95% CI, 0.47 to 0.94)
 - Acute Decompensated Heart Failure 0.27 (95% CI, 0.08 to 0.98)
 - Not statistically significant
 - Coronary Revascularization 0.69 (95% CI, 0.40 to 1.18)
 - Atrial fibrillation 0.96 (95% CI, 0.55 to 1.68)
 - Death from Cardiovascular Causes 0.72 (95% CI, 0.39 to 1.32).
- Safety - No significant difference in side effects, except for hypotension worse in higher control. (3.2% vs 2.6 %)

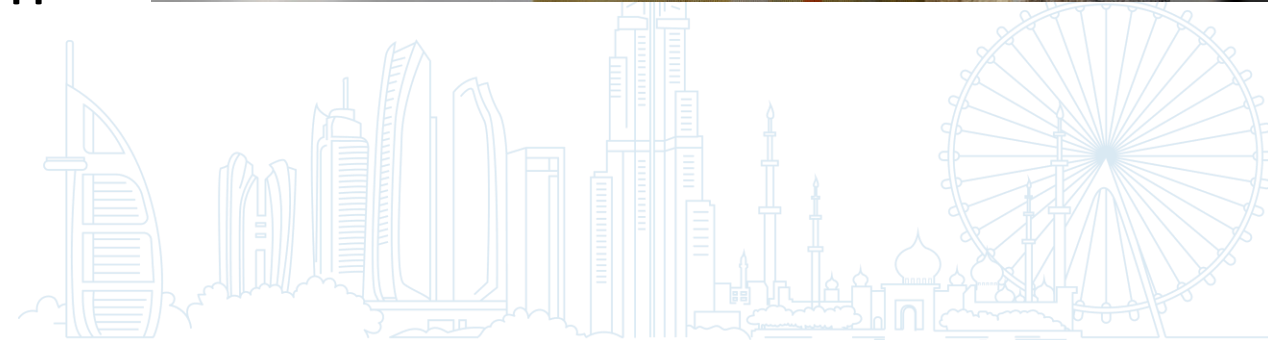




Case 6 - Akram

- 8 y/o male at WCC
- Screen time “Hours a day”
- You recommend cut down on screen time
- Mom asks how to do this? “It’s such a fight”

- What are effective ways to cut down on screen time?





Why Do We Care About Screen Time?

- Cohort study n= 7097 mother-child pairs, Measure screen time at 1 year of age and correlated it to developmental delay at two and four years..
- **Time on screens (hours/day)**
 - 48.5% <1 hour
 - 29.5 1-2 hours /day
 - 17.9 2-4 hours/day
 - 4.1 > 4 hours/ day
- **At 2 Years**, High screen time associated with Developmental Delay in: (delays greater the more hours spent)
 - Communication – OR 1.61
 - Fine motor OR 1.74
 - Problem solving OR 1.40
 - Personal and social skills 2.10
- **Age 4:** Communication and problem-solving remained at an increased risk





What Are Effective Ways to Cut Down On Children's Screen Time?

- RCT: n=89 families
 - Screen Reduction Group:
 - Non smart phones to family + limit screen time \leq 3 hours per week for 2 weeks.
 - Control group families carry on as usual
- Results: **INCREASE** in non-sedentary activity of children 45 minutes a day vs 1 min. in control group
- Important - Parents and kids cut down on screen time





While We're On the Subject of Family

- How do you advise families who struggle?
- Family dinner!!
- Systematic review 14 large cohorts 200-100,000
- Decreased
 - disordered eating
 - alcohol and substance use
 - violent behavior
 - feelings of depression or thoughts of suicide in adolescents.
- Increased
 - Self-esteem
 - School success



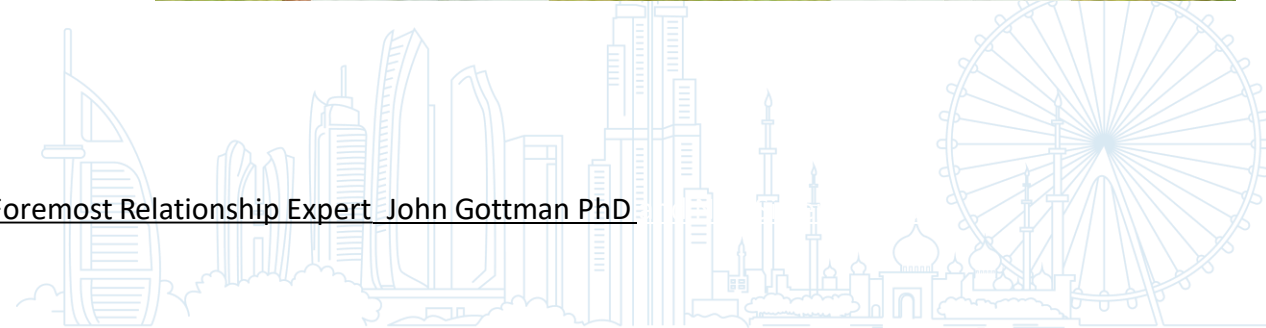


And Since We're Talking About Relationships

- What is a Data Driven way to intervene in relationships that are struggling?
- 80% success rate from start 100% at 6 months
- **5 Magic hours- John Gottman**
 1. Partings/Departures – 2 Minutes per day
 2. Greetings/Arrivals – 20 Minutes per day
 3. Physical Affection – 5 Minutes per day
 4. Admiration, Affirmation, & Compliments – 5 Minutes per day
 5. Weekly Dates – 2 Hours per week



The Seven Principles for Making Marriage Work: A Practical Guide from the Country's Foremost Relationship Expert John Gottman PhD





How Can I Have a Relationship If I Can't Get My Baby to Sleep?





What is the Best Way to Sleep Train a Baby?

- Cohort n= 2090 parent-infant dyads with sleep issues (3-18 months):
 - Measured sleep, parental fatigue, parental depression, time spent sleeping for baby and parents...
 - Unmodified Extinction (27.6%) **Crying it out**- Tuck them in and wish them good luck!
 - Modified Extinction (42.7%) **Controlled crying** –Leave the infant alone, but periodically intervening with minimal interaction (talking w/o touching)
 - Parental Presence (10%) **Camping out** – staying in the room with the child
- Outcomes
 - Unmodified and Modified Extinction – harder to do but got to the goal of sleeping through the night faster. (25-31 days vs 48)





Case #5 Dalia

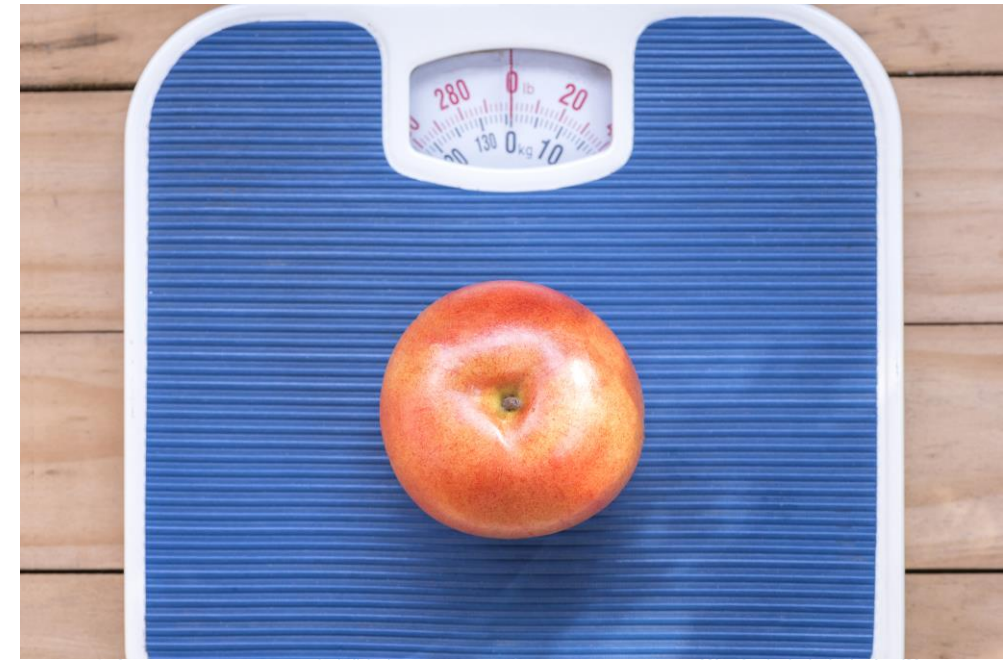
- Presents asking for help with weight loss
- PMhx significant for
 - Type 2 Diabetes (A1c 6.8)
- Wonder if there is anything that can be done to help lose weight
- What intervention could you offer that might be helpful?





Medications to Help With Weight Loss in Diabetes

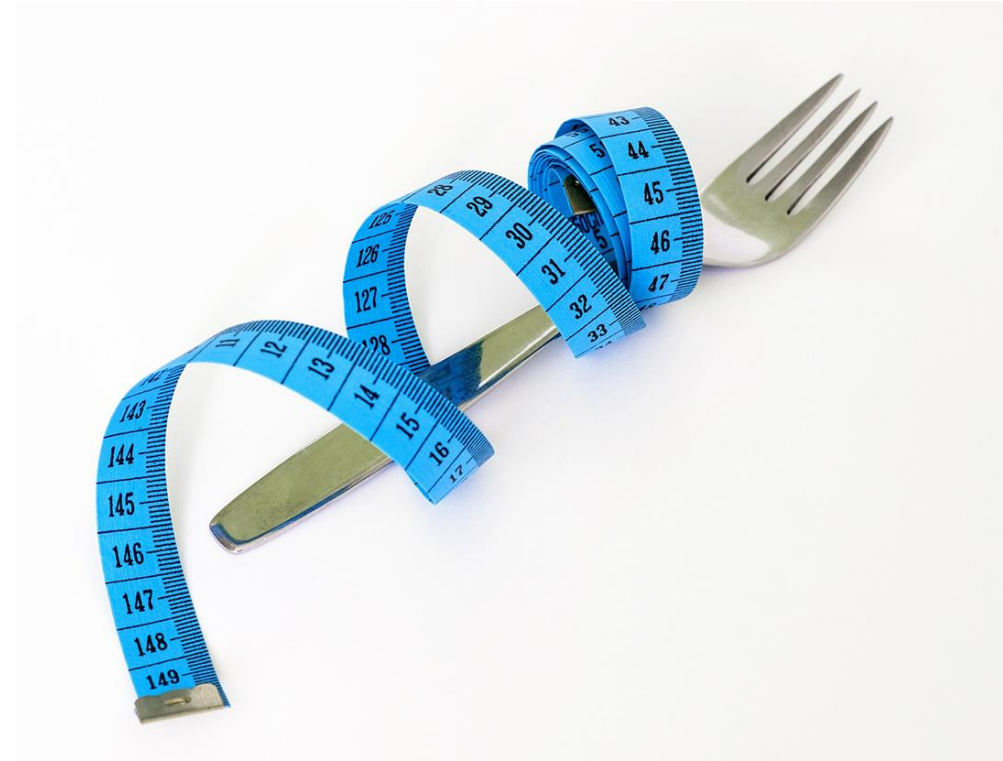
- SR: 168 trials (97 938 T2DM patients):
- **Weight Loss: All drugs** associated with greater at 12 months than placebo
 - 1. Semaglutide- mean difference [MD], -9.02 kg [95% CI: -10.42, -7.63]
 - 2. Phentermine/topiramate- MD, -8.10 kg [95% CI: -10.14, -6.05]
- Waist circumference reduction:
 - Semaglutide -7.84 cm
 - Phentermine/topiramate -6.20 cm
- Lowered CV mortality
 - Naltrexone/bupropion (odds ratio [OR], 0.62 [95% CI: 0.39, 0.99].
- Tirzepatide had 5.5 kg greater weight loss and better A1c control (2.45 drop vs 0.45) compared to semaglutide but is more expensive





Other Interventions for Weight Loss

- Fiber increase
 - 12 RCTs, n=609
 - 10 grams a day x 17 weeks
 - 2.52 kg loss
- Weight tracking
 - N=153 6 months food tracking
 - 28.5% = 3% wt loss
 - 39.4%=5% wt loss
 - 67.1%=10% wt loss



Thompson SV, Hannon BA, An R, Holscher HD. Effects of isolated soluble fiber supplementation on body weight, glycemia, and insulinemia in adults with overweight and obesity: a systematic review and meta-analysis of randomized controlled trials. *Am J Clin Nutr.* 2017

Dec;106(6):1514-1528.

Xu R, Bannor R, Cardel MI, Foster GD, Pagoto S. How much food tracking during a digital weight-management program is enough to produce clinically significant weight loss? *Obesity (Silver Spring).* 2023 Jul;31(7):1779-1786.



Case #5 Dalia Follow up

- Dalia follows up in 6 months, she opted for diet and exercise- lost 10 lbs!
- A1c is now 6.2 and she is in diabetes remission!
- A year later she follows up and weight her weight has returned.
- We know $>10\%$ weight loss early after diagnosis strongly associated with remission but often won't last.
- Is there any benefit to short remission?





Other Diabetes Wins- Remission

- Cohort, N=60,287, DMII, 7 yrs. f/u in UK
 - 19% remission x 6 months (a1c <6.5=%) via exercise and diet
 - Low HA1c 15%
 - Remission and relapse 14%,
 - Decrease Blood sugar levels but no remission, 11%,
 - High A1c 61%
- Remission reduced the risk risk of (Remission no relapse/relapse)
 - Cardiovascular event (76%/ 71%)
 - Large blood vessel complication (85% /70% with relapse)
 - Small blood vessel complication (63% / 56% with relapse).
 - Lower Risk of mortality in remission groups vs high A1C, but low A1c had higher risk.

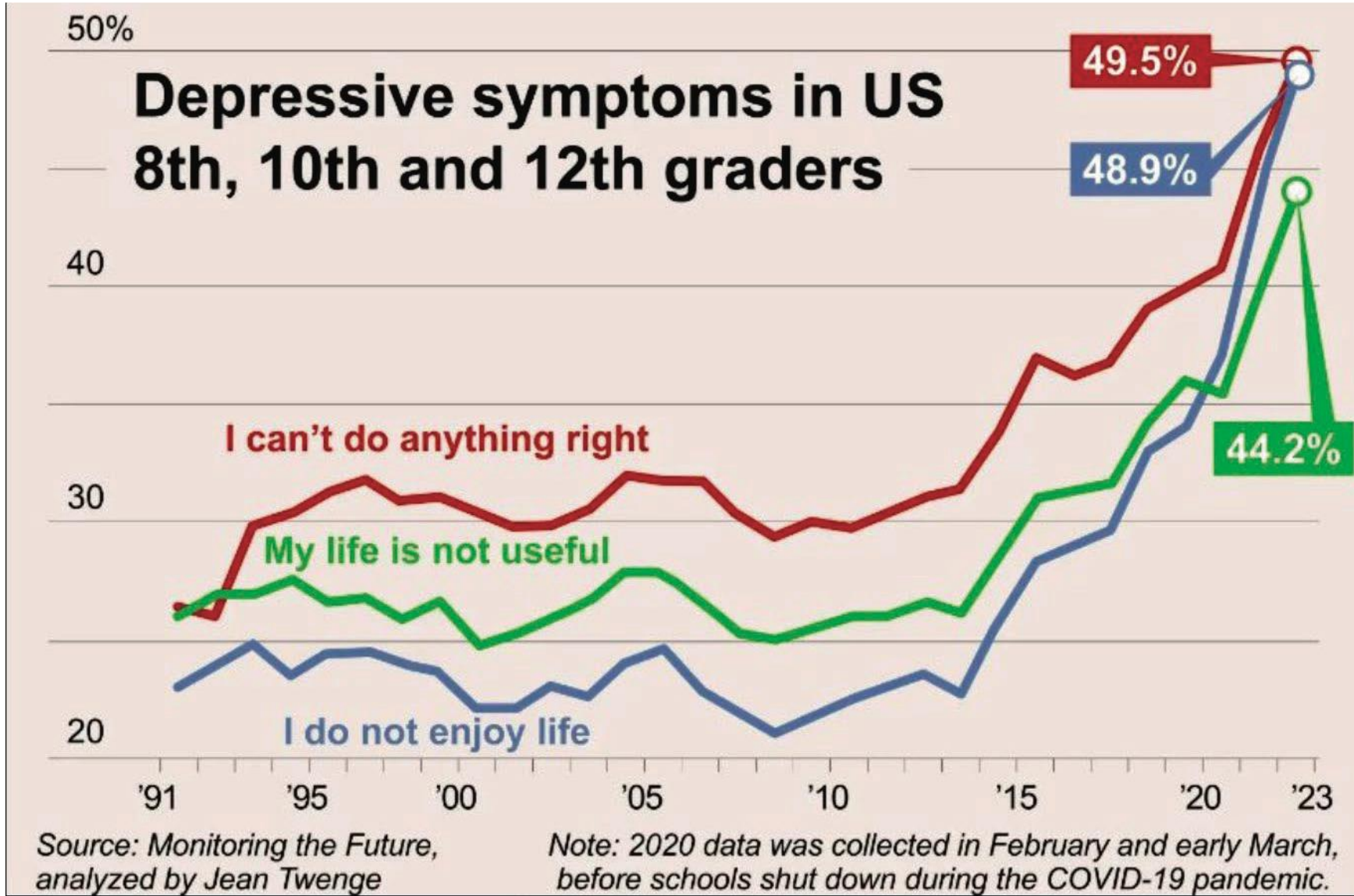
Case #6 Halima

- 18 y/o female presents with complaints of depression and anxiety
- Wants to know what options she has for treatment?





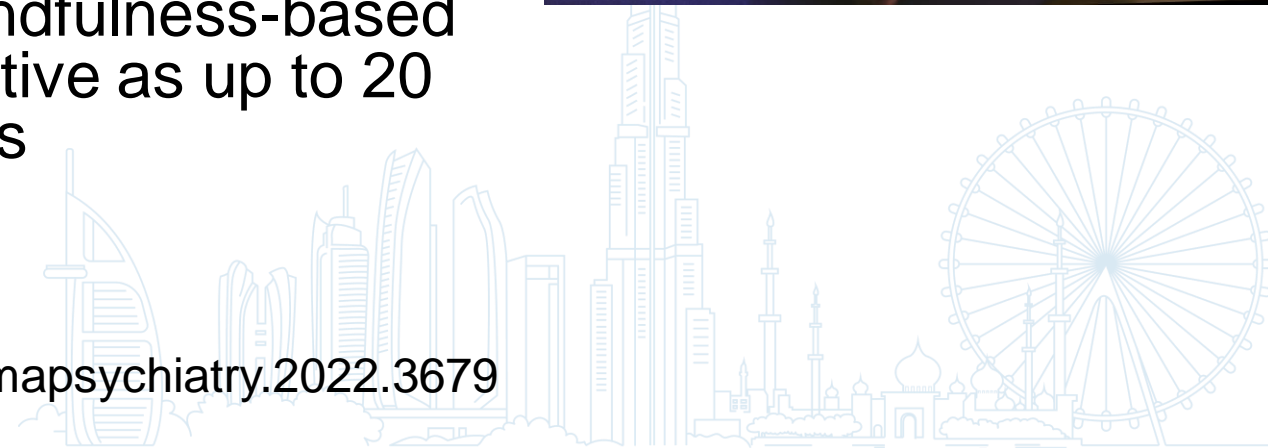
Are Our Kids Getting More Anxious and Depressed?





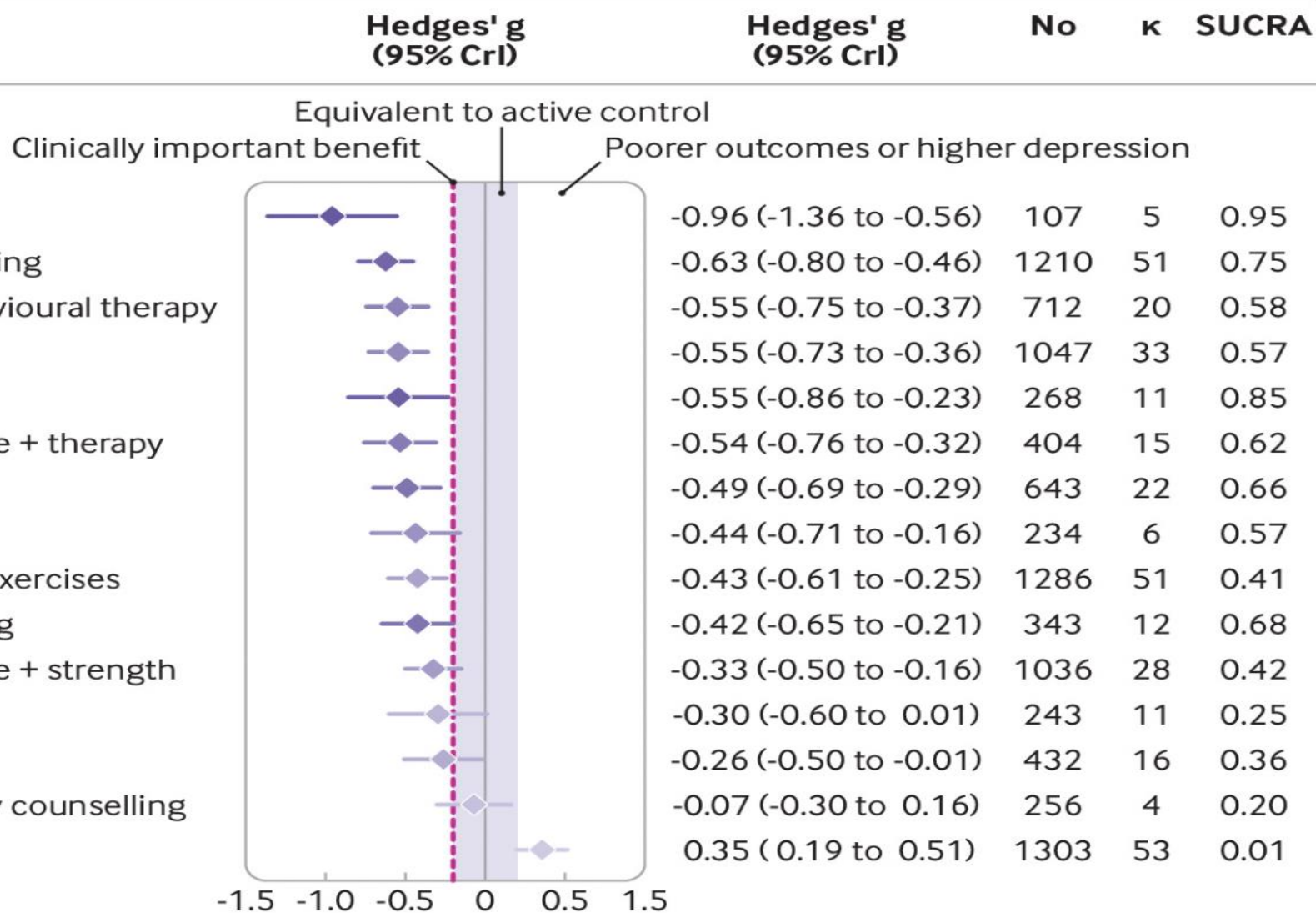
Meditation vs Medication

- RCT n= 276 adults with anxiety:
 - 8-week Mindfulness-based stress reduction vs Escitalopram (10-20 mg) on Clinical Global Impression of Severity scale (CGI-S).
- At 8 weeks, mean CGI-S score was reduced by
 - 1.35 for MBSR vs 1.43 for escitalopram; non inferior difference
- Drop out rate 8% dropped vs 0% from Meditation group.
- Bottom line: For generalized anxiety, mindfulness-based stress reduction meditation was as effective as up to 20 mgs of escitalopram, with fewer dropouts





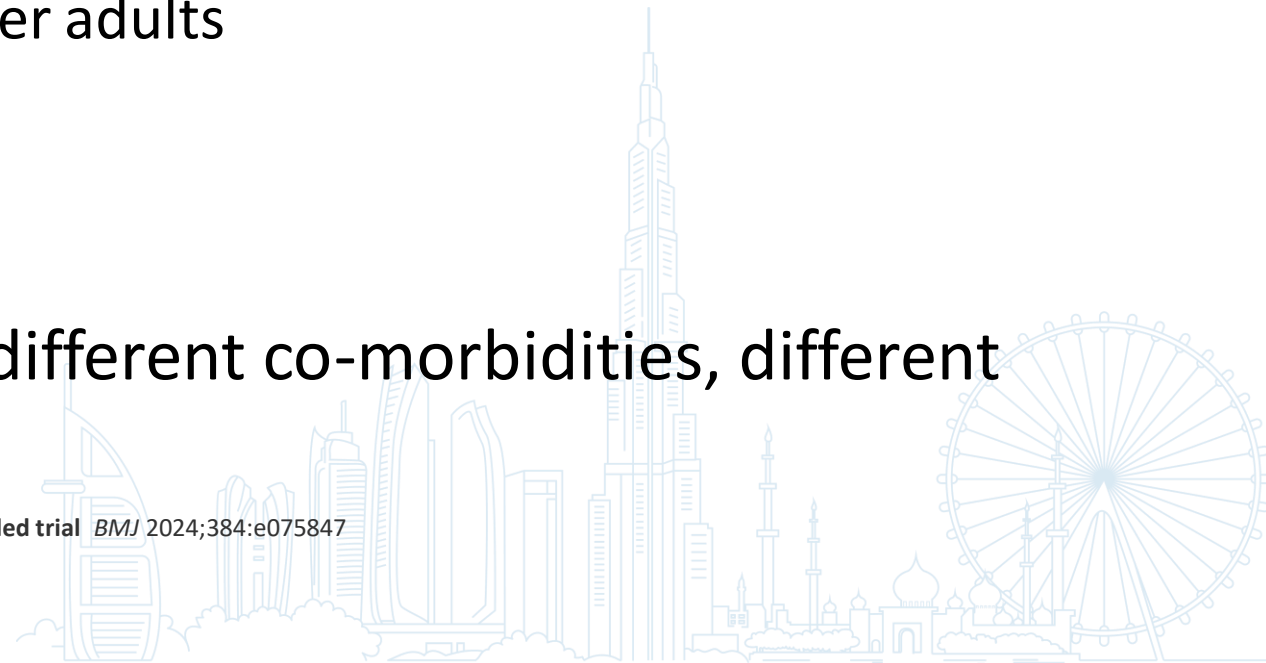
Depression and Exercise





Depression & Exercise Highlights Reel

- Exercise has moderate effects on depression alone or in combination
 - Best: walking, jogging, yoga, strength training, dancing
- Biggest effect
 - Strength training – Most effective in women and younger patients
 - Yoga – Most effective in Men and older adults
 - Qigona also more effective in men
 - Vigorous > mild intensity
 - 3x's = 5x's = 7x's a week
- Benefits of exercise equivalent for different co-morbidities, different levels of severity





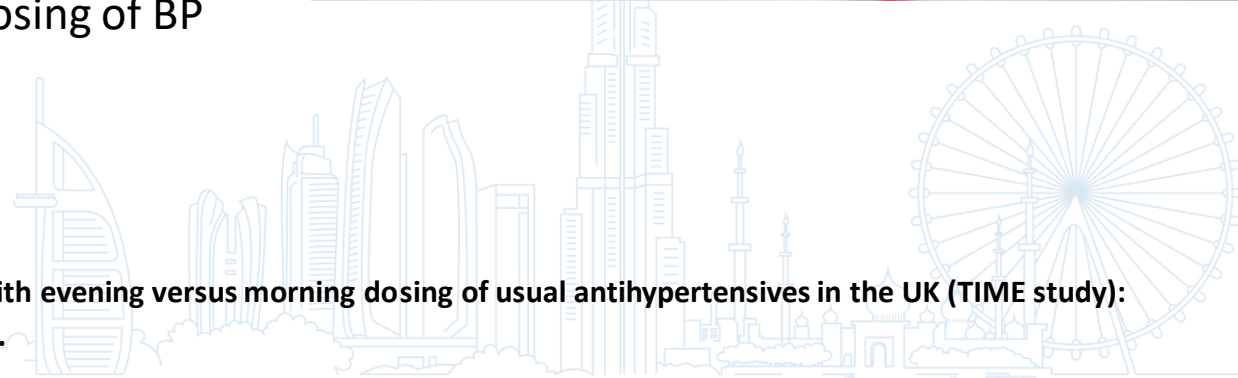
Grab bag





Is It Better to Take BP Meds AM or PM?

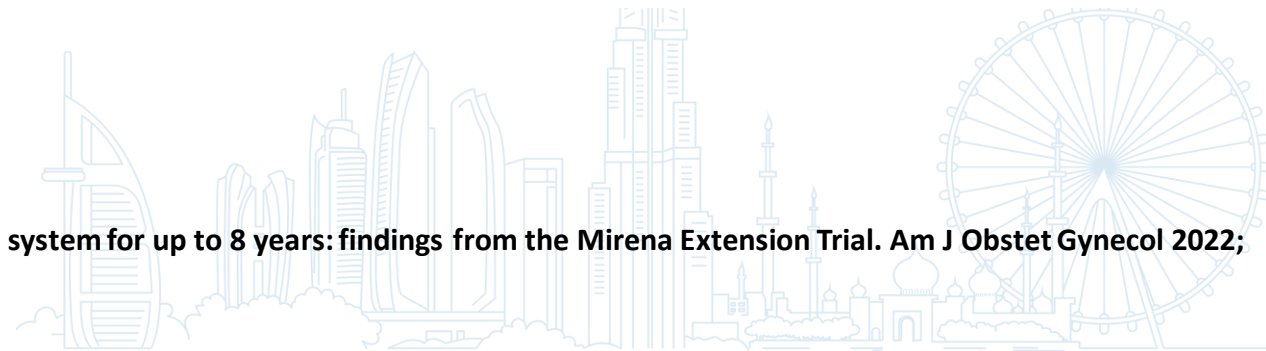
- TIME Study: RCT 21,000
 - Compared AM (6A-10A) to PM (8P-12A) dosing, 5 yrs f/u
 - Outcome
 - No difference in composite CV outcome (vascular death or hospitalization for non-fatal MI or CVA)
 - All-cause mortality or hospitalization for HF related cause
 - Discussion -Differs from 2 previous trials out of Spain showing advantage evening dosing (HYGIA group).
 - JNC 8 nor ACC/AHA guidelines do not call out timing of med as a concept.
 - The ADA BP guideline (Diabetes Care Supplement 1, CV Risk reduction) says that preferential evening dosing of BP meds is not supported.
- Bottom line No benefit in this study to timing





Can IUDs stay in past 3-5 years?

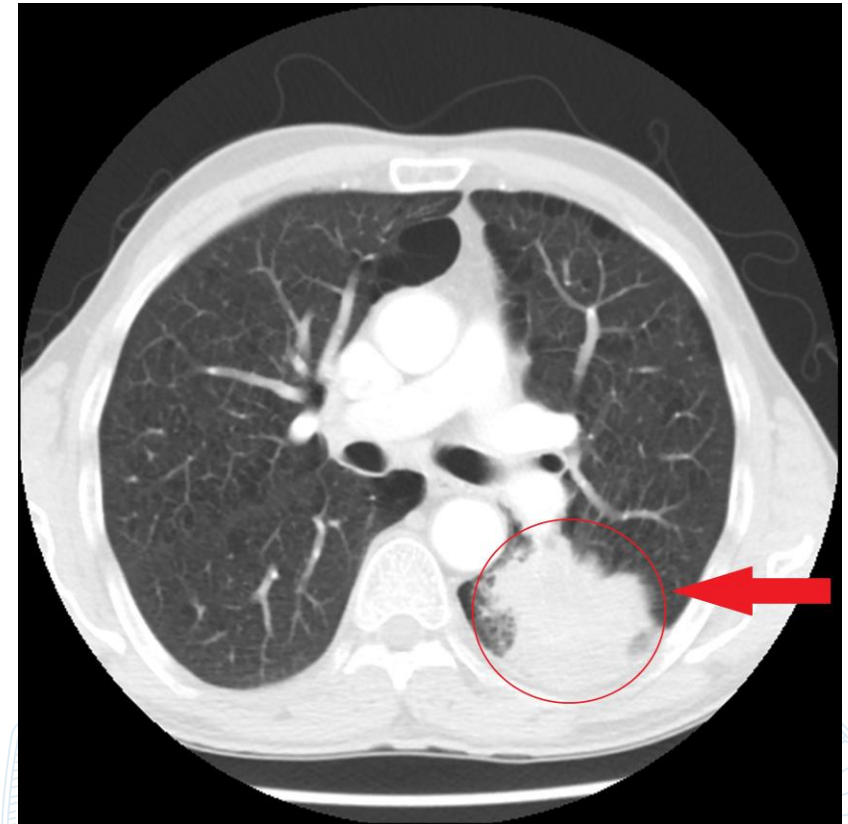
- IUDs are used by 12-14% of contraceptive users in the US
 - Progesterone IUD (Mirena, Liletta, Kyleena, Skyla)
 - Copper IUD (Paragard)
- Mirena and Liletta contain 52 mg of levonorgestrel.
 - They release 20 mcg/day decreasing to 10 mcg/day by 5 years of use.
- Mirena is now FDA approved for pregnancy prevention for 8 years. (8/18/22)
 - FDA: 5 years (2000) 7 years (2021) **8 years (2022)**
- Liletta also has 8-year approval now. (11/14/22)
 - FDA: 3 years (2015) 4 years (2017) 5 years (2018) 6 years (2019) **8 years (2022)**
- Other hormonal IUDs:
 - Kyleena contains 19.5 mg = 5 years, Skyla 13.5 mg = 3 years





Should Screen for Lung Cancer?

- The USPSTF recommends low-dose computed tomography (LDCT) for some smokers and former smokers to reduce mortality based largely on the US National Lung Screening Trial.
- NNS= 219 to prevent one death
- Retrospective case series n= 26,455 National Lung Screening Trial
 - 1 screening examination with LDCT.
 - Incidental findings were negative screen result for cancer +
 - Positive screen result for emphysema, significant cardiovascular abnormality, or significant abnormality above or below the diaphragm.
- Results:
 - **33.8% of participants had a significant incidental finding (SIF)**
 - Emphysema = 43.0%
 - Coronary artery calcium = 12.1% (NNS= 8)
 - Masses or suspicious lesions = 7.4% (NNS= 14)
 - Kidney 3.2% of all SIF
 - Liver 2.1%
 - Adrenal 1.3%
 - Breast 0.8%





Should We Screen for CKD in older adults

- Decline in the (eGFR) is a normal part of aging.
 - > 65 y/o with an eGFR 45 to 59 and no or mild albuminuria = low risk of progressing to more serious kidney disease.
- New Diagnostic criteria has qualified many more patients but
- Overestimation of CKD,
 - Increased health care costs
 - Increased worry, and
 - Unnecessary interventions
 - No clear benefit if patient >75
- ½ > 75 y/o meet criteria for CKD but few progress to end-stage renal disease.
- No intervention based on CKD diagnosis alone improves outcomes.
- Stop screening and intervening in older adults





Summary

- Torsemide instead of furosemide for heart failure
- In older adults (>65) don't intervene in pre diabetes, low chance of help
- SGLT-2 GLP-1 and probably metformin for mortality benefit in DM
- BP goals <140/85 for overall mortality, 130/80 for mortality and CV, CVA benefit, 130/80 in diabetes
- Cut down screen time to avoid developmental delay,
- 5 magic hours for couples, family dinner for families
- Mediation and Exercise for Depression
- IUD can stay in longer
- Lung Cancer screening comes with a lot of other things besides lung cancer
- Consider stopping screening CKD in older adults.



