The State of Cardiometabolic Disease & What are the Targets to Mitigate Risk?

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Disclosures

- Faculty: Sean Wharton
- Relationships with for-profit and not-for-profit interests:
  - Financial Payments/Honoraria: Novo Nordisk, Bausch Health Canada Inc. Eli Lilly
  - Other: Obesity Canada, Diabetes Canada, The Obesity Society, Women’s College Hospital, Juravinski Hospital, Wharton Medical Clinic

Objectives

Disease Burden

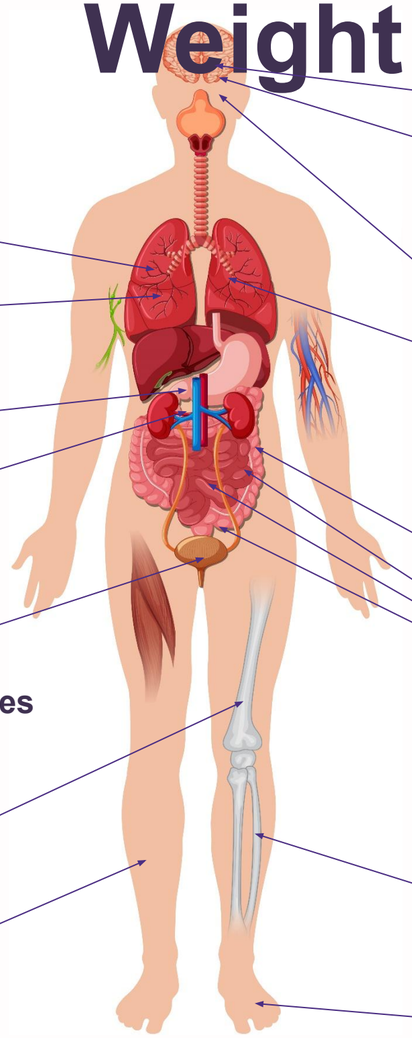
To be able to discuss the disease burden of obesity, diabetes and cardiovascular disease

Treat Metabolic Conditions

Recognize the need to target weight, blood pressure, cholesterol, and smoking to reduce risk

Identify tools to mitigate cardiovascular risk

Medical Complications of Increased Weight



Pulmonary disease
abnormal function
obstructive sleep apnea
hypoventilation syndrome

Acute Conditions
COVID19
H1N1

Nonalcoholic fatty liver disease
steatosis
steatohepatitis
cirrhosis

Gall bladder disease

Gynecologic abnormalities
abnormal menses
infertility
polycystic ovarian syndrome
urinary incontinence

Osteoarthritis

Skin
fungal/bacterial infections

Cognitive decline
Mental health conditions

Stroke

Cataracts

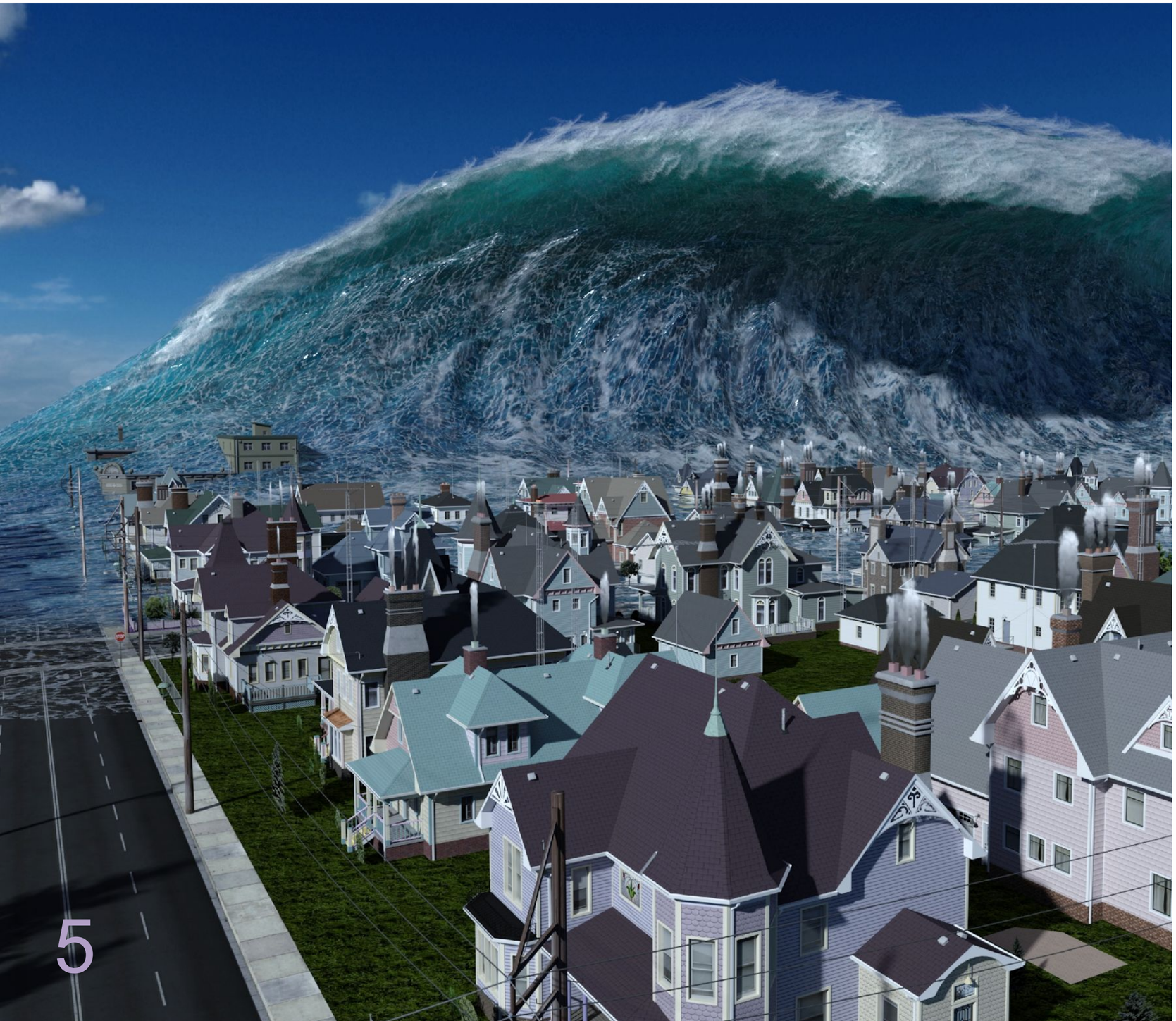
Coronary heart disease
diabetes
dyslipidemia
hypertension

Renal Failure

Cancer
breast, uterus, cervix
colon, esophagus, pancreas
kidney, prostate

Phlebitis/DVT (Blood Clots)
venous stasis

Gout



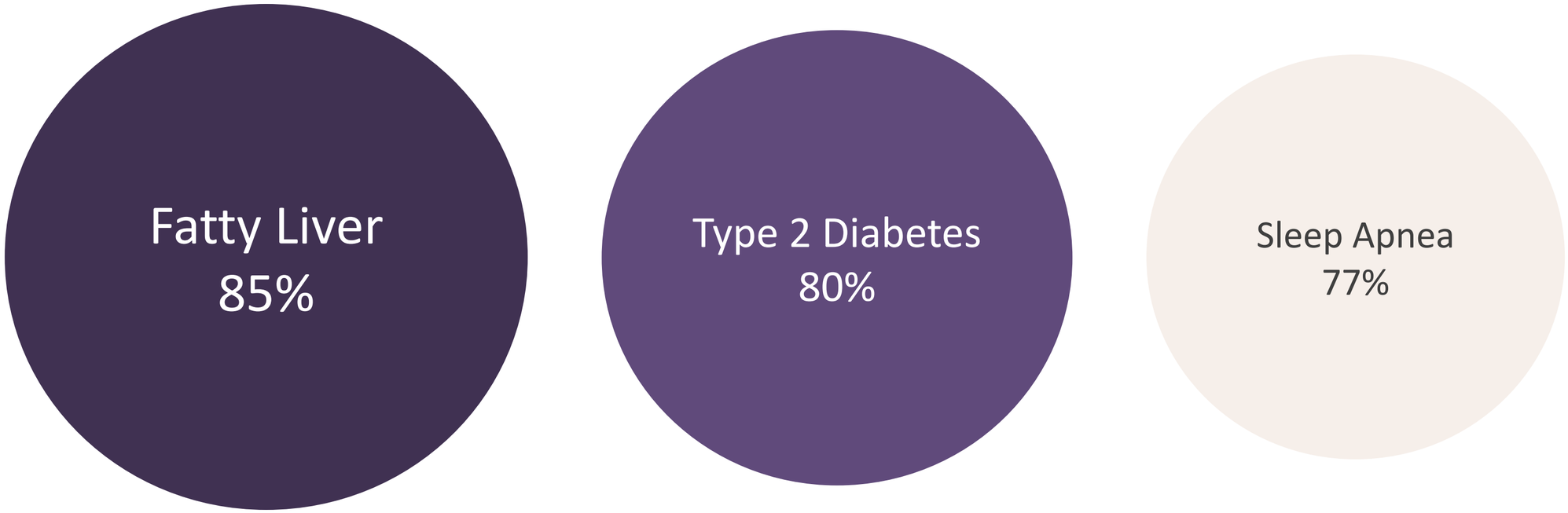
Obesity

650 million (13%) Globally

150 million (42%) U.S.A.

9 million (26%) Canada

Obesity



9 million Canadians

Elisa Fabbrini t al. Hepatology 2010 Feb 51(2) 679-689.
Wing RR. Evidence-based diabetes care. Hamilton: B.C. Decker Inc., 2000, pg. 252–76
Jehan et al. Sleep Med Disord. 2017; 1(4): 00019

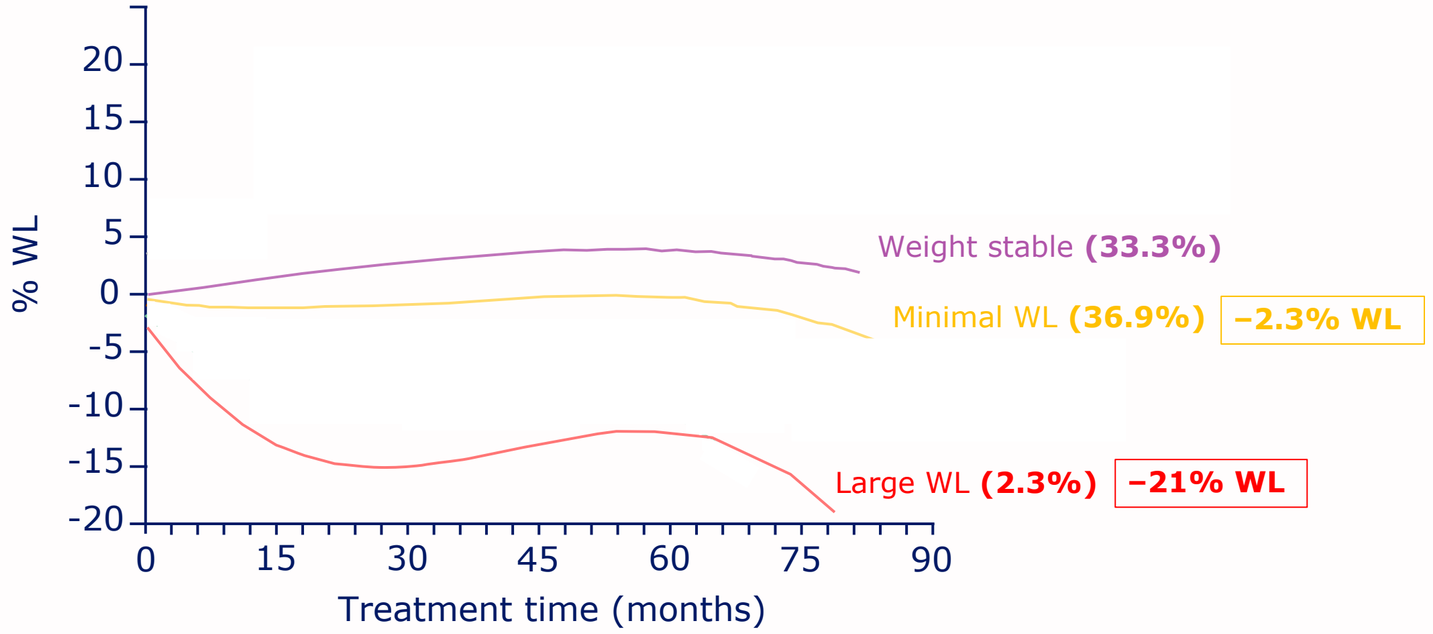
Adipose Tissue Dysfunction

Inability to store excess calories

Cellular hypoxia

Inflammation - adipokines

Weight loss trajectories of 7,121 patients over 7.5 years
Lifestyle Management (diet and exercise)



Patients who attended a physician-led multi-disciplinary clinical lifestyle weight management that predominantly focused on education and diet counseling management. WL, weight loss

Kuk J, Wharton S. *Obes Sci Pract* 2016;2:215–23

How much weight loss is needed to improve obesity-related complications?

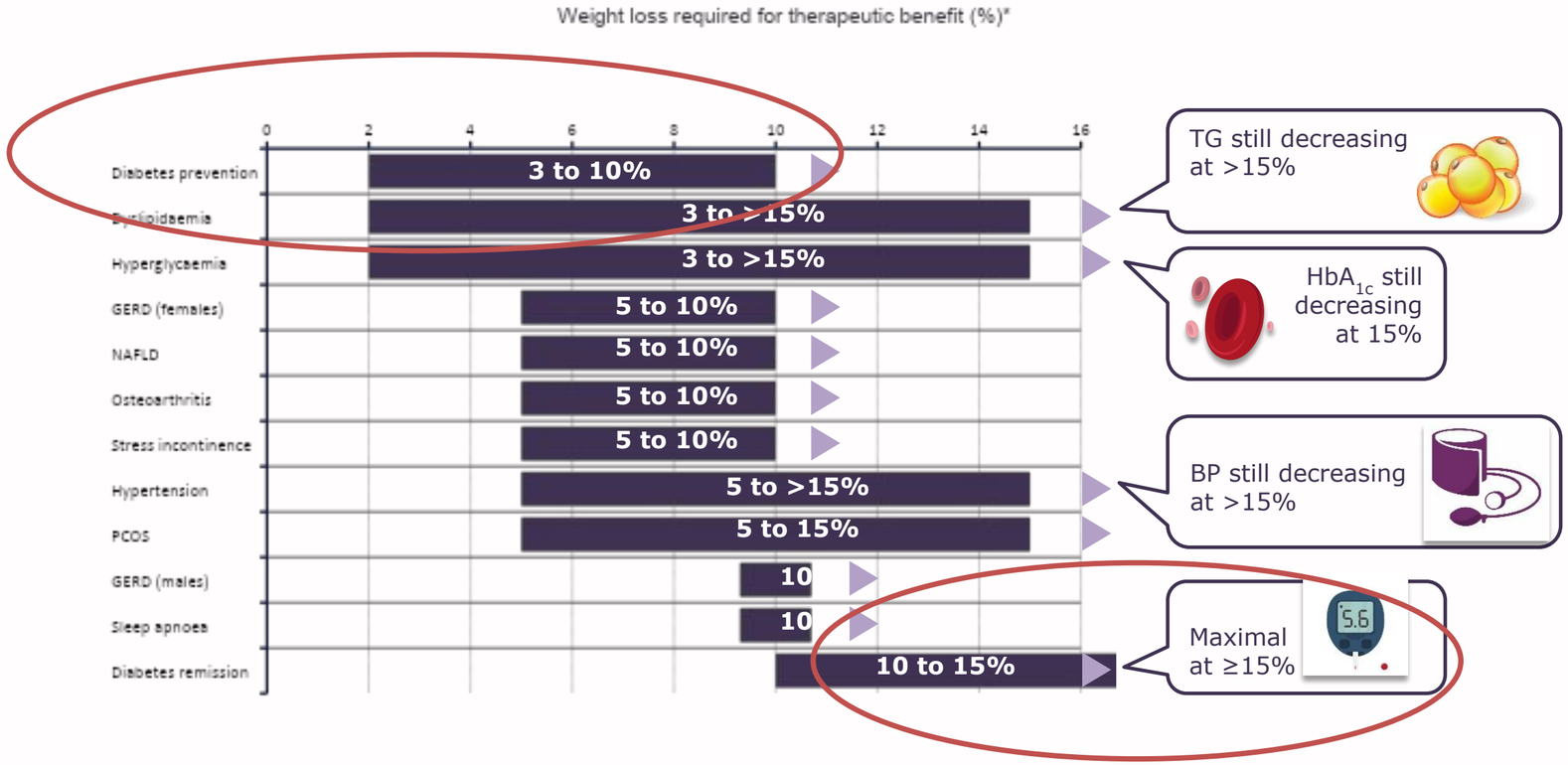
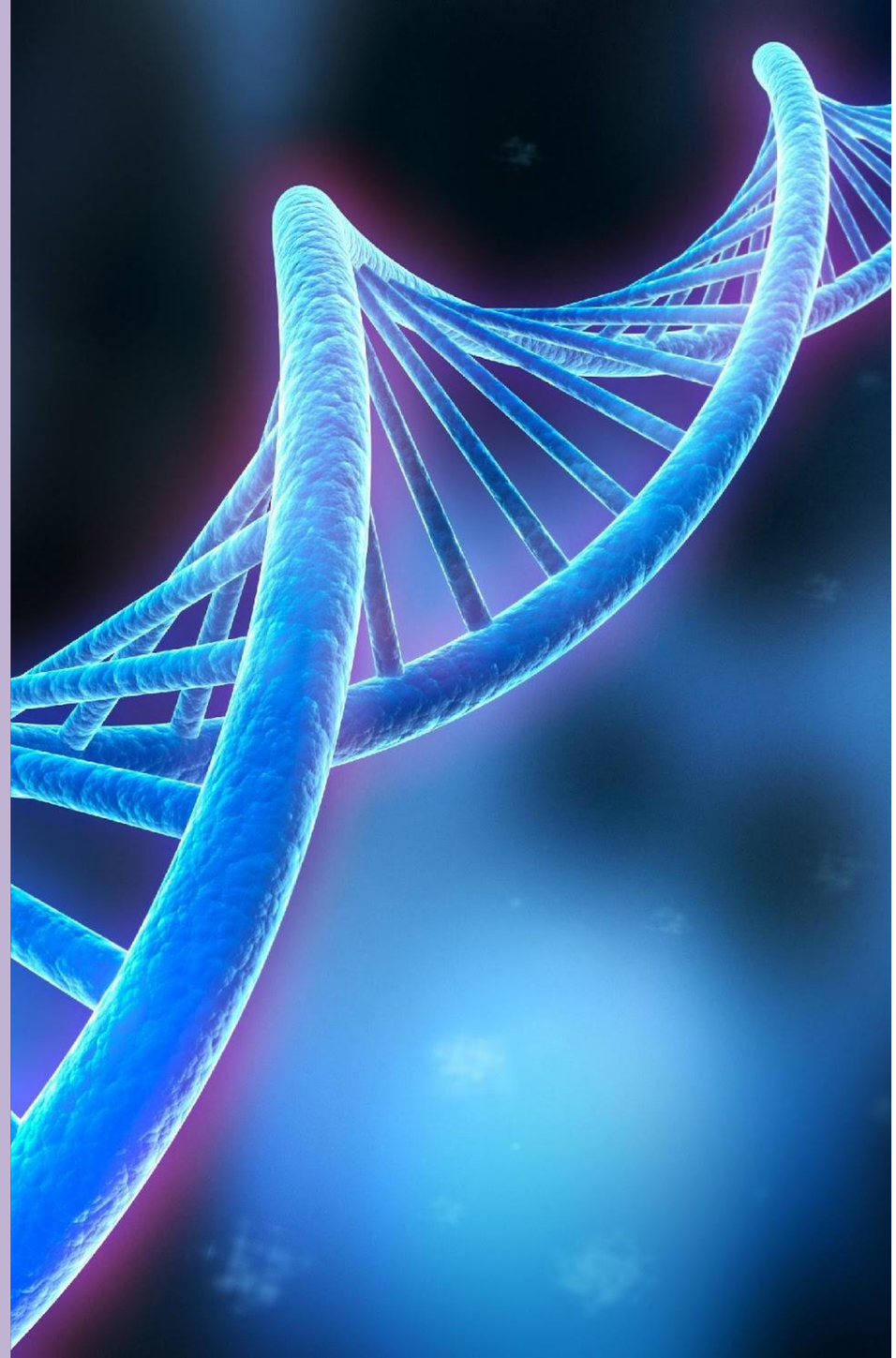


*Figure displays weight loss ranges examined in the studies (impact of >10% weight on NAFLD, and sleep apnea symptoms was not reported).
BP, blood pressure; GERD, gastroesophageal reflux disease; NAFLD, non-alcoholic fatty liver disease; PCOS, polycystic ovary syndrome; TG, triglycerides.

Adapted from: AACE/ACE Obesity CPG, *Endocr Pract.* 2016;22(Suppl 3); Cefalu et al. *Diabetes Care* 2015;38:1567–82; Lean et al. *Lancet* 2018;391:541–51; Hannah & Harrison. *Clin Liver Dis* 2016;20:339–50.



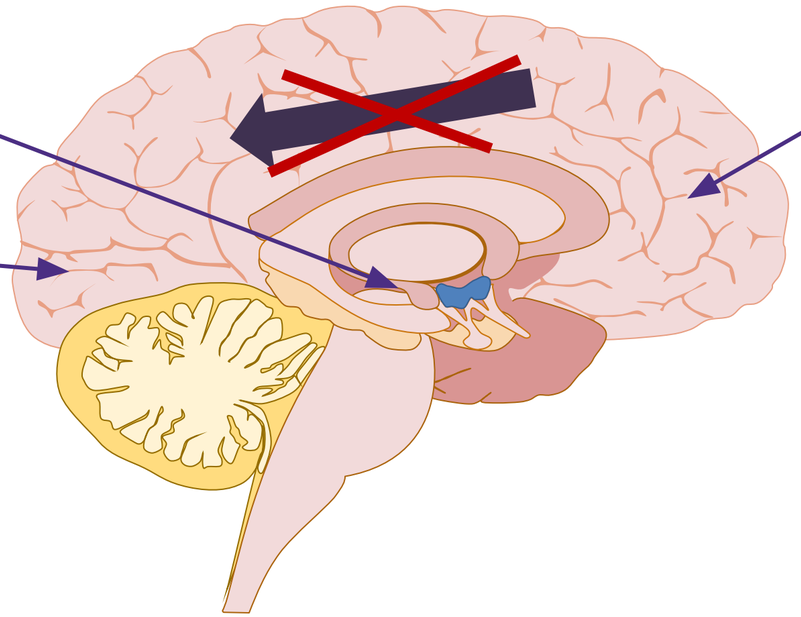
Genetics of Obesity

> 140 genetic regions are known to influence obesity traits

Neuropathology Associated with Obesity

Hypothalamic Hunger System

Mesolimbic Reward System



Frontal Lobe Executive Function

Dopamine
Opioid
Cannabinoid
Receptors

- **Ghrelin**
- **Leptin**
- **PYY**
- **GLP-1**
- **CCK**
- **Amylin**

Lau DCW, Wharton S. Canadian Adult Obesity Clinical Practice Guidelines: The Science of Obesity. Available from: https://obesitycanada.ca/guidelines/science

Gut-Brain Connection

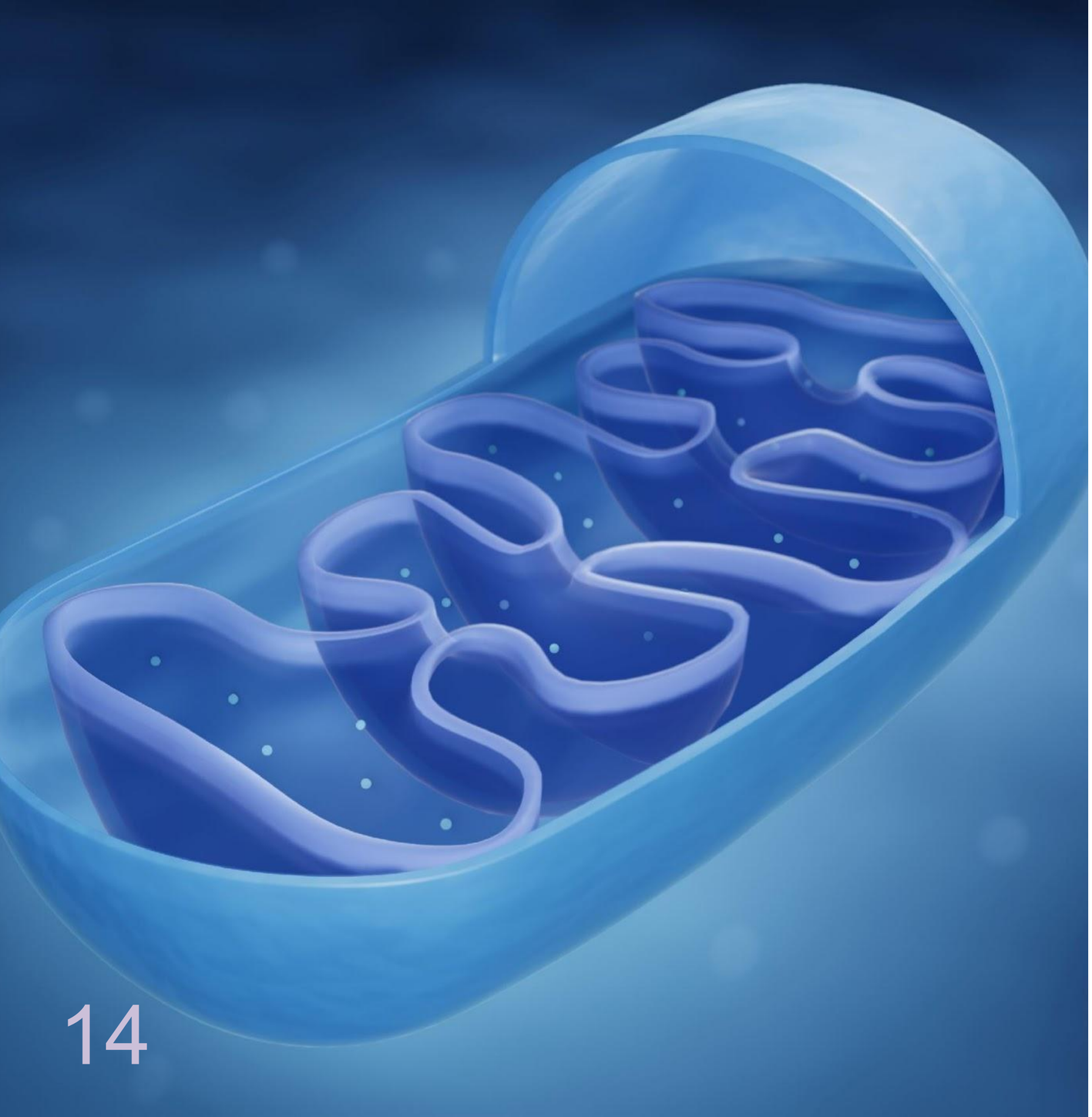
GLP-1 and PYY delay gastric emptying and are potent anorexigenic gut hormones secreted by the L-cells in the small bowel in response to food ingestion

Leptin and insulin bind to their respective receptors in the arcuate nucleus to decrease food intake and increase energy expenditure

Gut microbiome – bacteria influences weight and messages to the brain

Metabolic Adaptation

- Lower than expected metabolic rate
- Primarily after weight loss and then weight regain
- RMR stays low after regain of weight



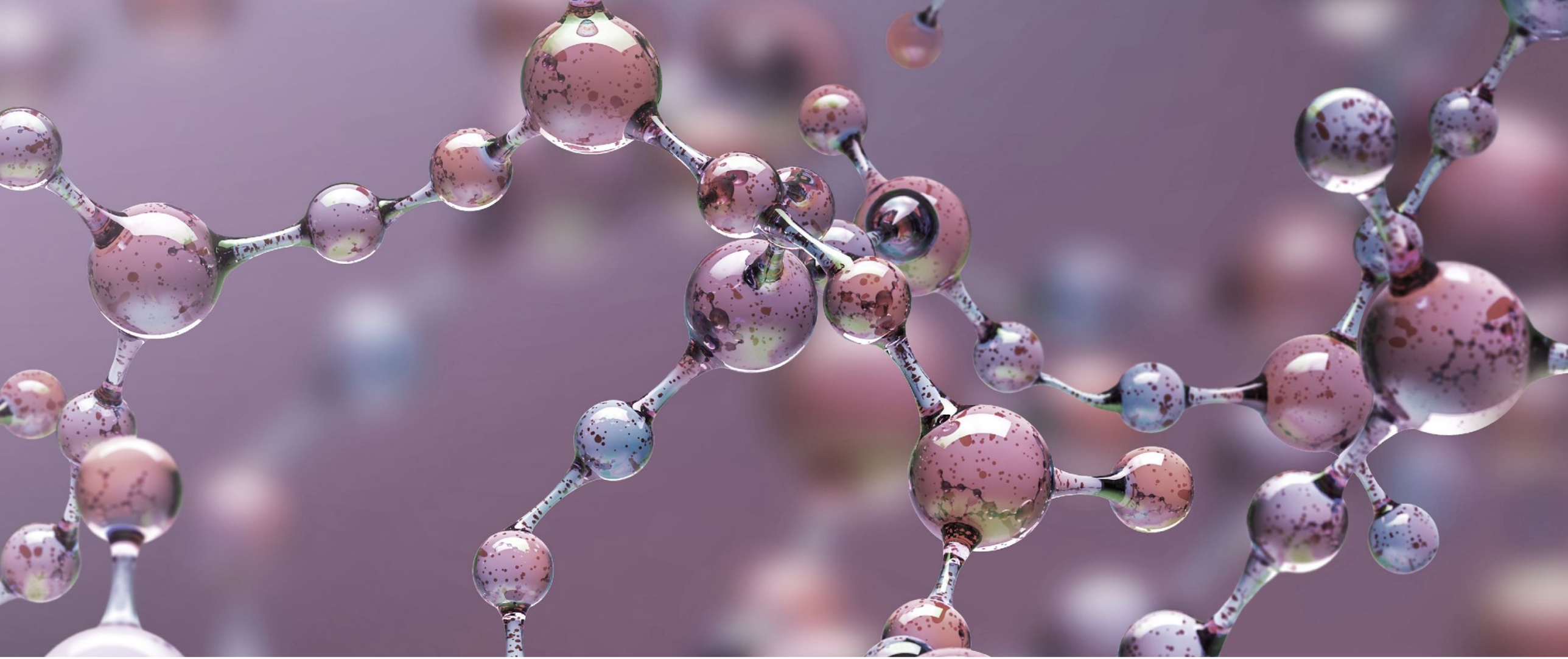
Mitochondria

Dieting – depresses mitochondria function and gene expression

Bariatric surgery – improves the activity and function of mitochondria and gene expression.

Differential Mitochondrial Gene Expression in Adipose Tissue Following Weight Loss Induced by Diet or Bariatric Surgery

B. W. van der Kolk et al. *The Journal of Clinical Endocrinology & Metabolism*, 2021



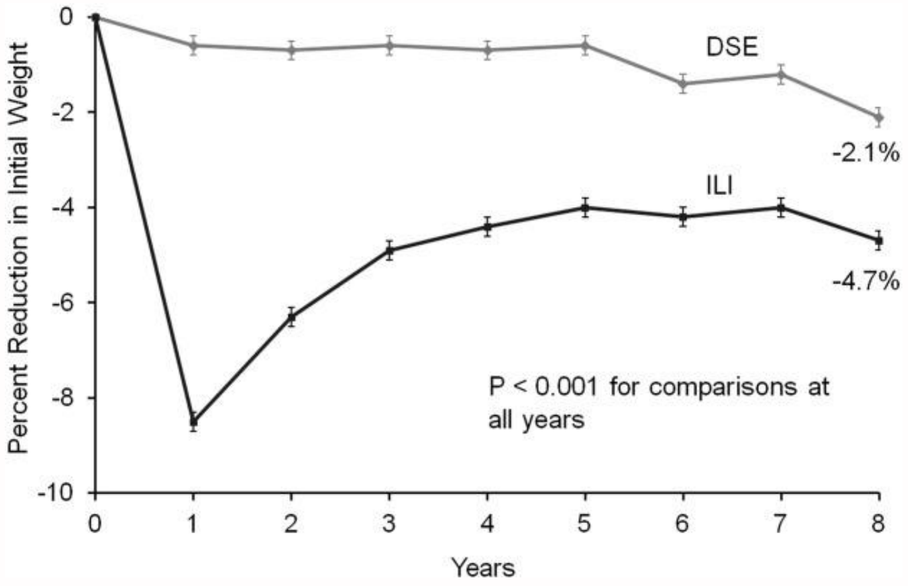
Uncoupling Proteins for Obesity

Chen et al. Mitochondrial uncoupler SHC517 reverses obesity in mice without affecting food intake. Metabolism. Volume 117, April 2021, 154724

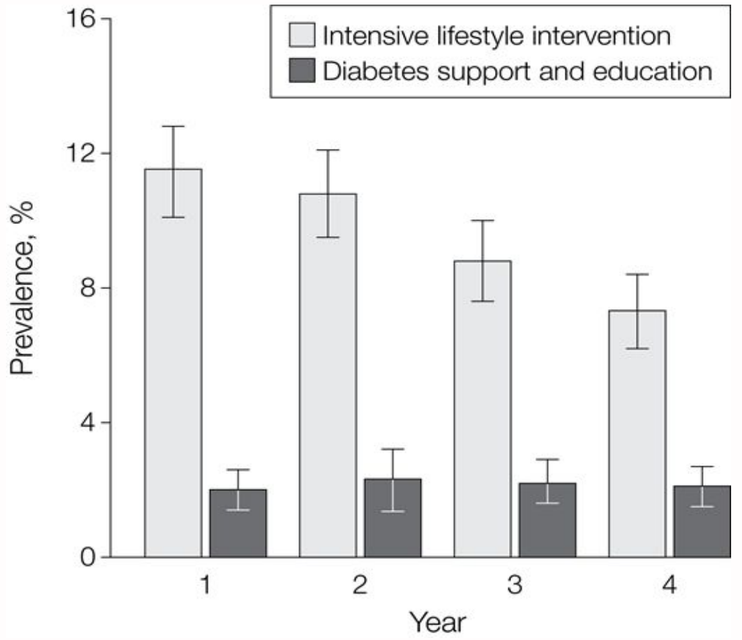
Treating Obesity –

Treats Type 2 Diabetes

Eight-year weight losses with The look AHEAD study



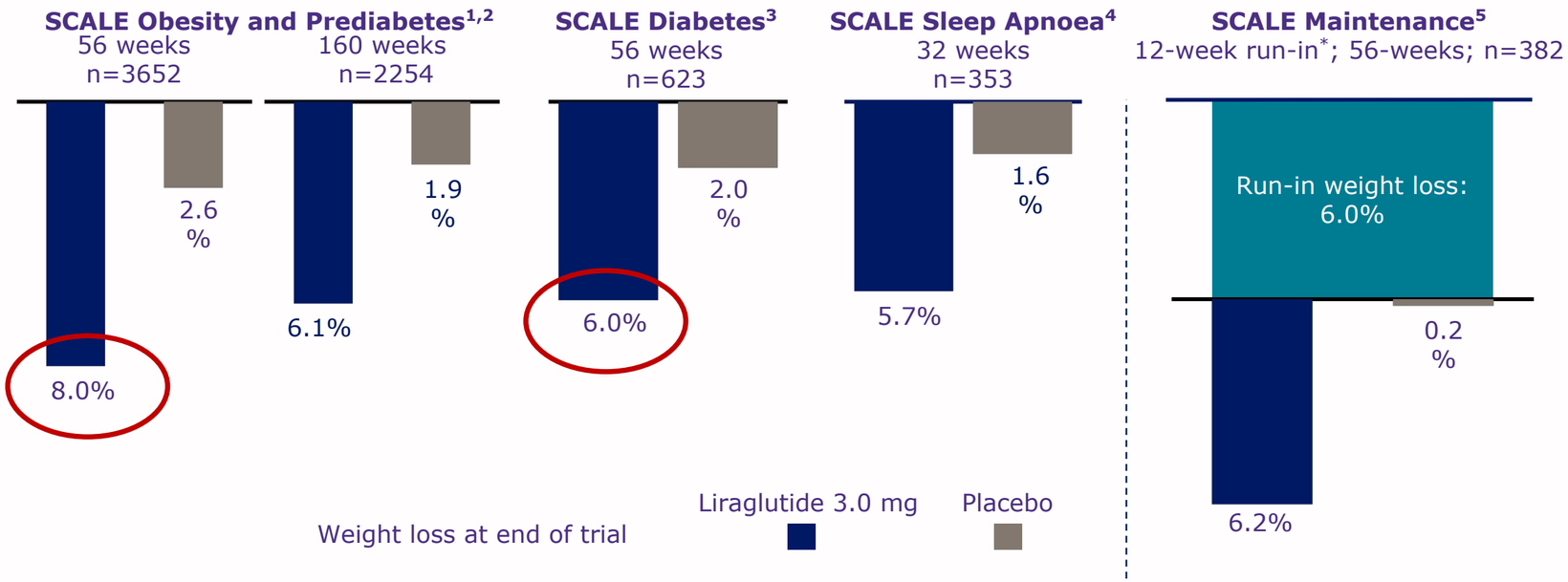
Prevalence of Any Remission (Partial or Complete)



Obesity, Volume: 22, Issue: 1, Pages: 5-13, First published: 09 November 2013

Gregg EW et al. AMA. 2012;308(23):2489-2496

Weight loss across SCALE trials

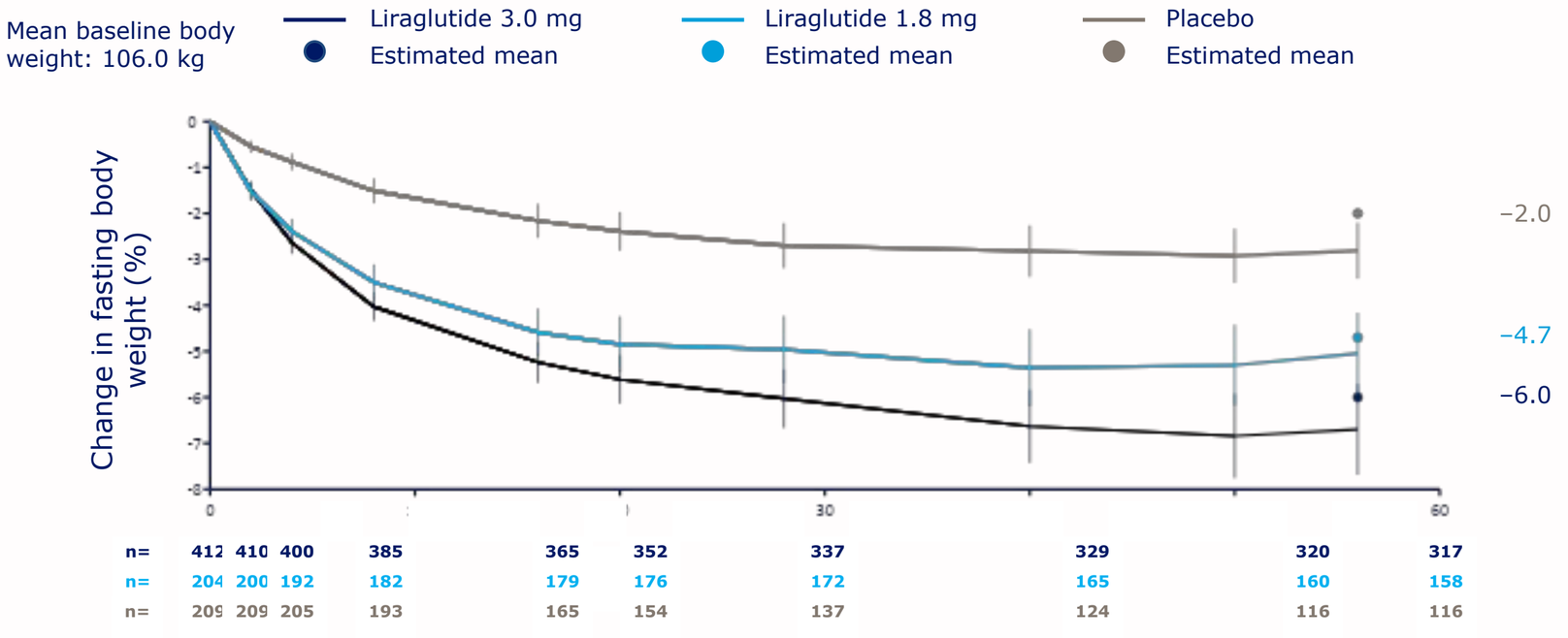


Data are observed means; last observation carried forward at end of trial; N, number of individuals contributing to the analysis
*Low calorie diet (total energy intake 1200–1400 kcal/day)

1. Pi-Sunyer *et al. N Engl J Med* 2015;373:11–22; 2. le Roux CW *et al. Lancet.* 2017;389:1399–1409; 3. Davies *et al*. *JAMA* 2015;314:687–99;
4. Blackman *et al. Int J Obes (Lond)* 2016;40:1310–19; 5. Wadden *et al. Int J Obes (Lond)* 2013;37:1443–51

Change in body weight (%)

0-56 weeks

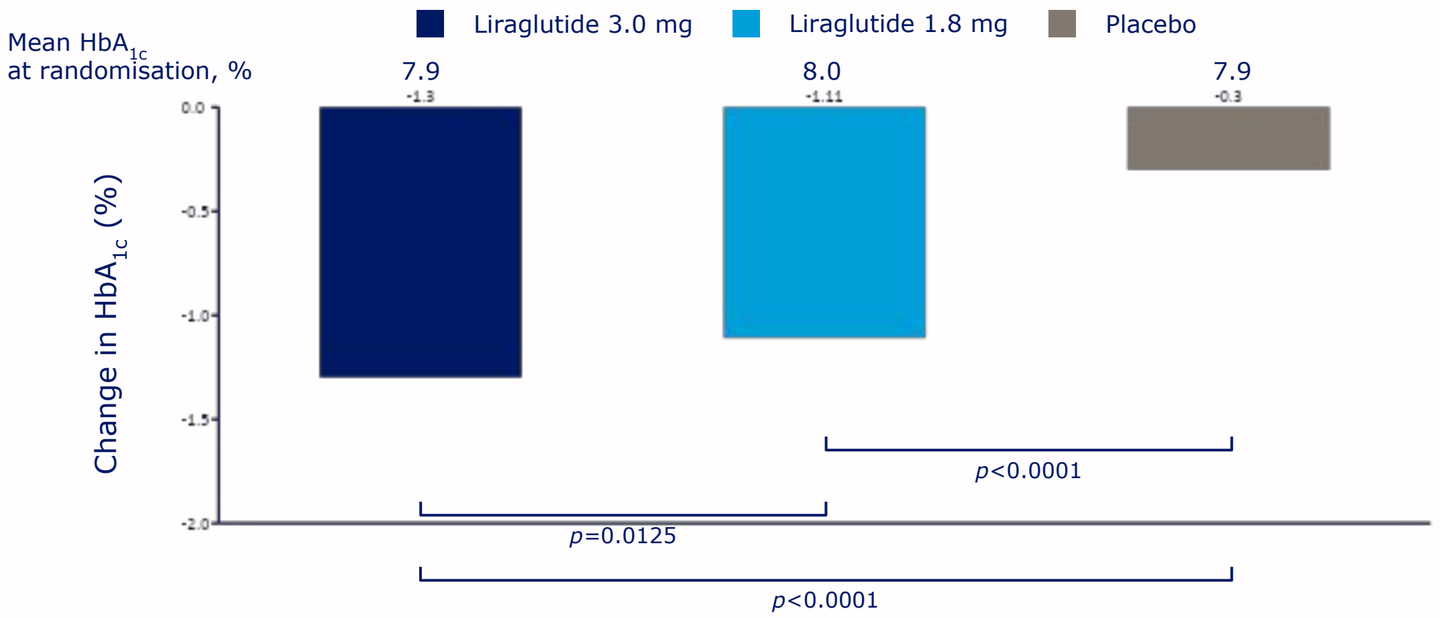


FAS. Line graphs are observed means (±95% Wald CI). Statistical analysis is ANCOVA. Estimated means are calculated with missing observations at week 56 imputed using a regression method. CI, confidence interval; FAS, full analysis set

Davies *et al*. *JAMA* 2015;314:687–99

Change in HbA_{1c} (%)

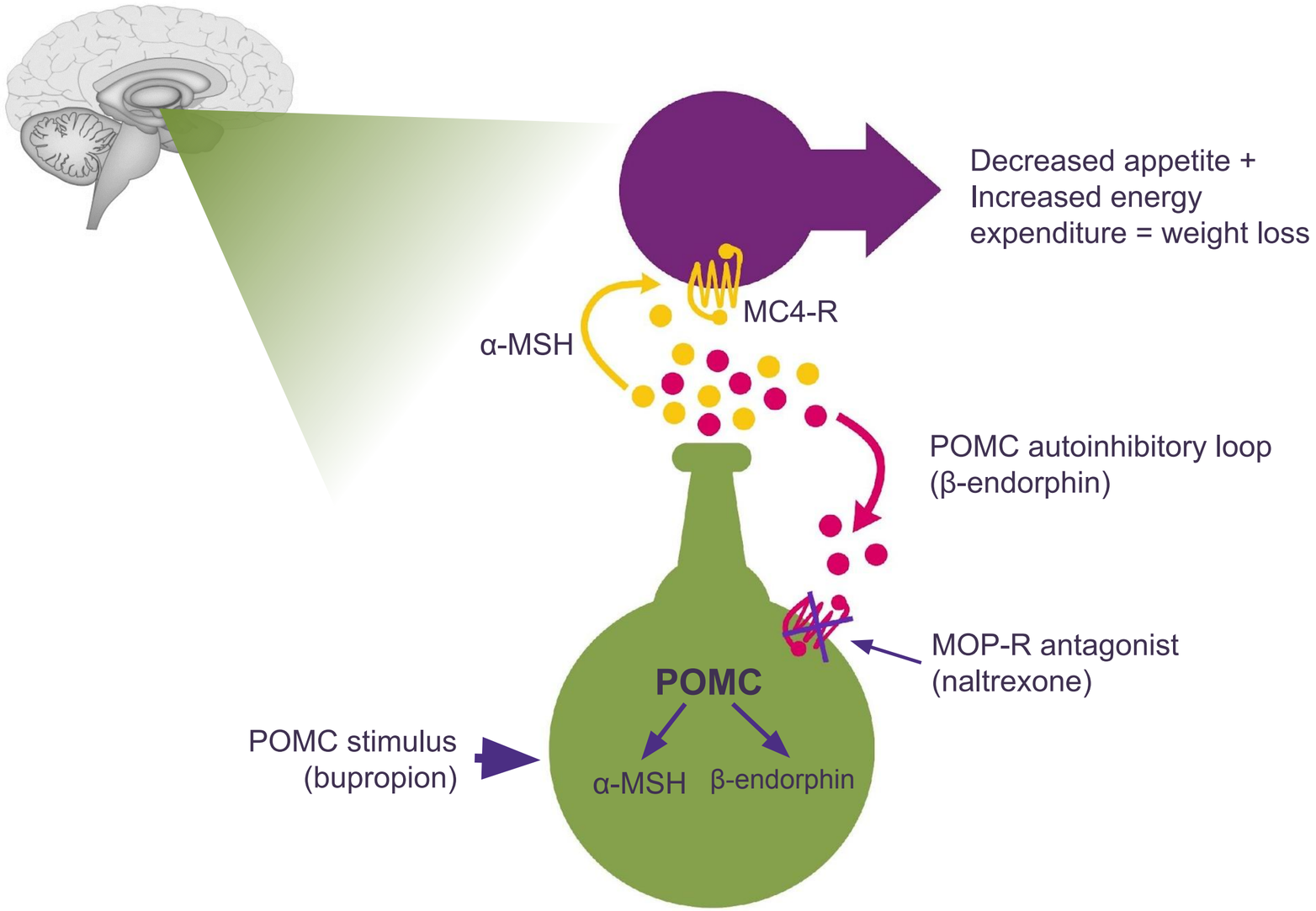
0 – 56 weeks



FAS LOCF. Change from baseline is observed mean change. Statistical analysis is analysis of covariance
FAS, full analysis set; LOCF, last observation carried forward

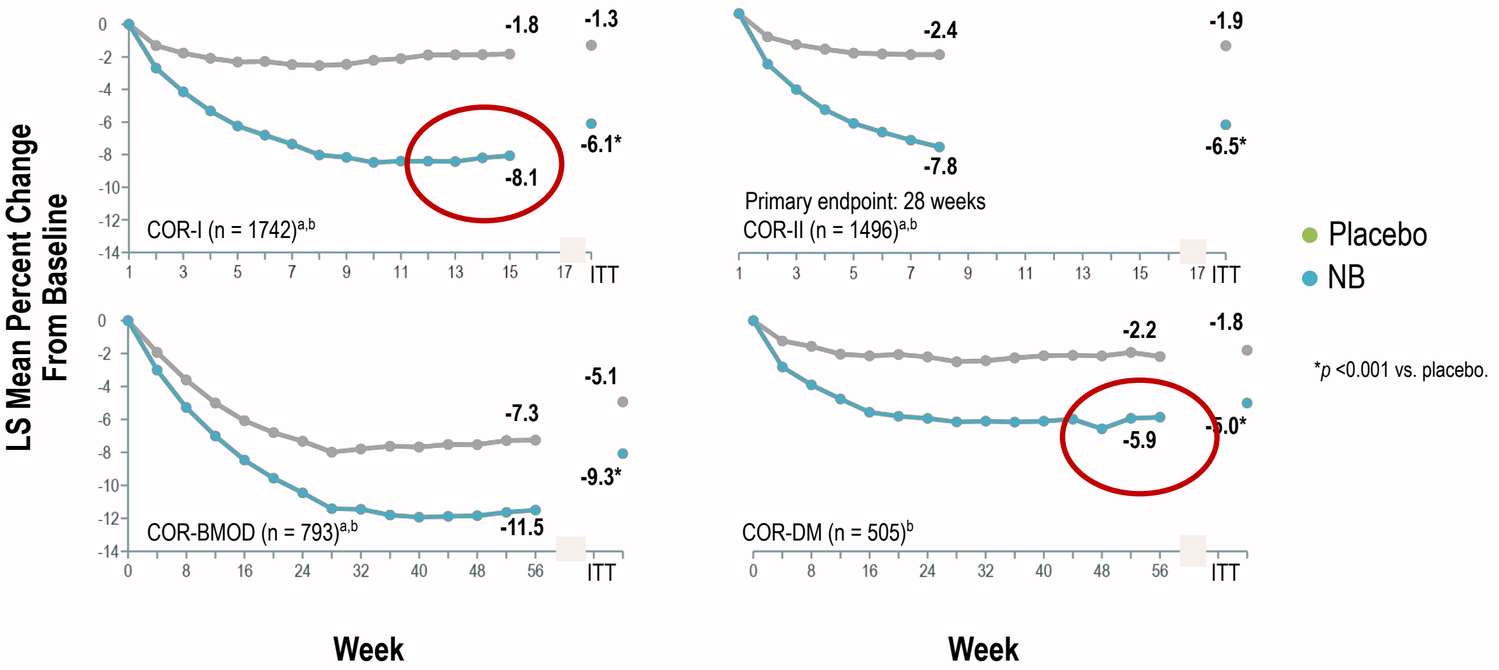
Davies *et al*. *JAMA* 2015;314:687–99

Naltrexone/Bupropion



COR Phase 3 – Naltrexone/Bupropion

Weight Loss Results

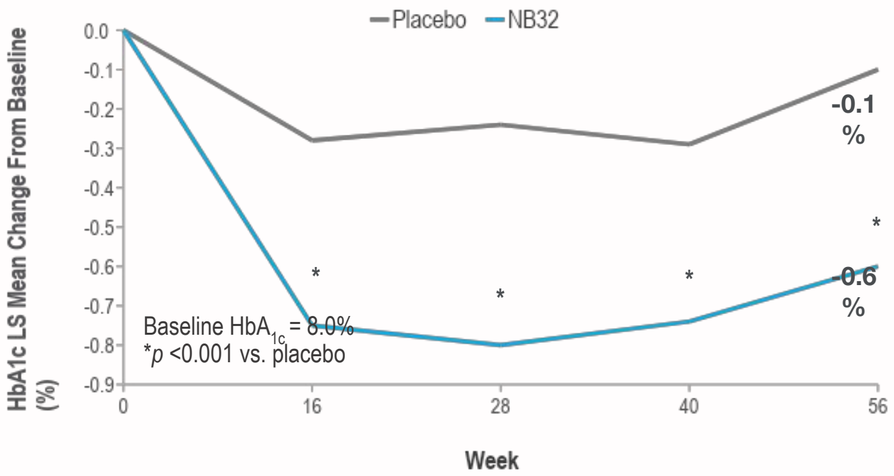


a. BMI 30–45 kg/m2; b. BMI 27–45 kg/m2 with comorbidities. BMOD = behavior modification; ITT = intent-to-treat; DM = type 2 diabetes mellitus.

CONTRAVE® (product monograph), February 12, 2018, Valeant Canada LP, Laval, QC. Greenway FL *et al*. *Lancet*. 2010;376:595-605. Wadden TA *et al*. *Obesity*. 2011;19:110-120. Hollander P *et al*. *Diabetes Care*. 2013;36:4022-4029. Apovian CM *et al*. *Obesity.* 2013;21:935-943.

Change in Glycemic Control

Over 56 weeks



Percentage of subjects reaching HbA1c target at week 56

HbA1c target	Placebo (% subjects)	NB32 (% subjects)
< 7%	26.3%	44.1%*
< 6.5%	10.2%	20.7%*

*P<0.001 vs placebo. HbA1c, hemoglobin A1C; NB32, naltrexone 32 mg/bupropion 360 mg
Hollander P et al. Diabetes Care. 2013 Dec;36(12):4022-9.

The NEW ENGLAND JOURNAL of MEDICINE

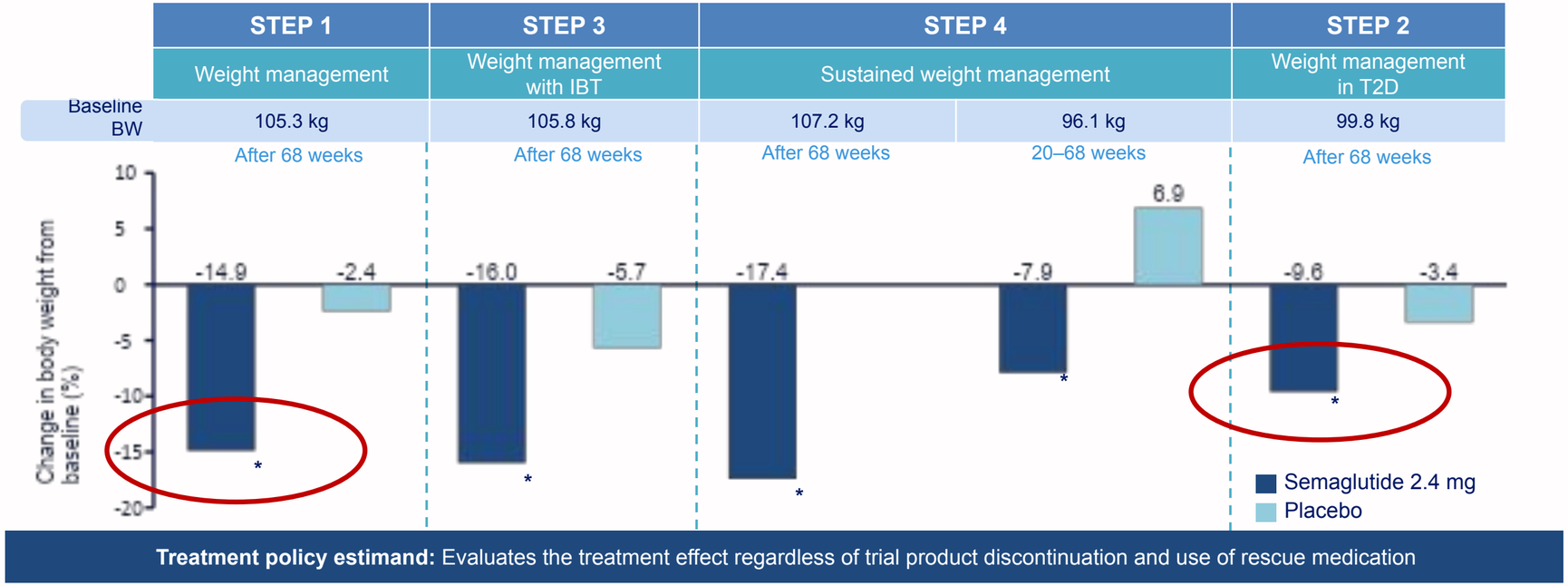
ORIGINAL ARTICLE

Once-Weekly Semaglutide in Adults with Overweight or Obesity

John P.H. Wilding, D.M., Rachel L. Batterham, M.B., B.S., Ph.D., Salvatore Calanna, Ph.D., Melanie Davies, M.D., Luc F. Van Gaal, M.D., Ph.D., Ildiko Lingvay, M.D., M.P.H., M.S.C.S., Barbara M. McGowan, M.D., Ph.D., Julio Rosenstock, M.D., Marie T.D. Tran, M.D., Ph.D., Thomas A. Wadden, Ph.D., Sean Wharton, M.D., Pharm.D., Koutaro Yokote, M.D., Ph.D., Niels Zeuthen, M.Sc., and Robert F. Kushner, M.D., for the STEP 1 Study Group*

Phase 3a Results – STEP Trials

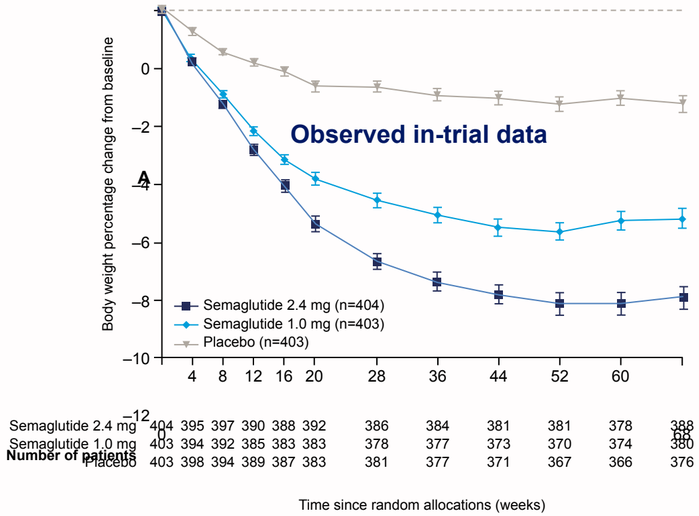
Effects of semaglutide 2.4 mg once-weekly in patients with obesity

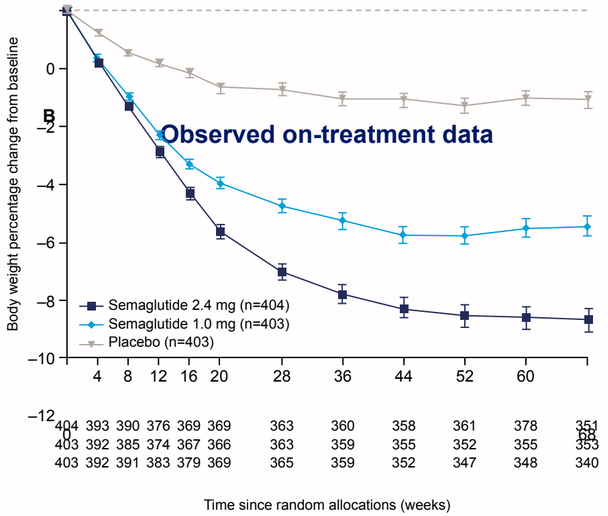


*Statistically significant vs placebo.
BW, body weight; IBT, intensive behavioural therapy.

STEP 2 – Diabetes - Semaglutide

Percentage change from baseline in body weight by week





Observed mean percentage change from baseline in body weight over time for patients in the full analysis set during the in-trial observation period (from randomisation to last contact with trial site, regardless of treatment discontinuation or rescue intervention) and on-treatment observation period (during treatment with trial product [any dose of trial medication administered within the previous 2 weeks]). Data are for the full analysis set.
Error bars are ± standard error of the mean. Numbers below the panels are the number of patients contributing to the mean.
Adapted from Figure 2. Comparison of bodyweight parameters for semaglutide 2.4 mg versus semaglutide 1.0 mg versus placebo, given once a week.
Davies et al. Lancet 2021;epub ahead of print

Confirmatory Secondary Endpoints

Treatment policy estimand (2 of 3)

	Semaglutide 2.4 mg (N=404)	Semaglutide 1.0 mg (N=403)	Placebo (N=403)	Treatment comparison [95% CI]; p value (for confirmatory analyses)
HbA_{1c}, percentage points				Semaglutide 2.4 mg – placebo ETD: −1.2 [−1.4 to −1.0]; p<0.0001 Semaglutide 2.4 mg – semaglutide 1.0 mg ETD: −0.2 [−0.3 to 0.0] Semaglutide 1.0 mg – placebo ETD: −1.1 [−1.3 to −0.9]
Week 68 mean ± SD	6.4 (1.2); n=381	6.6 (1.1); n=376	7.8 (1.3); n=374	
Change from baseline to week 68 ± SE	−1.6 ± 0.1	−1.5 ± 0.1	−0.4 ± 0.1	
HbA_{1c}, mmol/mol				Semaglutide 2.4 mg – placebo ETD: −13.5 [−15.5 to −11.4]; p<0.0001 Semaglutide 2.4 mg – semaglutide 1.0 mg ETD: −1.7 [−3.7 to 0.4] Semaglutide 1.0 mg – placebo ETD: −11.8 [−14.0 to −9.7]
Week 68 mean ± SD	46.7 ± 12.9; n=381	48.4 ± 12.0; n=376	61.8 ± 14.4; n=374	
Change from baseline to week 68 ± SE	−17.5 ± 0.7	−15.9 ± 0.8	−4.1 ± 0.8	

Data are for the full analysis set for the treatment policy estimand (assesses treatment effect regardless of treatment discontinuation or rescue intervention).
CI, confidence interval; ETD, estimated treatment difference; SD, standard deviation; SE, standard error.
Adapted from Table 2. Co-primary, confirmatory secondary, and selected exploratory trial endpoints (treatment policy estimand).
Davies et al. Lancet 2021;epub ahead of print

Treatment of Obesity based on Evidence and Biology

Wharton S et al. Obesity in Adults CPG. CMAJ 2020 Aug 4;192:E875-91

Current Treatments & Beyond

Current Medications

Naltrexone/Bupropion

GLP1 (Liraglutide)
- Once daily

GLP1 (semaglutide)
- Once weekly

Phentermine/Topiramate

Emerging Medications

Amylin

Combination Treatments
- GLP1/Amylin
- GLP1/GIP
- GLP1/Glucagon Agonist

Real World Study in Canada
Liraglutide 3.0 mg n:311 patients

8.1 kg

average weight loss between baseline and 6 months in the ≥6 months cohort

7.1%

average percentage weight loss between baseline and 6 months in the ≥6 months cohort

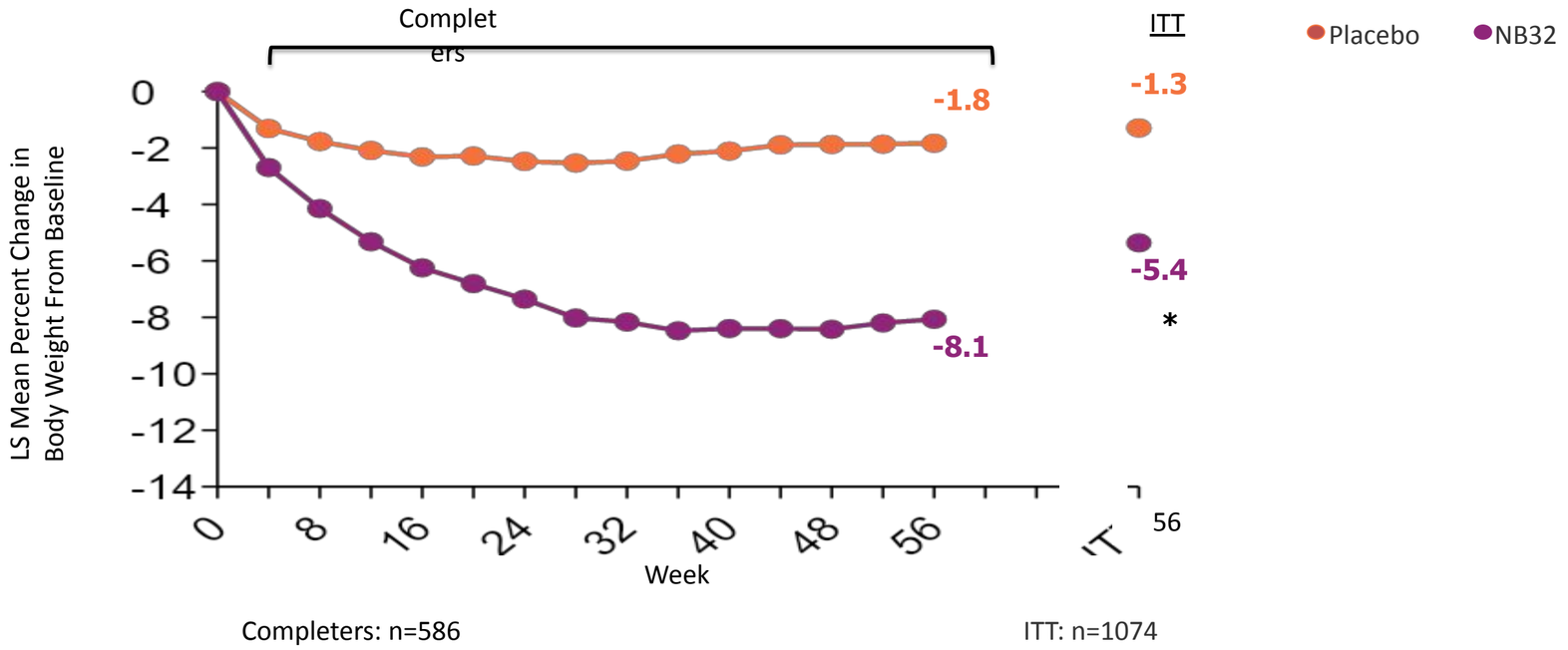
Improvements in HbA_{1c} and SBP were also observed

Wharton S et al. Obesity, June 2019. https://doi.org/10.1002/oby.22462

Effect of Naltrexone/Bupropion on weight in COR-I

Treatment with NB resulted in significant & sustained weight loss over 56 weeks

COR-I



Completers: n=586

ITT: n=1074

Figure on right republished with permission of the American Diabetes Association, from Hollander P et al,[2] © 2013; permission conveyed through Copyright Clearance Center, Inc.
*P<0.001 vs placebo.
BMOD=behavior modification; DM=diabetes mellitus; ITT=intent-to-treat; LS=least squares.

1. Contrave [prescribing information]. La Jolla, CA: Orexigen Therapeutics, Inc.; 2016. **2.** Greenway FL et al. *Lancet*. 2010;376:595-605. **3.** Wadden TA et al. *Obesity*. 2011;19:110-120. **4.** Hollander P et al. *Diabetes Care*. 2013;36:4022-4029.

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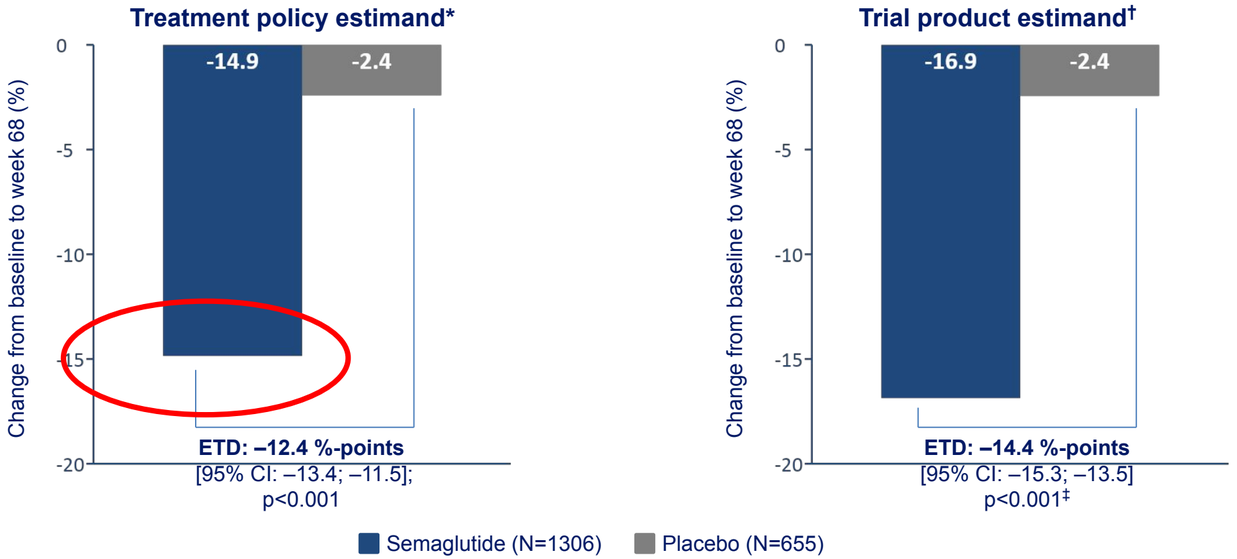
Semaglutide 2.4mg

Percentage change in body weight from baseline to week 58



*The treatment policy estimand assesses treatment effect regardless of treatment discontinuation or rescue intervention. Continuous end points were analyzed using analysis of covariance, with randomized treatment as a factor and baseline end point value as a covariate, and a multiple imputation approach for missing data.[1]

†The trial product estimand assesses treatment effect if trial product was taken as intended (i.e. if all participants adhered to treatment and did not receive rescue intervention). End points were analyzed using a mixed model for repeated measurements.

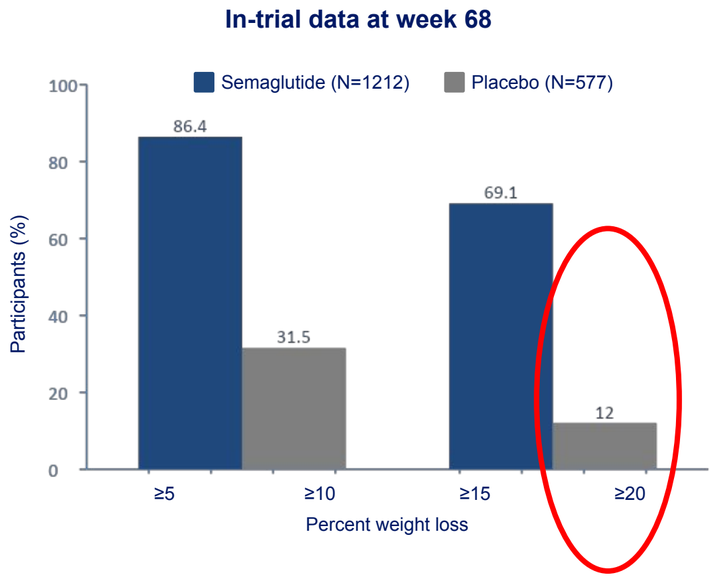
‡Not controlled for multiplicity.

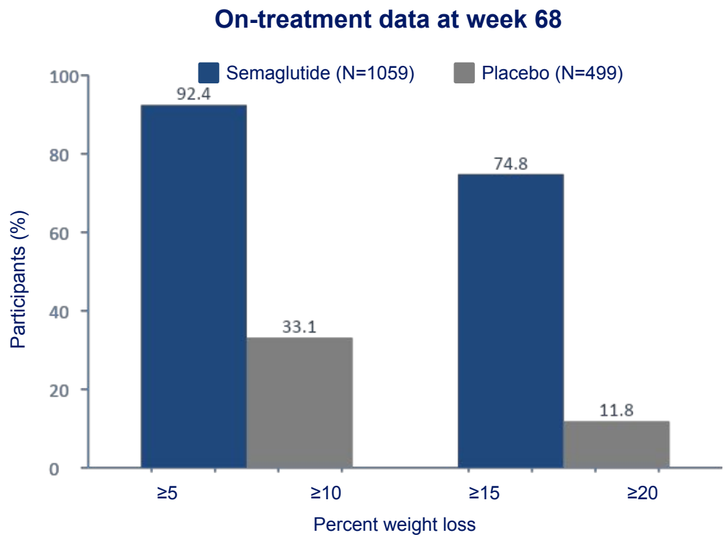
1. Kushner RF, et al. Obesity 2020;6:1050-61. CI, confidence interval; ETD, estimated treatment difference.

Adapted from data presented in Table 2. Coprimary, Confirmatory, and Selected Supportive Secondary and Exploratory End Points for the Treatment Policy Estimand, and Table S2. Co-primary, Confirmatory and Selected Supportive Secondary Endpoints for the Trial Product Estimand.

Semaglutide 2.4mg

Achievement of categorical body weight reduction at week 68





Bar graphs show the percentages of participants with an observation at the week 68 visit in whom body-weight reductions of at least 5%, 10%, 15%, and 20% were achieved from baseline to week 68 during the in-trial observation period and on-treatment observation period.
Adapted from Figure 1C/D. Effect of Once-Weekly Semaglutide, as Compared with Placebo, on Body Weight.

How does semaglutide 2.4 mg affect other health parameters?

Step 1

CV Risk Factors

- Greater reduction of:
  - SBP: -6.2 vs. -1.1 mmHg
  - DBP: -2.8 vs. -0.4 mmHg
  - Total cholesterol, LDL, triglycerides
- Greater increase of:
  - HDL

Step 2

Glycemic Control

- A1C reduction of
  -1.6% with sema 2.4mg
  -1.5% with sema 1mg
  -0.4% with placebo

Step 1 & 2

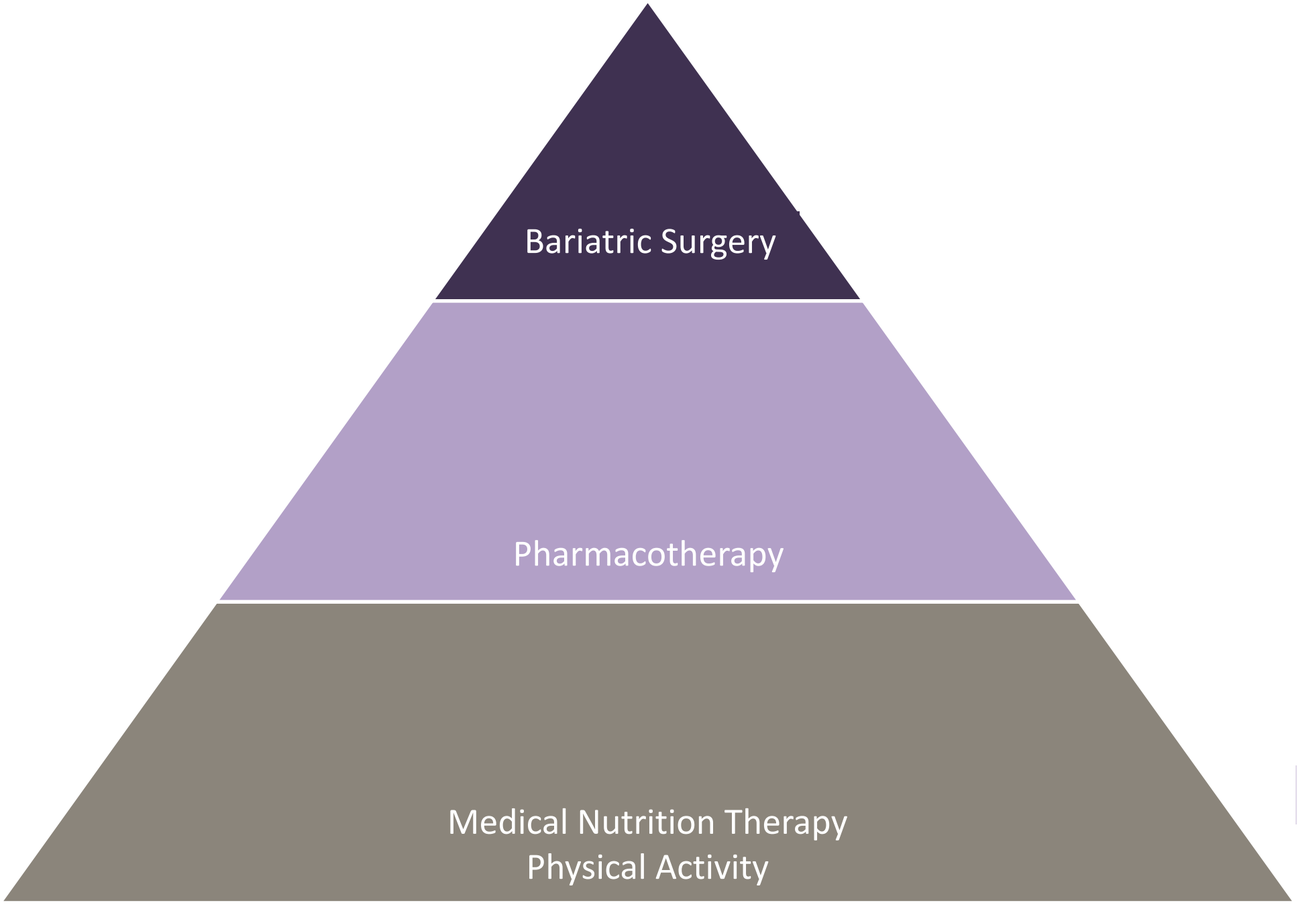
Patient Reported Outcomes

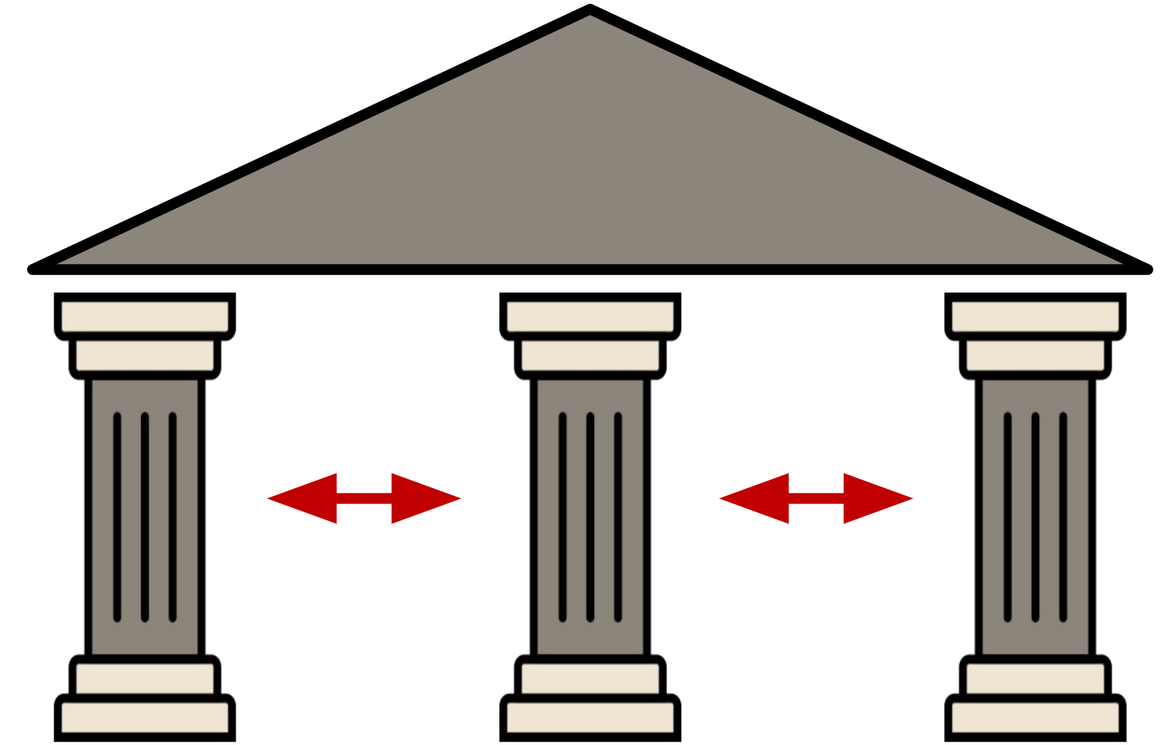
- Beneficial effect on physical functioning:
  - SF-36
  - IWQOL-Lite-CT

Results for the in-trial observation period and the treatment policy estimand. From STEP 1: Beneficial effects beyond weight loss vs. placebo, from baseline to week 68
CV, cardiovascular; SBP, systolic blood pressure; DBP, diastolic blood pressure; CRP, C-reactive protein; IWQOL-Lite-CT: Impact of Weight on Quality of Life-Vt2; SF-36; Short Form 36.
Semaglutide 2.4 mg is Health Canada approved but is not commercially available.

1. Wilding et al. NEJM 2021; doi: 10.1056/NEJMoa2032183.

From a step-wise approach to the 3 pillars





3 Advise On obesity risks. Discuss the health benefits of obesity management.

Medical Nutrition Therapy (MNT)

MNT is used in managing chronic diseases and focuses on nutrition assessment, diagnostics, therapy and counselling. MNT should:

a. be personalized and meet individual values, preferences and treatment goals to promote long term adherence

b. be administered by a registered dietitian to improve weight-related and health outcomes

Physical Activity

30-60 mins of aerobic activity on most days of the week, at moderate to vigorous intensity, can result in:

a. small amount of weight and fat loss

b. improvements in cardiometabolic parameters

c. weight maintenance after weight loss

ⓘ **Remember nutrition and physical activity recommendations are important for all Canadians regardless of body size or composition.**

The Three Pillars of Obesity Management that Support Nutrition and Activity

Psychological Intervention

a. Implement multicomponent behaviour modification

b. Manage sleep, time, and stress

c. Cognitive behavioural therapy and/ or acceptance and commitment therapy should be provided for patients if appropriate

Pharmacological Therapy

a. liraglutide

b. naltrexone/bupropion *(in a combination tablet)*

c. orlistat

CRITERIA

BMI ≥30kg/m² or

BMI ≥27 kg/m² with obesity (adiposity) related complications

Bariatric Surgery

ⓘ Procedure should be decided by surgeon in discussion with the patient.

a. Sleeve gastrectomy

b. Roux-en-Y gastric bypass

c. Biliopancreatic diversion with/without duodenal switch

CRITERIA

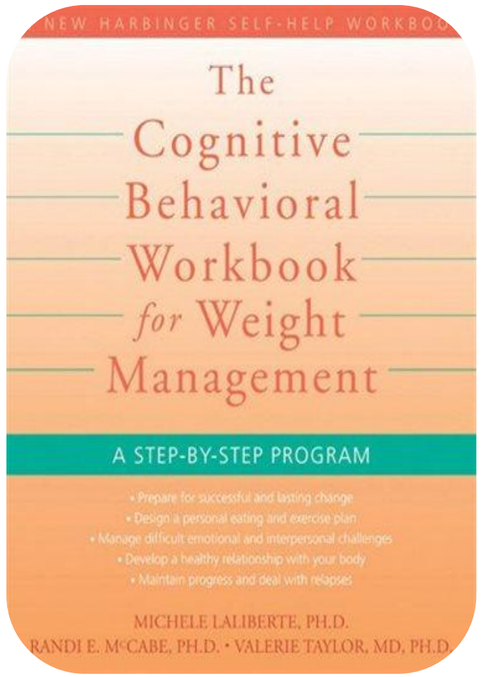
BMI ≥40 kg/m² or

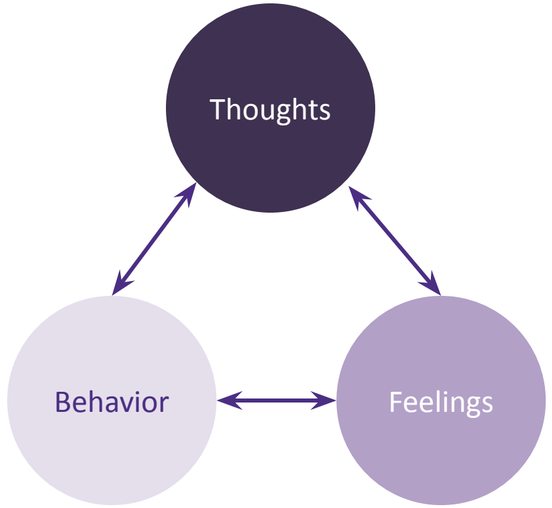
BMI ≥35 - 40 kg/m² with an obesity (adiposity) related complication or

BMI ≥30 kg/m² with poorly controlled type 2 diabetes

Treating the root causes of obesity is the foundation of obesity management - refer to the 4M framework - *mechanical, metabolic, mental and social milieu*

Psychological & Behavioural Interventions in Obesity Management





Vallis TM, Macklin D, Russell-Mayhew S. Canadian Adult Obesity Clinical Practice Guidelines: Effective Psychological and Behavioural Interventions in Obesity Management. Available from: https://obesitycanada.ca/guidelines/behavioural

Current & Emerging Pharmacotherapy Treatments

Pharmacotherapy should NOT be reserved
for those who fail diet & exercise

Bariatric Surgery in Canada

CRITERIA

- BMI > 40
- BMI 35 – 40 with comorbidity

Guidelines recommend

- BMI > 30 in people with Type 2 Diabetes

Laurent Biertho MD et al. Bariatric Surgery: Surgical Options and Outcomes. Adult Obesity Guidelines https://obesitycanada.ca/guidelines/

Chronic Disease

Conclusion

The Science of Obesity

Clinical Practice

Obesity in prevalent, inflammation causes multiple complications, and it is understudied, likely due to bias

Science of obesity is complex and driven by brain neurochemistry

Diet and exercise alone and not sufficient for obesity treatment

Effective treatments for obesity are limited but increasing rapidly

Gut hormones and peptides are the primary targets for pharmacotherapy agents

Laurent Biertho MD et al. Bariatric Surgery: Surgical Options and Outcomes. Adult Obesity Guidelines https://obesitycanada.ca/guidelines/

Case Notes Session 1: Case 1

April 6, 2022

RECAP

- 75 y/o female with uncontrolled diabetes, HLD, HTN and BMI 31 (82kg). A1C 9.3% on basal insulin and prandial insulin with largest meal. Possible lower health literacy and family concerns about hypoglycemia.

Medication	Dose	Frequency
Metformin	1000mg	BID
Insulin Glargine (Lantus)	24 units	QHS
Insulin Aspart (novolog)	2 units	with lunch
Atorvastatin	40mg	daily
Lisinopril	10mg	daily
Aspirin	81mg	daily

What information for every pt with diabetes do you need?

- 1.Weight
- 2. Kidney function
- 3. Age
- 4.Family hx of DM or autoimmune disease
- 5. Medications that increase insulin resistance
- 6. Lifestyle/Job/ diet/activity
- 7. Insurance
- 8. Other complications from diabetes

Individual Patient Characteristics

- BMI 31 (82kg)= so + insulin resistance
- GFR >60
- Age 75
- NO DKA
- Unknown Family hx
- High carb diet
- Medicare
- Concerns about insulin/hypoglycemia
- Possible microalbuminuria

First question:

Does this person produce insulin?

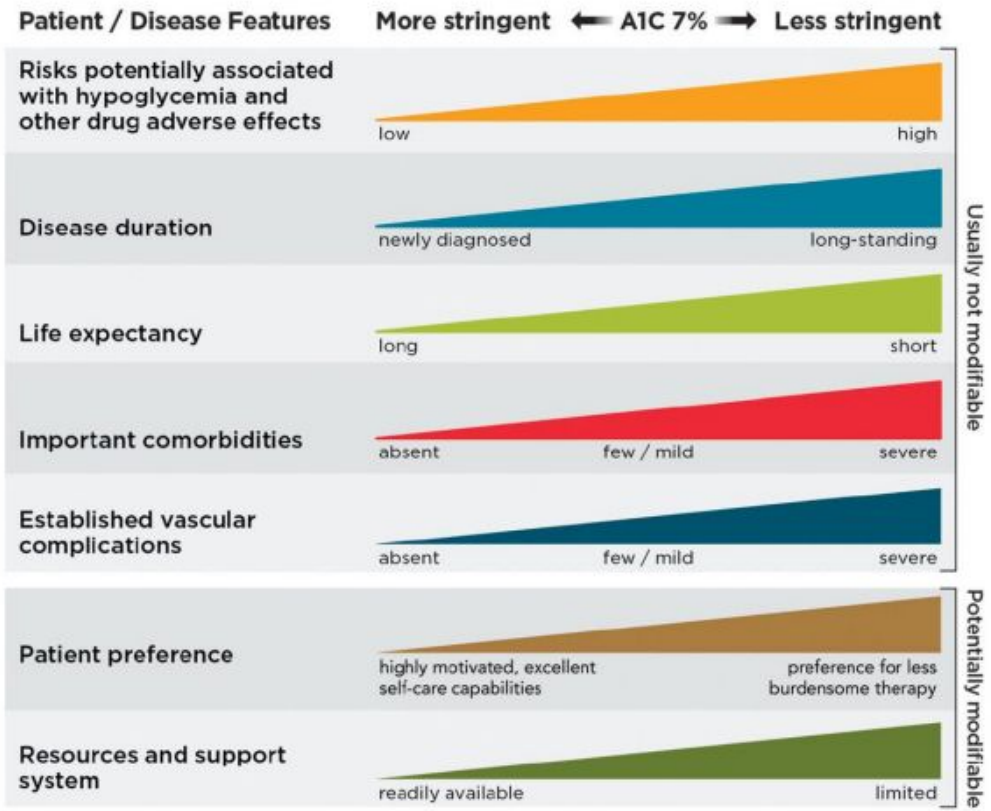
- Type 1 or Type 2?
- Insulinopenic or Insulin resistant ?

Type 2- most likely but as older think of possible relative insulinopenia

Second Question:

- **What is her A1c Goal?**
- <8.0% (7.0 if possible without hypoglycemia)

Individualizing Glycemic Targets



American Diabetes Association.

Figure 6.1—Depicted are patient and disease factors used to determine optimal A1C targets. Characteristics and predicaments toward the left justify more stringent efforts to lower A1C; those toward the right suggest less stringent efforts. A1C 7% = 53 mmol/mol. Adapted with permission from Inzucchi et al. (40).

Non-Pharm Intervention

- Screen for Depression
- Portion sizes for fruit
- Replace potatoes/ rice with smaller portion size and or beans or chick peas or lean protein
- Encourage activity after meal

Depression and Cognitive Impairment in Older Adults with Diabetes

Depression:

- PHQ-9
- GDS-15

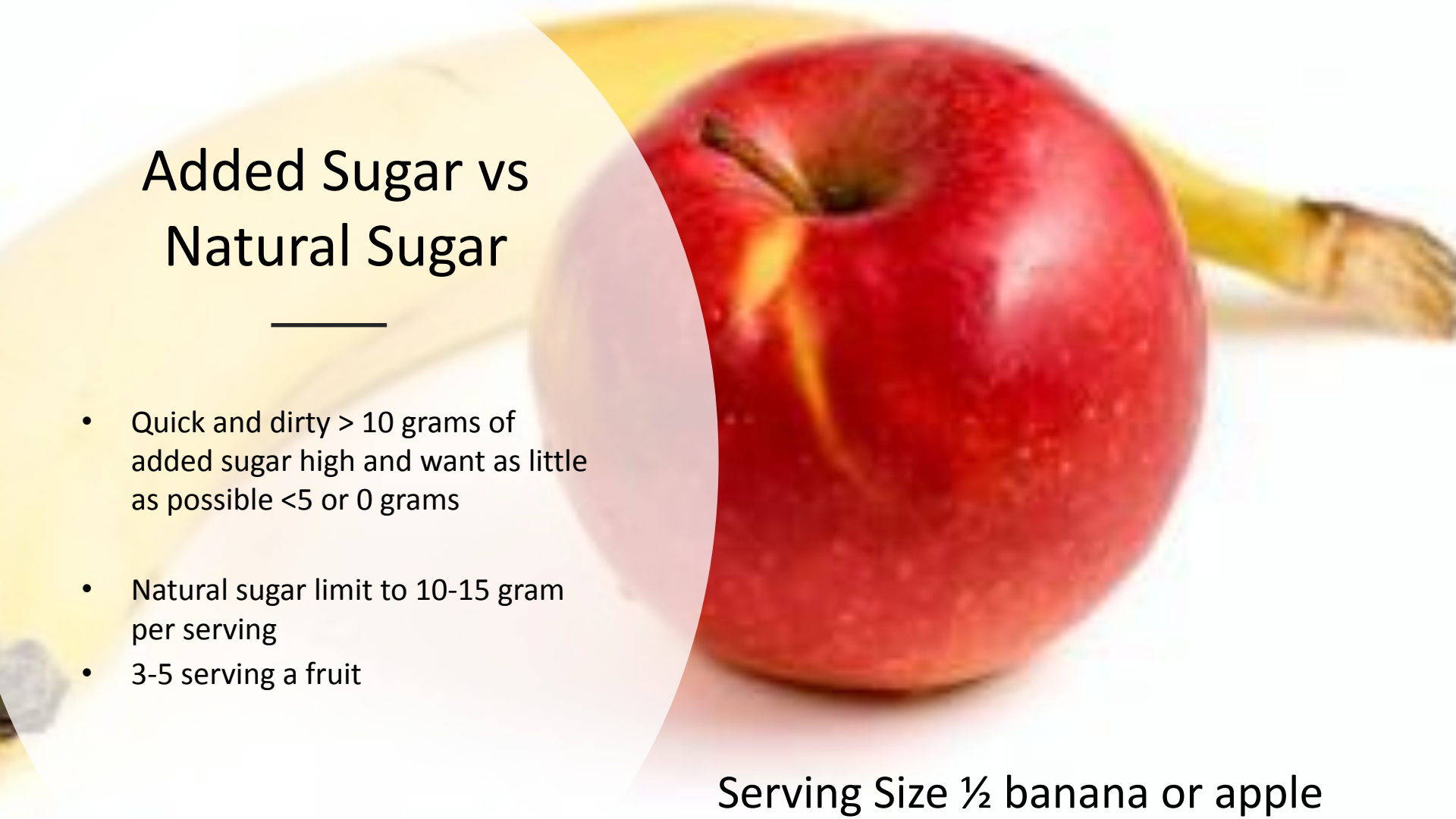
Cognitive Impairment:

- Observed or reported changes
- Mini Mental Status Exam (MMSE)
- Mini-Cog
- Montreal Cognitive Assessment (MoCA)

Small apple=15 grams but larger 20-25 grams
Banana=30 grams

Added Sugar vs Natural Sugar

- Quick and dirty > 10 grams of added sugar high and want as little as possible <5 or 0 grams
- Natural sugar limit to 10-15 gram per serving
- 3-5 serving a fruit



Serving Size ½ banana or apple

Lifestyle in older individuals with Obesity

- Assess sleep schedule since disrupted sleep could impact leptin and have down-steam impacts on insulin resistance
  - Goal 7-8 hours per night, avoid staying up too late
  - Rule out sleep apnea
- If any lower extremity issues that could impact walking consider sit and be fit exercises on Youtube or formal referral to physical therapy
  - Exercise is critical for weight loss maintenance
- Use smaller plates, protein with each meal and each snack to help decrease hunger during weight loss and to also ensure preservation of muscle mass during weight loss. Eat protein first.

Advice to walk after meals is more effective for lowering postprandial glycaemia in type 2 diabetes mellitus

Measure	Post-meal walks	30 min walk	Difference (95% CI) (post-meal walks – 30 min walk)[a]	*p* value
All-meal iAUC[b] (mmol l^{-1} min^{-1})	453 ± 230	508 ± 270	0.88 (0.78, 0.99)	0.031
Breakfast iAUC (mmol l^{-1} min^{-1})	507 ± 298	540 ± 300	0.87 (0.72, 1.05)	0.153
Lunch iAUC (mmol l^{-1} min^{-1})	426 ± 259	444 ± 264	0.94 (0.80, 1.10)	0.416
Dinner iAUC (mmol l^{-1} min^{-1})	424 ± 240	537 ± 331	0.78 (0.67, 0.91)	0.001
FBG (mmol/l)	8.0 ± 2.61	7.9 ± 2.39	0.11 (−0.30, 0.52)	0.604
Mean BG (mmol/l)	9.3 ± 2.55	9.3 ± 2.46	0.01 (–0.29, 0.32)	0.932
MAGE (mmol/l)	4.7 ± 1.75	5.1 ± 2.08	–0.42 (–0.94, 0.10)	0.117
CONGA	8.4 ± 2.44	8.4 ± 2.32	–0.01 (–0.31, 0.29)	0.944
Glycaemic range (mmol/l)	12.7 ± 3.6	13.3 ± 4.07	–0.60 (–1.56, 0.36)	0.219

Reynoldset al . Diabetologia. 2016 Dec;59(12):2572-2578

CASE Question?

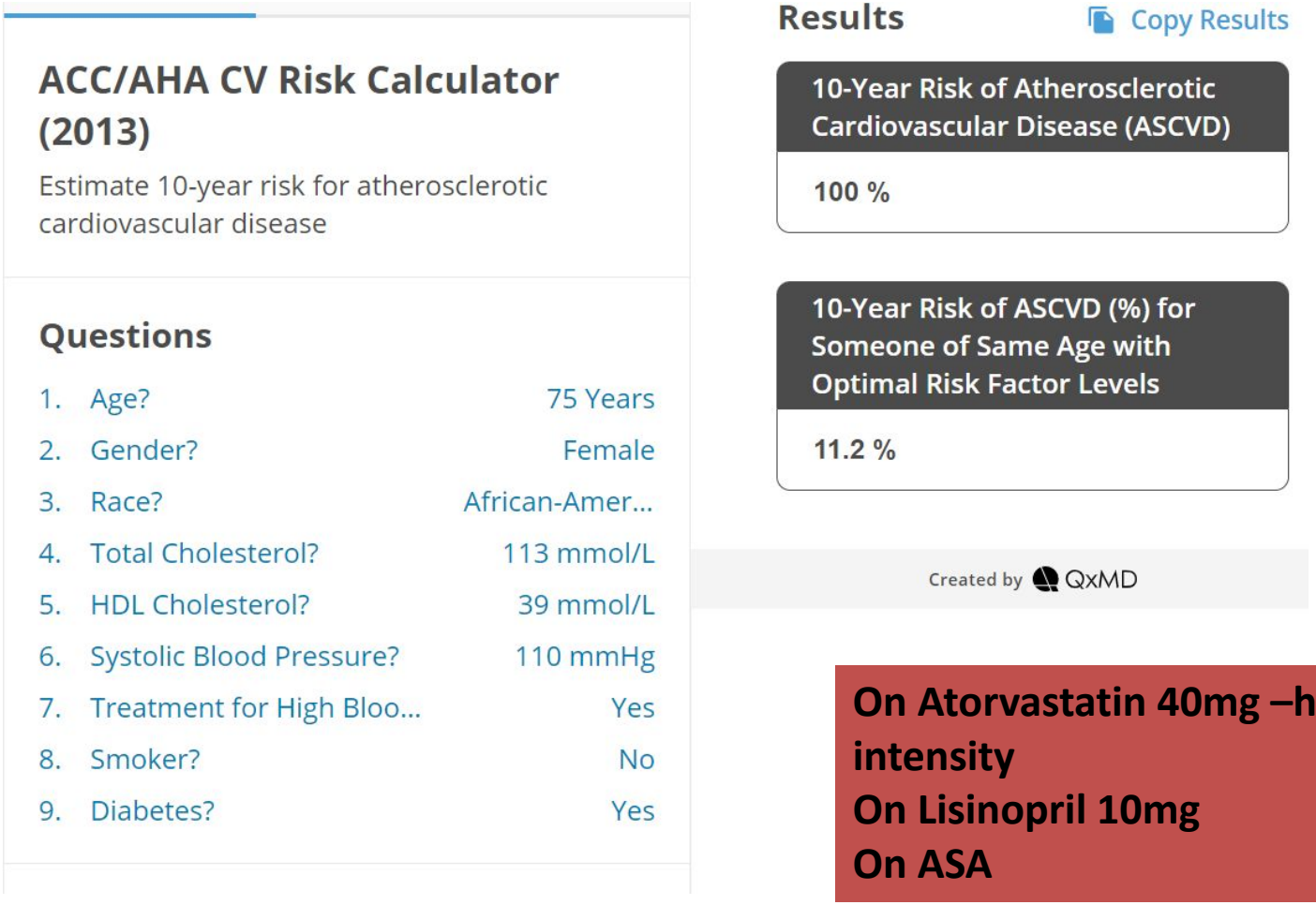
- Can this patient be managed with insulin sparing agents?
- Microalbuminuria vs need for Efficacy of 1.5-2% A1c lowering
- Yes consider SGLT2-I
- vs **GLP-1 RA**

Pharmacologic intervention: Insulin and GLP-1-RA

- First assess how much insulin they are actually taking :
- -"If your blood sugars is in low 100's at bedtime what do you do with your insulin?"
- Or
- -"Many people are worried about low blood sugars do you ever take less insulin given a fear of low sugars?"

- 0.3 u/kg basal- 0.3 x 82= 24 units
- ADA recommends do not increase over 0.5u/kg (41 units)
- A1c > 9.0
- Add Glp-1 Ra, stop prandial insulin
- Continue metformin consider convert 2 tablets 750mg XR daily in am with breakfast

Dual Therapy With SGLT-2I and GLP-1-RA ?



ACC/AHA CV Risk Calculator (2013)

Estimate 10-year risk for atherosclerotic cardiovascular disease

Questions

1.	Age?	75 Years
2.	Gender?	Female
3.	Race?	African-Amer...
4.	Total Cholesterol?	113 mmol/L
5.	HDL Cholesterol?	39 mmol/L
6.	Systolic Blood Pressure?	110 mmHg
7.	Treatment for High Bloo...	Yes
8.	Smoker?	No
9.	Diabetes?	Yes

Results Copy Results

10-Year Risk of Atherosclerotic Cardiovascular Disease (ASCVD)

100 %

10-Year Risk of ASCVD (%) for Someone of Same Age with Optimal Risk Factor Levels

11.2 %

Created by QxMD

On Atorvastatin 40mg –high intensity
On Lisinopril 10mg
On ASA

ACC/AHA CV Risk Calculator (2013) (medscape.com)