

Obesity Management for Type 2 Diabetes

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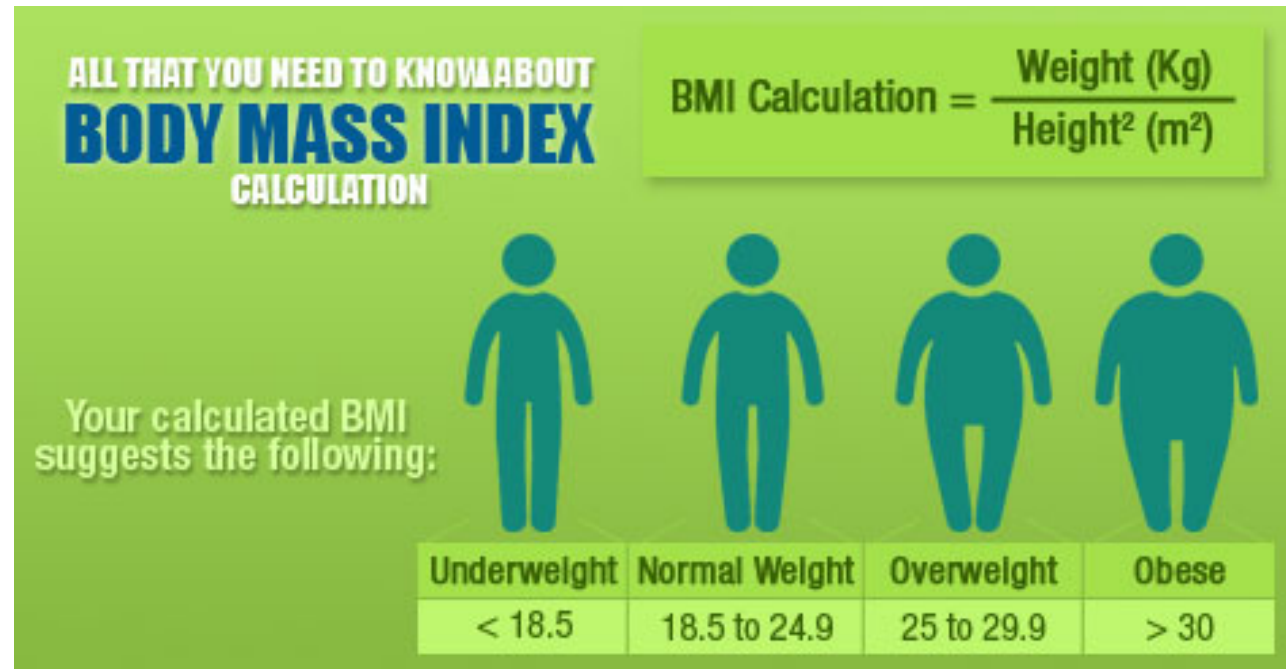
Disclosures:
None

Objectives

- Identify the role of treating obesity in type 2 diabetes
- Be able to identify and address treatment barriers within medical scope of practice
- Become familiar with treatment options mutually beneficial to obesity and type 2 diabetes

Diabetes Quick Facts

- Obesity was declared a chronic disease in 2013 by the American Medical Association
- 42% of American adults fall into the obese category
- Small to moderate amounts of weight loss improve glycemic control

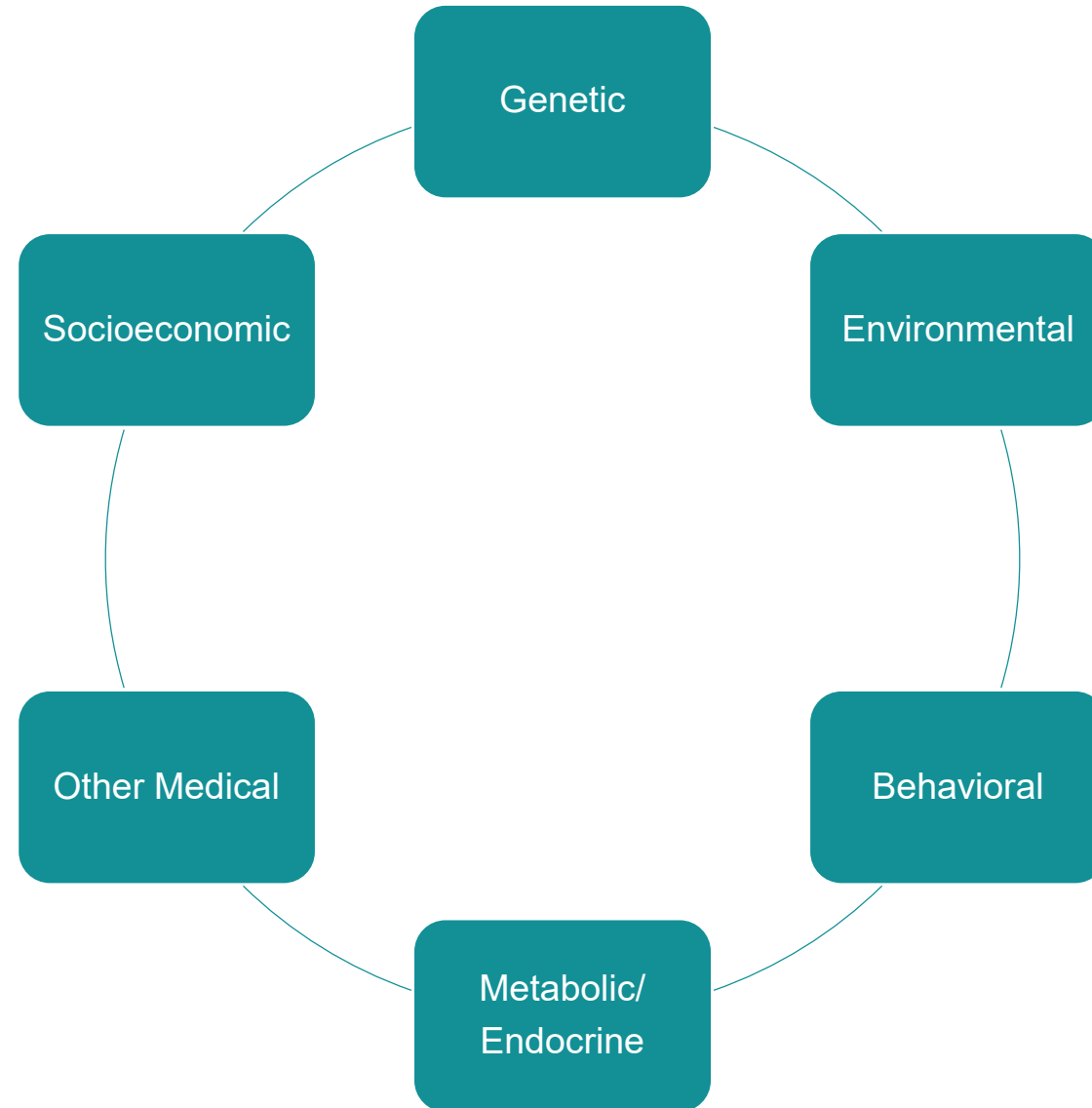


Where do I begin?

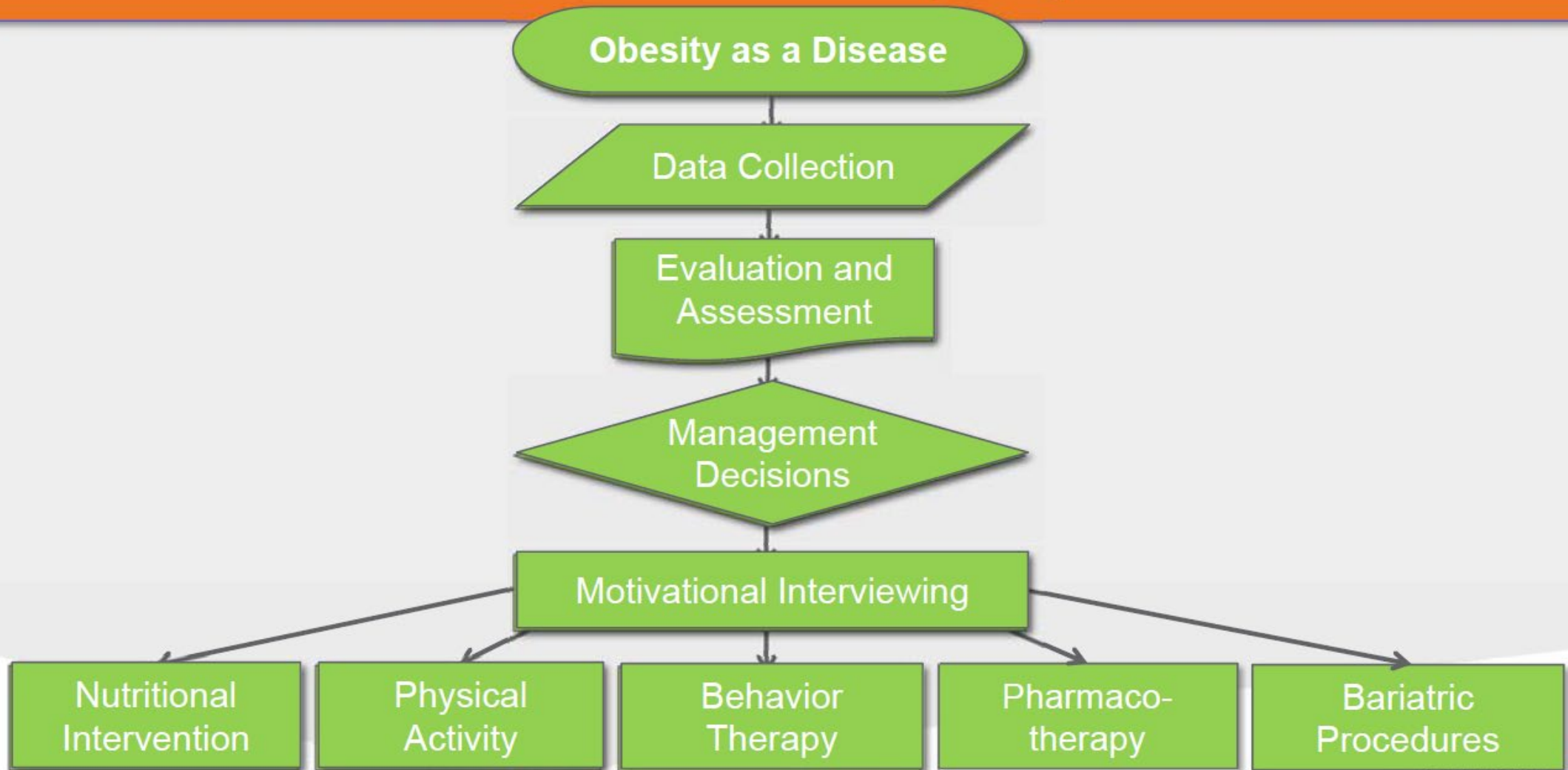
- Start the conversation
- Don't blame the patient
- Treatment goals include:
 - Improving patient's health
 - Improving patient's quality of life
 - Improving patient's body weight and composition
- Refer to DSME program or a registered dietitian for medical nutrition therapy



Obesity is a Complex, Multi-factorial Disease



The OMA Obesity Algorithm



Review Current Obesogenic Medications:

- Antidepressants
 - Selective Serotonin Reuptake Inhibitors (SSRIs)
 - Tricyclic antidepressants
 - Beta-blockers
 - Hormones
- Antihyperglycemics:
 - Long-acting insulin
 - Sulfonylureas
 - Thiazolidinediones (TZDs)

Weight Friendly Diabetes Medications

- Glucophage
- Liraglutide
- GLP-1 agonists
- SGLT-2 inhibitors
- Pramlintide

FIRST-LINE Therapy is Metformin and Comprehensive Lifestyle (including weight management and physical activity)



NO

INDICATORS OF HIGH-RISK OR ESTABLISHED ASCVD, CKD, OR HF†

CONSIDER INDEPENDENTLY OF BASELINE A1C, INDIVIDUALIZED A1C TARGET, OR METFORMIN USE*

IF A1C ABOVE INDIVIDUALIZED TARGET PROCEED AS BELOW

+ASCVD/Indicators of High Risk

- Established ASCVD
- Indicators of high ASCVD risk (age ≥55 years with coronary, carotid, or lower-extremity artery stenosis >50%, or LVH)

ETHER/ OR

GLP-1 RA with proven CVD benefit¹ **OR** SGLT2i with proven CVD benefit¹

If A1C above target

If further intensification is required or patient is unable to tolerate GLP-1 RA and/or SGLT2i, choose agents demonstrating CV benefit and/or safety:

- For patients on a GLP-1 RA, consider adding SGLT2i with proven CVD benefit and vice versa¹
- TZD²
- DPP-4i if not on GLP-1 RA
- Basal insulin³
- SU⁴

+HF

Particularly HFrEF (LVEF <45%)

SGLT2i with proven benefit in this population^{5,6,7}

+CKD

DKD and Albuminuria⁸

NO

PREFERABLY

SGLT2i with primary evidence of reducing CKD progression

OR

SGLT2i with evidence of reducing CKD progression in CVOTs^{5,6,8}

OR

GLP-1 RA with proven CVD benefit¹ if SGLT2i not tolerated or contraindicated

For patients with TZD and CKD⁹ (e.g., eGFR <60 mL/min/1.73 m²) and thus at increased risk of cardiovascular events

ETHER/ OR

GLP-1 RA with proven CVD benefit¹ **OR** SGLT2i with proven CVD benefit^{1,7}

COMPELLING NEED TO MINIMIZE HYPOGLYCEMIA

DPP-4i	GLP-1 RA	SGLT2i	TZD
If A1C above target	If A1C above target	If A1C above target	If A1C above target
SGLT2i	SGLT2i	GLP-1 RA OR DPP-4i OR TZD	SGLT2i OR DPP-4i OR GLP-1 RA
OR	OR	OR	OR
TZD	TZD		

If A1C above target

Continue with addition of other agents as outlined above

If A1C above target

Consider the addition of SU⁴ OR basal insulin:

- Choose later generation SU with lower risk of hypoglycemia
- Consider basal insulin with lower risk of hypoglycemia⁹

COMPELLING NEED TO MINIMIZE WEIGHT GAIN OR PROMOTE WEIGHT LOSS

ETHER/ OR

GLP-1 RA with good efficacy for weight loss¹⁰ **OR** SGLT2i

If A1C above target

SGLT2i **OR** GLP-1 RA with good efficacy for weight loss¹⁰

If A1C above target

If quadruple therapy required, or SGLT2i and/or GLP-1 RA not tolerated or contraindicated, use regimen with lowest risk of weight gain

PREFERABLY

DPP-4i (if not on GLP-1 RA) based on weight neutrality

If DPP-4i not tolerated or contraindicated or patient already on GLP-1 RA, cautious addition of:

- SU⁴ • TZD² • Basal insulin

COST IS A MAJOR ISSUE^{11,12}

SU⁴ **OR** TZD¹²

If A1C above target

TZD¹² **OR** SU⁴

If A1C above target

Insulin therapy basal insulin with lowest acquisition cost

OR

Consider other therapies based on cost

7. Proven benefit means it has label indication of reducing heart failure in this population

8. Refer to Section 11: Microvascular Complications and Foot Care

9. Degludec / glargine U-300 < glargine U-100 / detemir < NPH insulin

10. Semaglutide > liraglutide > dulaglutide > exenatide > lixisenatide

11. If no specific comorbidities (i.e., no established CVD, low risk of hypoglycemia, and lower priority to avoid weight gain or no weight-related comorbidities)

12. Consider country- and region-specific cost of drugs. In some countries TZDs are relatively more expensive and DPP-4i are relatively cheaper.

† Acted whenever these become new clinical considerations regardless of background glucose-lowering medications.

* Most patients enrolled in the relevant trials were on metformin at baseline as glucose-lowering therapy.

1. Proven CVD benefit means it has label indication of reducing CVD events

2. Low dose may be better tolerated though less well studied for CVD effects

3. Degludec or U-100 glargine have demonstrated CVD safety

4. Choose later generation SU to lower risk of hypoglycemia; glimepiride has shown similar CV safety to DPP-4i

5. Be aware that SGLT2i labelling varies by region and individual agent with regard to indicated level of eGFR for initiation and continued use

6. Empagliflozin, canagliflozin, and dapagliflozin have shown reduction in HF and to reduce CKD progression in CVOTs. Canagliflozin and dapagliflozin have primary renal outcome data. Dapagliflozin and empagliflozin have primary heart failure outcome data.



Additional Anti-Obesity Medications

- FDA approved:
 - Liraglutide
 - Lisdexamfetamine*
 - Lorcaserin
 - Naltrexone/bupropion
 - Orlistat
 - Phentermine (short-term)
 - Phentermine/topiramate
- Off Label:
 - Bupropion
 - Metformin
 - Phentermine beyond 12 weeks
 - Naltrexone & bupropion separately
 - Phentermine & topiramate separately

*approved for Binge-Eating Disorder

Most effective treatment for weight and type 2 diabetes

- SURGERY-cliff hanger for next time I see you...

Resources

- Obesity Medicine Association
 - <https://obesitymedicine.org/>
- American Diabetes Association
 - <https://professional.diabetes.org/diabetes-education>

References

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Questions?

