Lesson 2
Data, Measurements, and Expectations

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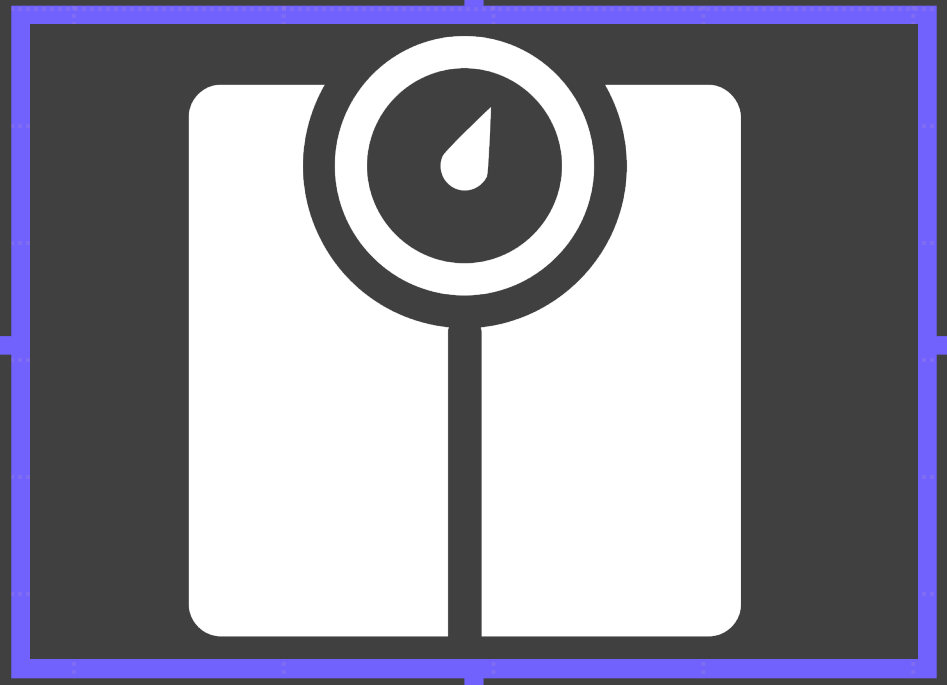
the Fasting Method

Preamble

- None of the information provided in this or other lessons of the DMII Masterclass is medical advice, it is for educational purposes only
- Discuss any and all lifestyle changes you wish to implement with your doctor/PA/NP, since they are familiar with your complete health history and have a record of your medications and supplements

STOP USING



THE SCALE

Weight is a Poor Measure of Anything!

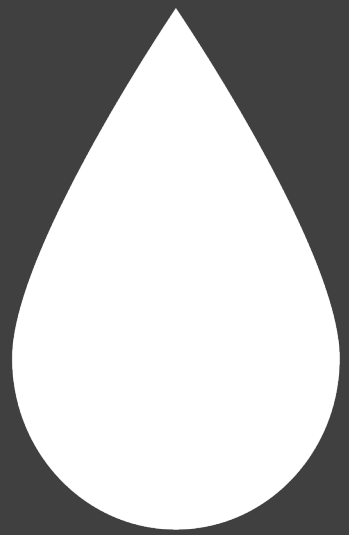
What it measures	Notes
The total weight of body fat, muscle, organs, bone and fluid	• Crude measurement – says nothing about body composition • Daily fluctuations indicate fluid shift • For someone with DMII, not helpful to weigh more than ONCE MONTHLY OR EVERY OTHER WEEK • We see people of normal or low body weight who are actually fat inside • We see people of elevated body weight who are lean inside

For Those Reluctant to Give It Up…

What it measures	What progress looks like
The total weight of body fat, muscle, organs, bone and fluid	• If you work out, don't expect the scale to drop fast/quick, as you are building muscle to replace fat • Males tend to drop weight faster/more readily than females at the beginning, then it paces out • Eating carbs causes fluid retention and lowering carbs/fasting causes fluid loss • A better measure → body fat % using an impedance scale or via DEXA scan (xray) • Can compare either reading to https://www.omnicalculator.com/health/navy-body-fat

MEASURE

WHAT



ACTUALLY

MATTERS

Blood Glucose Devices

Glucometer

- Everyone with pre- or DMII MUST have one, even if have a CGM
- Inexpensive
- Will need to purchase lancets and strips
- We do not have any brand recommendations

Continuous Glucose Monitor (CGM) – Freestyle Libre

- Anyone can purchase in Canada
- Need a prescription in USA
- 14-day wear
- Pros: can log food/activities in app, lower price point than Dexcom
- Cons: not as accurate as Dexcom, can come off prior to 14-day expiry

Continuous Glucose Monitor (CGM) – Dexcom

- Anyone can purchase in Canada
- Need a prescription in USA
- 10-day wear
- Pros: more accurate than Freestyle Libre, can calibrate with glucometer
- Cons: higher price point than Freestyle Libre, cannot log food/activities in app (preselected events)

CGM in USA – If you cannot get a prescription

Signos.com

Levelshealth.com

Nutrisense.io

Veri.co

Using Your CGM

- Insert the sensor as instructed
- On your phone, download the app to sync with your sensor and view your data
- Document, document, document: foods eaten, exercise, good sleep, bad sleep, stress etc. for the duration of your sensor wear, along with time of day
- You will need to wait 1-2 hrs before the device provides any readings
- Any time you notice an outlier (i.e. unusually low or unusually high reading), VERIFY IT with a glucometer (sidebar: the CGM is taking a reading from your interstitial fluid, which sits just above the capillary bed, so readings won't match 100% with your glucometer. But, they shouldn't be way off either).
- If you notice that your sensor is way off several times throughout your first few days, give the manufacturer a call to have your sensor replaced. Don't remove or discard your current sensor until you speak with them and have your data available.

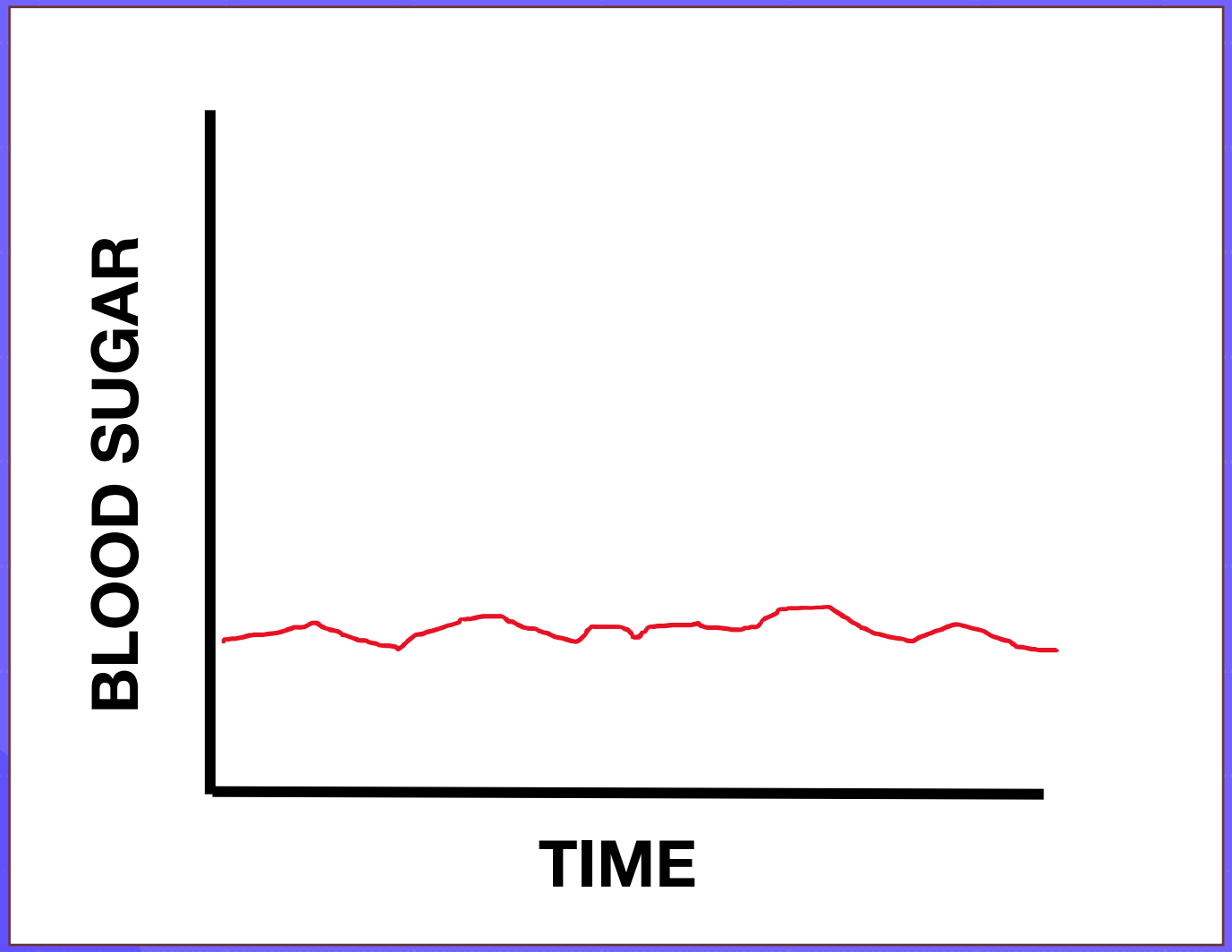
Fasting Blood Glucose (FBG)

What it measures	Why important
Blood sugar / glucose in a fasted state (at least 12 hrs.)	• Helpful in determining how in/efficient your body is at returning your BG to baseline • If elevated, a sign of pre- or DMII (also called dawn phenomenon) • Normal is < 100 mg/dl or 5.6 mmol/l • Break your fast and seek medical attention if you feel unwell independent of your FBG OR you see FBG <63 mg/dl or 3.5 mmol/L

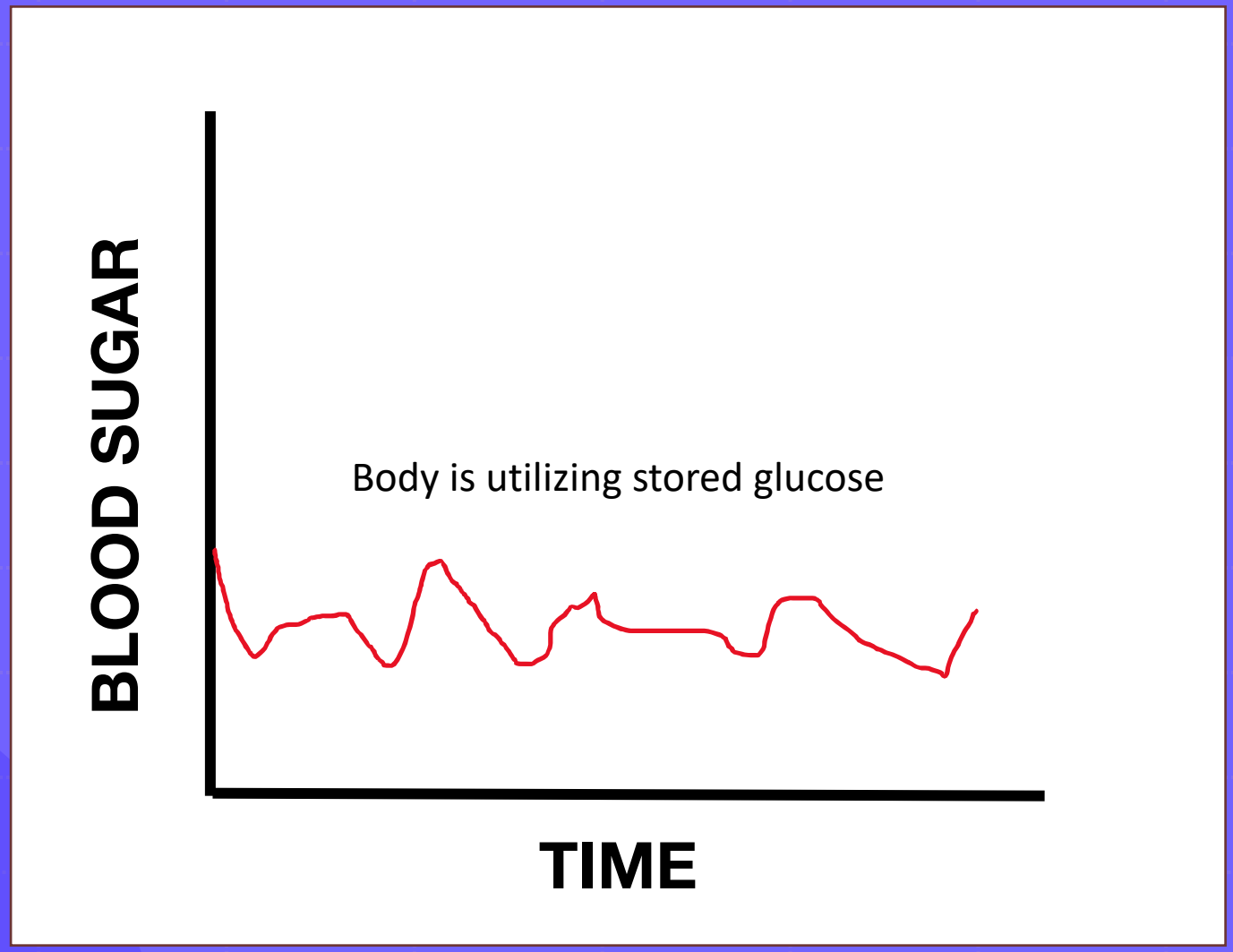
Fasting Blood Glucose (FBG)

What it measures	What progress looks like
Blood sugar / glucose in a fasted state (at least 12 hrs.)	• GET TO KNOW YOUR FBG! • Every person with DMII who checks FBG knows these will elevated • Why? → Just before awakening, our body secretes hormones that raise blood sugar, and this is pronounced in those with pre- and DMII • Will improve slowly over time • Usually the last thing to correct/normalize

Fasting & Blood Sugar (Healthy State)



Fasting & Blood Sugar (Disease State)



Talk to your doctor/PA/NP if you see FBG > 162 mg/dl or > 9 mmol/L while fasting

HbA1c

What it measures and why important	What progress looks like
• Percentage of your red cells that are bound to glucose • Indicates if someone at risk for, or has DMII • Used to monitor and titrate medications • Norm <5.5% • At-risk 5.5 - 5.9% • Pre-DM 6.0 - 6.4% • DMII >= 6.5%	• If you are NOT on a blood sugar lowering med, you can expect a decrease in your next HbA1c • If you are on a blood sugar lowering med OR insulin and you work with your doctor/PA/NP to either lower the dose or come off it, your first HbA1c may be elevated but your next one should be lower. So, don't be too disappointed if you see this, remember that those meds are designed to lower your HbA1c.

Fasting Insulin

What it measures and why important	What progress looks like
• Usually elevated ~10 years before a diagnosis of DMII is made • Demonstrative of how hard your pancreas is working to maintain your current blood sugar and HbA1c • Optimal < 3 miU/ml or < 21 pmol/L • Acceptable 3-10 miU/ml or 21-70 pmol/L • Too high > 10 miU/ml or > 70 pmol/L	• You can expect a slow, downward trend • If you are taking insulin, your insulin needs will likely decrease as you work through your health journey; it's imperative to work with your doctor/PA/NP • If you are taking any form of cortisol: inhaled corticosteroid, intranasal, steroid for rheumatoid arthritis or some other autoimmune condition, you may not see a decrease, since cortisol raises insulin

Symptom Using Self-Report Scale

What it measures	Why important	What progress looks like
• We can convert subjective concepts into an objective ones, such as: general aches and pains, energy levels, mood, sleep, stress levels, neuropathy, headaches etc. • This is done on a scale from 0-10 (you decide what 0 and 10 are)	• Helpful for you to stay in tune with how you are feeling as you progress through your health journey • Objectively demonstrates improvement or elimination of a symptom	• Journal your score daily or weekly • Be consistent in how you apply your scoring • You can expect improvement in your scores, week to week or month to month

Nerd Alert 

Into the Weeds: Post-Prandial Blood Glucose

What it measures	Why important
Blood sugar / glucose after eating	• Helpful in determining the impact a certain meal/food has on your BG • Helpful proxy for insulin • Norm (but not ideal) up to 140 mg/dl or 8 mmol/L

Into the Weeds: Post-Prandial Blood Glucose

What it measures	What progress looks like
Blood sugar / glucose after eating	• Gradually decrease and normalize • Largely dependent on what you eat, so if you see a high reading it's likely because of something you ate • Can also be impacted by other things • To see a food's impact on you: take your BG before eating the food, eat the food, then test your BG every 30 mins. for 2 hrs. to plot your BG curve

Into the Weeds: What is An Acceptable Blood Sugar Spike?

Great – enjoy liberally	Not great, not terrible – enjoy occasionally/watch portion sizes	Too high – avoid
Less than or = 10 mg/dl rise in BG Less than or = 0.5 mmol/L rise in BG	Up to 25 mg/dl rise in BG Up to 1.5 mmol/L rise in BG	> 25 mg/dl rise in BG > 1.5 mmol/L rise in BG

Action Plan

1. Commit to only weighing self once every 2 weeks or monthly
2. Get to know your dawn phenomenon
3. Obtain a baseline HbA1c, and then every 3 months thereafter
4. Obtain a baseline fasting insulin, and then every 6 months thereafter
5. For those who like data, get to know how foods and lifestyle factors impact your blood sugar by testing your BG more often and journaling your foods and activities

If you are in the USA and wish to order your own labs, go to ownyourlabs.com.
Follow up with your healthcare provider for interpretation.
Please note that I cannot provide individual feedback on any lab data you share with me in this course.