Complications

Diabetes Care Coaching

OKAKI

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Before We Begin …

OKAKI Diabetes Virtual Care Clinic

- Our goal is to create a safe space where all participants are comfortable to learn, share, ask questions
  - Everyone brings knowledge and expertise
  - We are always learning too
  - We won't record discussions, but will share monthly education videos
- The coaching sessions will focus on practical pieces of working in diabetes. For details, it is always best to reference the Diabetes Canada Clinical Practice Guidelines (guidelines.diabetes.ca)

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What We Plan to Cover Today

- Explaining why we screen for complications
- Screening:
  - Heart
  - Feet
  - Eyes
  - Kidneys
  - Others
- Deciding what to cover in a visit

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Staying on Top of Diabetes

- A diagnosis of diabetes can be scary and stressful
- We've all likely heard stories of complications someone with diabetes had, but this absolutely does not have to be the story!
- Work with healthcare team to take care of whole self, and keep on top of regular screening for any complications

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Screening for Complications

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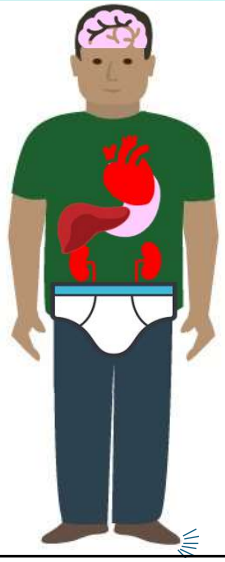
Think about…
Where are our small blood vessels?



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Kidneys

- Blood sugar control
- Blood pressure <130/80
- Blood pressure pills
- Sick day meds list

Heart

- Blood sugar control
- Blood pressure <130/80
- Heart healthy eating
- Moving your body
- Stopping smoking

Feet

- Blood sugar control
- Blood pressure <130/80
- Activity
- Stopping smoking
- Foot care

Eyes

- Blood sugar control
- Blood pressure <130/80

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Heart

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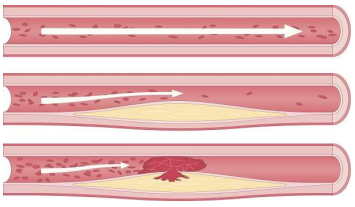
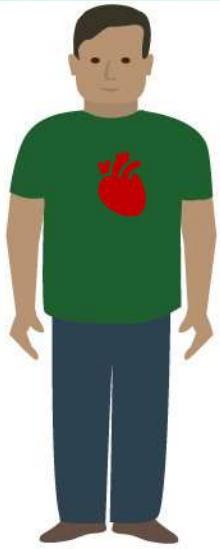
Heart Health

Screening
- Blood Pressure check with every visit
- Cholesterol labs every 1-3 years
- ECG every 3-5 years





Actions
- Heart healthy eating
- Moving your body
- Stopping smoking
- Blood pressure less than 130/80 mmHg
- Blood sugar at target

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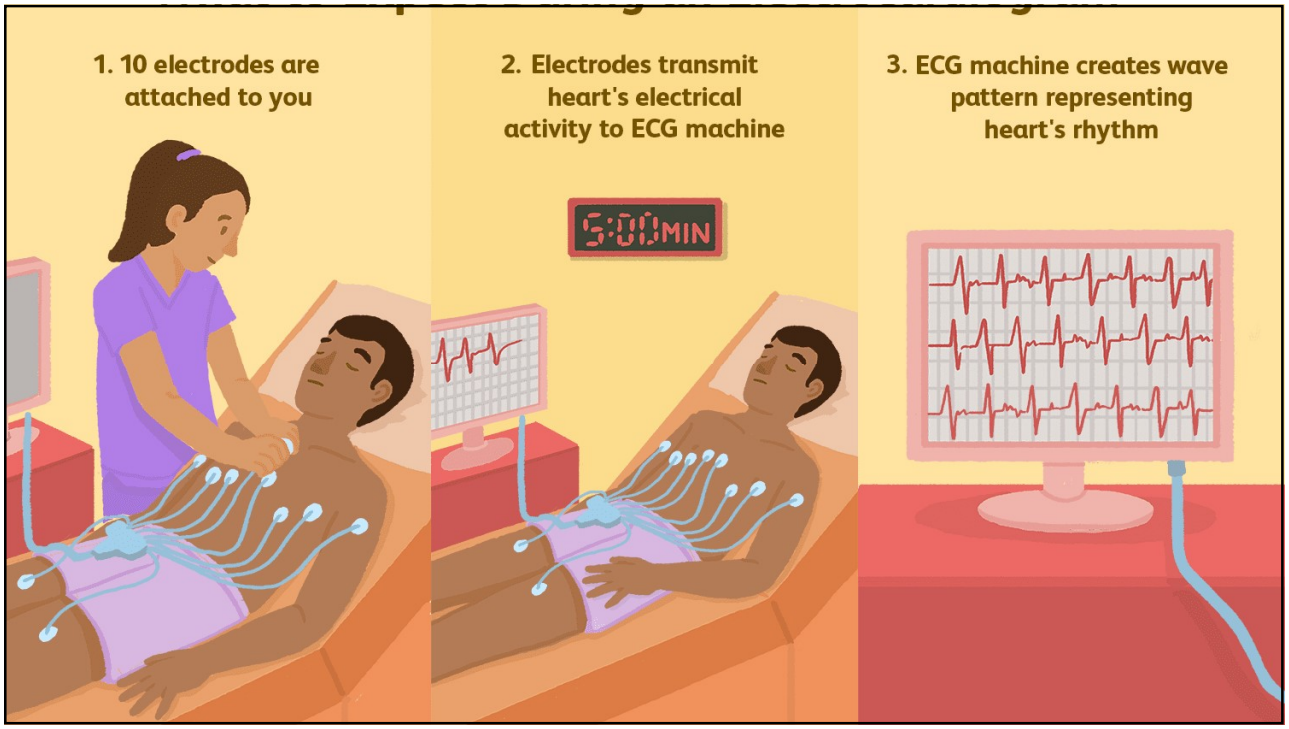

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Kidney Screening

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Kidneys

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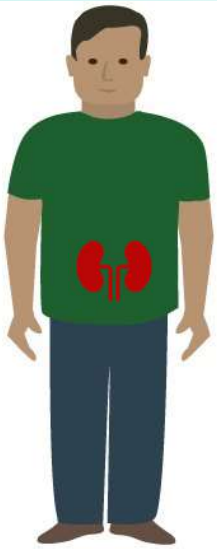
Screening

- Blood and urine test every year

Actions

- Blood pressure less than 130/80 mmHg
- Blood sugar at target
- Blood pressure pills
- Sick day medication list



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Sick Day Management

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S	• Sulfonylureas
A	• ACE Inhibitors
D	• Diuretics
M	• Metformin
A	• ARBs
N	• NSAIDs
S	• SGLT-2 Inhibitors

If unsure, call 811

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Foot Screens and Footcare

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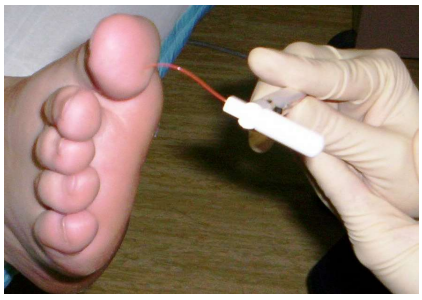
Feet

Screening

- Foot exam every year
- If using screening tool, guided by risk categories



Risk:

Low- Annual screening

Moderate- every 3-6 months

High- screen every 1-3 months and refer to foot care specialist

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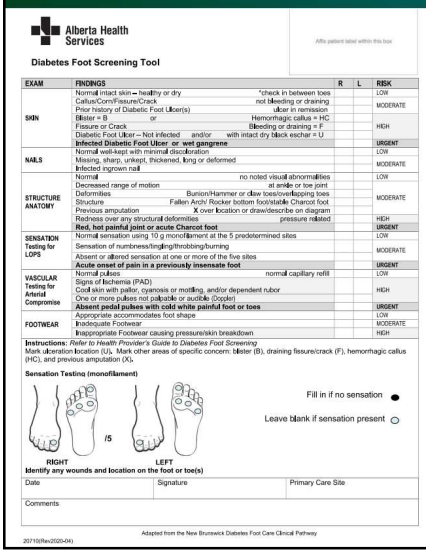
AHS Diabetic Foot Screening Tool



Alberta Health Services

Diabetes Foot Screening Tool

EXAM	FINDINGS	R	L	RISK
SKIN	Normal intact skin – healthy or dry *check in between toes			LOW
	Callus/Corn/Fissure/Crack not bleeding or draining			MODERATE
	Prior history of Diabetic Foot Ulcer(s) ulcer in remission			
	Blister = B or Hemorrhagic callus = HC			
	Fissure or Crack Bleeding or draining = F			HIGH
	Diabetic Foot Ulcer – Not infected and/or with intact dry black eschar = U			
	Infected Diabetic Foot Ulcer or wet gangrene			URGENT
NAILS	Normal well-kept with minimal discoloration			LOW
	Missing, sharp, unkept, thickened, long or deformed			MODERATE
	Infected ingrown nail			
STRUCTURE ANATOMY	Normal no noted visual abnormalities			LOW
	Decreased range of motion at ankle or toe joint			
	Deformities Bunion/Hammer or claw toes/overlapping toes			MODERATE
	Structure Fallen Arch/ Rocker bottom foot/stable Charcot foot			
	Previous amputation X over location or draw/describe on diagram			
	Redness over any structural deformities pressure related			HIGH
	Red, hot painful joint or acute Charcot foot			URGENT
SENSATION Testing for LOPS	Normal sensation using 10 g monofilament at the 5 predetermined sites			LOW
	Sensation of numbness/tingling/throbbing/burning			MODERATE
	Absent or altered sensation at one or more of the five sites			
	Acute onset of pain in a previously insensate foot			URGENT
VASCULAR Testing for Arterial Compromise	Normal pulses normal capillary refill			LOW
	Signs of Ischemia (PAD)			
	Cool skin with pallor, cyanosis or mottling, and/or dependent rubor			HIGH
	One or more pulses not palpable or audible (Doppler)			
	Absent pedal pulses with cold white painful foot or toes			URGENT
FOOTWEAR	Appropriate accommodates foot shape			LOW
	Inadequate Footwear			MODERATE
	Inappropriate Footwear causing pressure/skin breakdown			HIGH

Instructions: *Refer to Health Provider's Guide to Diabetes Foot Screening*
Mark ulceration location (U), Mark other areas of specific concern: blister (B), draining fissure/crack (F), hemorrhagic callus (HC), and previous amputation (X).

Sensation Testing (monofilament)

Fill in if no sensation ●

Leave blank if sensation present ○

RIGHT /5 LEFT

Identify any wounds and location on the foot or toe(s)

Date	Signature	Primary Care Site
Comments		

Adapted from the New Brunswick Diabetes Foot Care Clinical Pathway

2071(Rev2020-04)

- Standardized tool
- Guides you in assessing the foot, identifying risks of ulceration and classifying the level of patient risk
- Good tool to input into your EMR for screening

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What to Check

What to check

Sensation: 10g monofilament test, vibration (128 Hz tuning fork), pinprick

Circulation: Foot Pulses (dorsalis pedis, posterior tibial)

Skin and Structure: Deformities, calluses, ulcers, infections, footwear issues.

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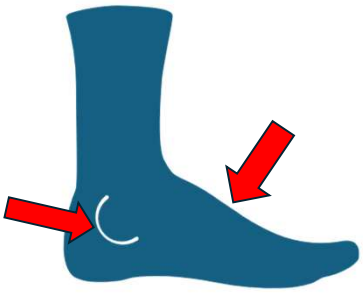
Where's the pulse?



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Red flags and referrals

- Podiatry referral:
  - For callus management, orthotics, vascular wound care if needed
- Immediate referral if:
  - Ulcer present
  - Signs of infection (redness, warmth, swelling, pus)
  - Critical ischemia (Absent pulses + symptoms)

Use standardized forms to keep track of changes

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Patient teaching

- Regular foot checks
- Proper footwear
- Nail and skin changes
- When to seek help
  - Cuts, changes in color, swelling, pain

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Alberta Health Services

Diabetes Foot Care Clinical Pathway
Healthcare Provider's Guide

Diabetes, Obesity & Nutrition Strategic Clinical Network™

https://www.albertahealthservices.ca/scns/Page13331.aspx

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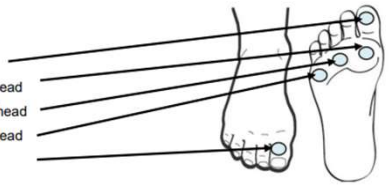
How to

- Provide privacy, have patient remove footwear and socks
- Explain procedure and wash hands or apply gloves (especially if patient reports any ulcerations)
- Touch monofilament to the arm or hand to show what to expect
- Hold monofilament perpendicular to foot, touch until it bends into that 'c' and hold for 2 seconds.
- Randomly test the 5 areas (avoid cracks, ulcers/sores or scars)
- Revisit any sites where they did not feel monofilament to confirm LOS
- Document

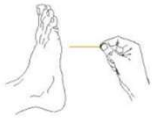
5-Site Monofilament Testing

1. Plantar surface of the great toe
2. Plantar surface of the first metatarsal head
3. Plantar surface of the third metatarsal head
4. Plantar surface of the fifth metatarsal head
5. Dorsum of big toe (not on the toenail)



Hold the filament perpendicular to the skin and use a smooth motion when testing. Use a 3 step sequence that includes:

- Touch the skin
- Bend the filament
- Remove from the skin



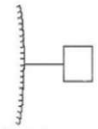


Figure 1

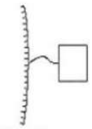


Figure 2

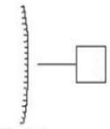


Figure 3

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Retinal Screening

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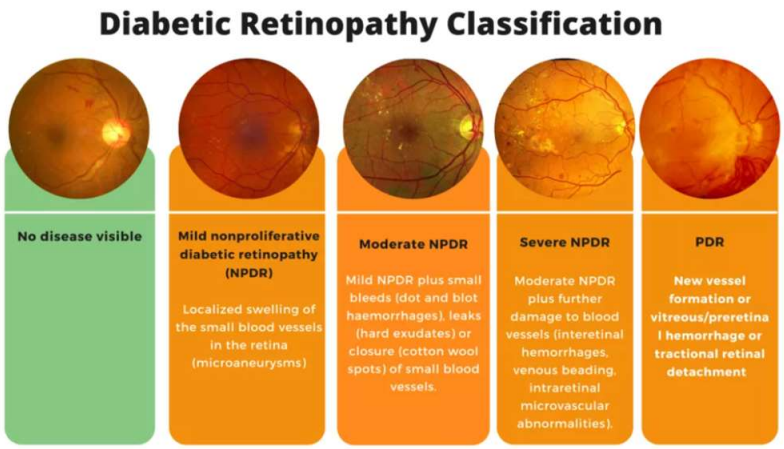
Retinopathy

- Microvascular complication of diabetes that effects the retina
- Increased risk of blindness→ leading cause of vision loss in adults.
- Progression: Non-Proliferative→ proliferative
  - Macular edema may occur at any stage



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Risk Factors and Screening

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Key Risk Factors

- Long Duration of diabetes
- poor glycemic control (A1C goal </= 6.5%)
- Hypertension and dyslipidemia

Screening

- Type 1: Initial exam 5 years after diagnosis
- Type 2: At diagnosis
  - Can repeat every 1-2 years depending on glycemic control

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What can you do as an Educator?

Help	Help Reduce fear and increase follow through • "Retinopathy can be cured or well managed if caught early"
Educate on	Educate on symptoms • Blurry vision, pain, floaters, and blind spots.
Promote	Promote regular eye exams • Story about Retinal photographer (Canon Retinal Camera- grant for remote monitoring)

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What can you do as an Educator?

OKAKI Diabetes Virtual Care Clinic

Help	Help Reduce fea increase follow t • "Retinopathy c cured or well managed if caught early"
Educate on	Educate on symptoms • Blurry vision, pain, floaters, and blind spots.
Vitrectomy: Involves removing the vitreous gel and replaces it with solution	May be necessary if significant bleeding or scar tissue
Laser treatment: helps shrink abnormal blood vessels to stop them from leaking	Used for proliferative diabetic retinopathy and macular edema

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Screening for Other Complications

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Other Complications

- Mental health
- Sexual health
- Dental Health
- Immune Support

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How do I cover this all?
How do I decide what to cover?

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Staying on Top of Screening

<u>After diagnosis</u>:
- ECG
- Foot exam
- Retinal exam
- Kidney test

<u>Every appointment:</u>
- Blood pressure

<u>Every 3 months:</u>
- HbA1c

<u>Once a year:</u>
- Cholesterol
- Kidney test
- Foot exam
- Immunizations
- Dentist visit
- Discuss sexual health and mental health

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Staying on Top of Screening

- Summaries available of how often each should be screened (either for clinic use or the patient)
- Tasks if using an EMR
- Rotating topics as clinic/team priority

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ABCDES of diabetes care

		GUIDELINE TARGET (or personalized goal)
A	**A1C** with other (CGM*, BG*) glycemic targets *when indicated/accessible	A1C ≤7.0% (or ≤6.5% to ↓ risk of CKD and retinopathy) If on insulin or insulin secretagogue, assess for hypoglycemia and ensure driving safety A1C 6.0 - <6.5% for selected adults with type 2 diabetes with potential remission to prediabetes A1C <6.0 for selected adults with type 2 diabetes with potential remission to normoglycemia
B	**BP** targets	BP <130/80 mmHg If on treatment, assess for risk of falls
C	**Cholesterol** targets	LDL-C ≤2.0 mmol/L (or >50 % reduction from baseline); Alternative: non-HDL-C ≤ 2.6 mmol/L, apo B ≤ 0.8 g/L If ASCVD, LDL ≤ 1.8 mmol/L. Alternative: non-HDL-C ≤2.4 mmol/L, apo B ≤0.7 g/L
D	**Drugs** for CV and/ or Cardiorenal protection	• GLP1-RA + SGLT2i with demonstrated cardiorenal benefits if type 2 with ASCVD, CKD or HF, OR Age >60 with ≥2 CV risk factors • ACEi/ARB if CVD, age ≥55 with risk factors, OR diabetes complications • Statin if age ≥40, age ≥30 and diabetes >15 years OR diabetes complications • ASA if CVD +/- finerenone if T2D + CKD with albuminuria
E	**Exercise** goals and healthy eating	• 150 minutes of moderate to vigorous aerobic activity/ week and resistance exercises 2-3 times/week • Follow healthy dietary pattern (eg Mediterranean diet, low glycemic index)
S	**Screening**	• Cardiac: ECG every 3-5 years if age >40 OR diabetes complications • Foot: Monofilament/Vibration yearly or more if abnormal • Kidney: Test eGFR and ACR yearly, or more if abnormal • Retinopathy: type 1 - annually; type 2 - every 1-2 years • Immunizations: ensure up-to-date as per NACI recommendations
S	**Smoking** cessation	If smoker: Ask permission to give advice, arrange therapy and provide support
S	**Self-management,** stress, sleep, other barriers	• Set personalized goals (see "individualized goal setting" panel) • Assess for stress, sleep, mental health and financial or other concerns that might be barriers to goals

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Diabetes Screening, Targets and Treatment Cheat Sheet

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Microvascular Screening

		Type 1		Type 2	
	Test	**Initial**	**Follow up**	**Initial**	**Follow up**
Nephropathy	eGFR, ACR	5 years after diagnosis	Annually	At diagnosis	Annually
Retinopathy	Varied imaging and interpretation via trained professional	5 years after diagnosis and ≥15 years old	Annually	At diagnosis	Every 1-2 years if normal
Neuropathy	10 g monofilament or Vibration tuning fork	5 years post-pubertal duration of diabetes	Annually	At diagnosis	Annually

Macrovascular Screening

		Who	**When**
CVD	Resting ECG	- Age >40 years - Duration of diabetes >15 years and age >30 years - End-stage organ damage - ≥1 CVD risk factor - >40 years and planning vigorous or prolonged exercise	Every 3-5 years
CAD	Exercise ECG stress testing*	- Cardiac symptoms - Signs or symptoms of associated diseases of PAD, carotid bruits, or TIA - Stroke - Resting abnormalities on ECG - CAC score >400 Agatston score	In place of ECG for those listed
PVD	Palpation of peripheral pulses	Emphasized for those with suspected PVD	As part of routine clinical exam

*Pharmacological stress echocardiography or nuclear imaging should be used for those with resting ECG abnormalities that preclude the use of exercise ECG stress testing or for those who are unable to exercise

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Diabetes Passport

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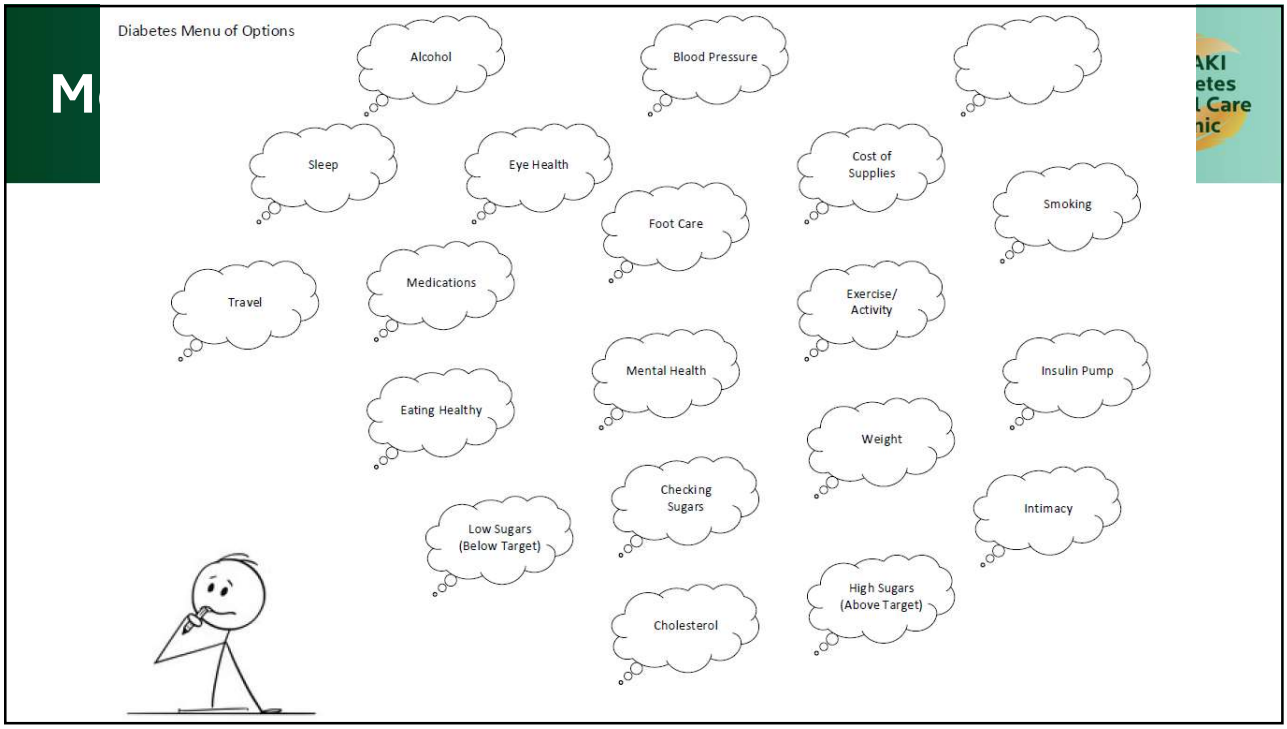

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Wrapping Up…

- Questions?
- Reminder…. June 17th 1:00 – 2:30
  Navigating the Emotional Landscape of Diabetes
- We are going to take the summer off from coaching - thank you for joining! Will restart again in the fall, please spread the word to others who might be interested in joining.

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