



Class 3: Putting It All Together With Diabetes Diabetes Education Program



How are you putting your plan together?

DIET

Share a time when:

- Blood sugar was lower after eating a certain meal
- Label reading helped you make a food choice
- You used the Plate Method
- Ordered differently at restaurants

EXERCISE

Share a time when:

- Blood was lower after exercise
- You worked through a barrier to exercise
- Noticed changes in fitness or health since exercising

TESTING

Share a time when:

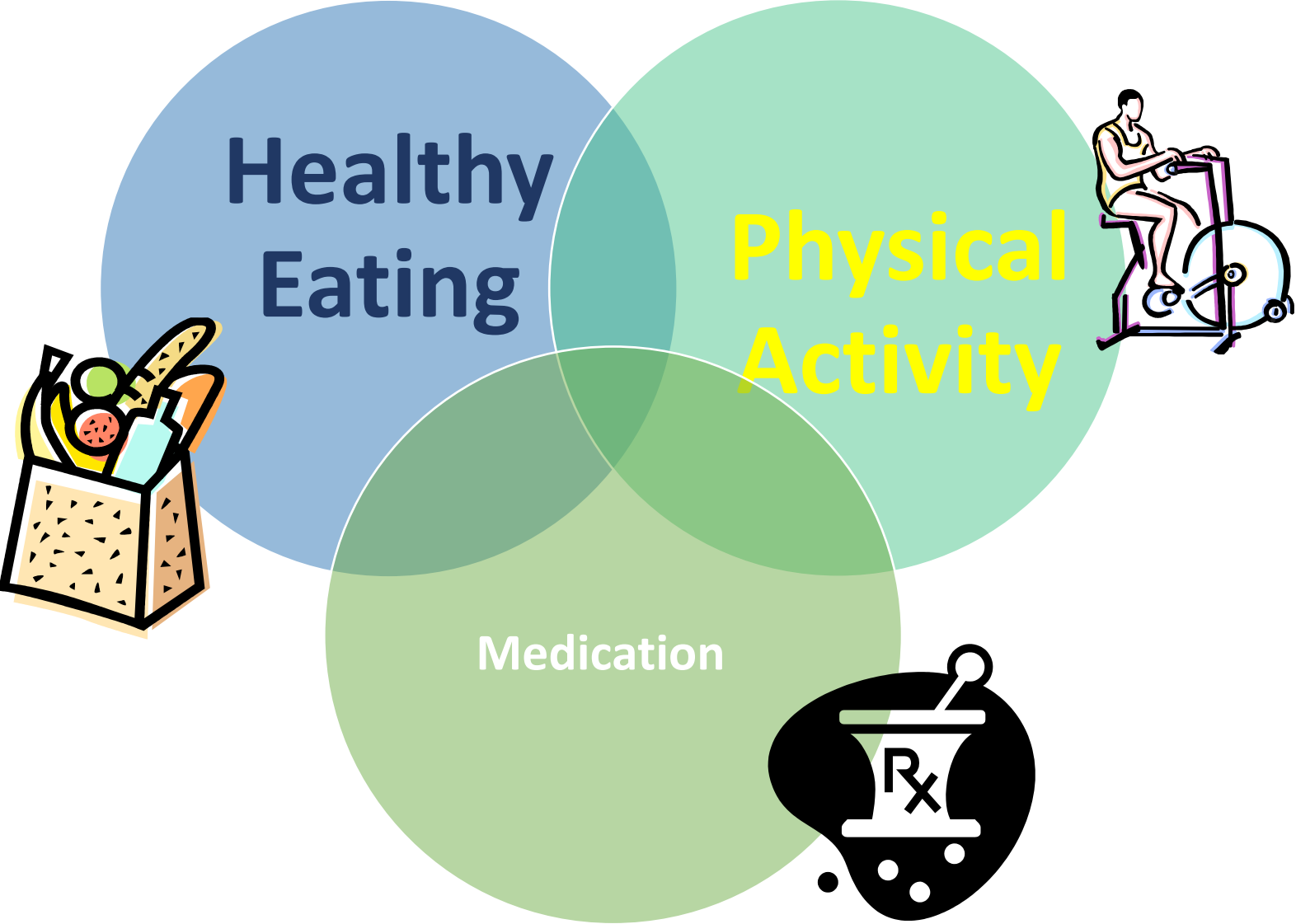
- Noticed a pattern to your blood sugars
- Made a different decision based on your blood sugar number



Goals and Objectives

- ▶ Understand how medications for diabetes work help control blood sugars.
- ▶ Learn to identify blood sugar patterns to guide changes in your diabetes plan.
- ▶ Identify and prevent complications of diabetes through diabetes self-care.
- ▶ Caring for diabetes while traveling.
- ▶ Ways to cope with emotions and diabetes.
- ▶ Summary and goals

Diabetes Treatment



Medications



- Are you taking any diabetes medications?
- If so which one(s)?
- Do you know the best time to take your medications?
- Do you know how they work in your body?



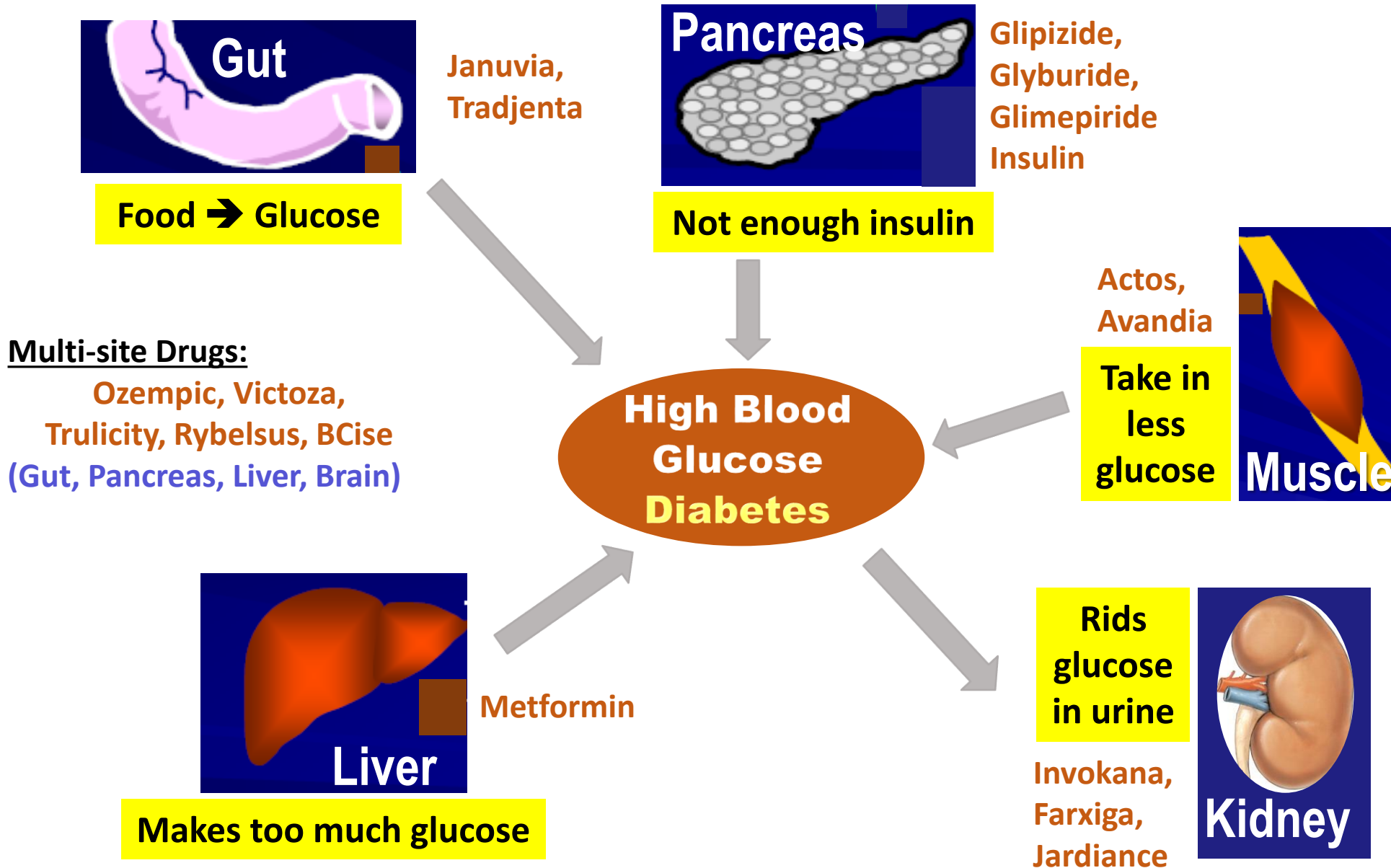
Well let's find out...

Medications for Type 2 Diabetes



- Decrease output of glucose by the liver.
- Increase insulin production by the pancreas.
- Improve insulin action in the intestines.
- Decrease insulin resistance in muscle and fat cells.
- Increase glucose output through the kidneys.

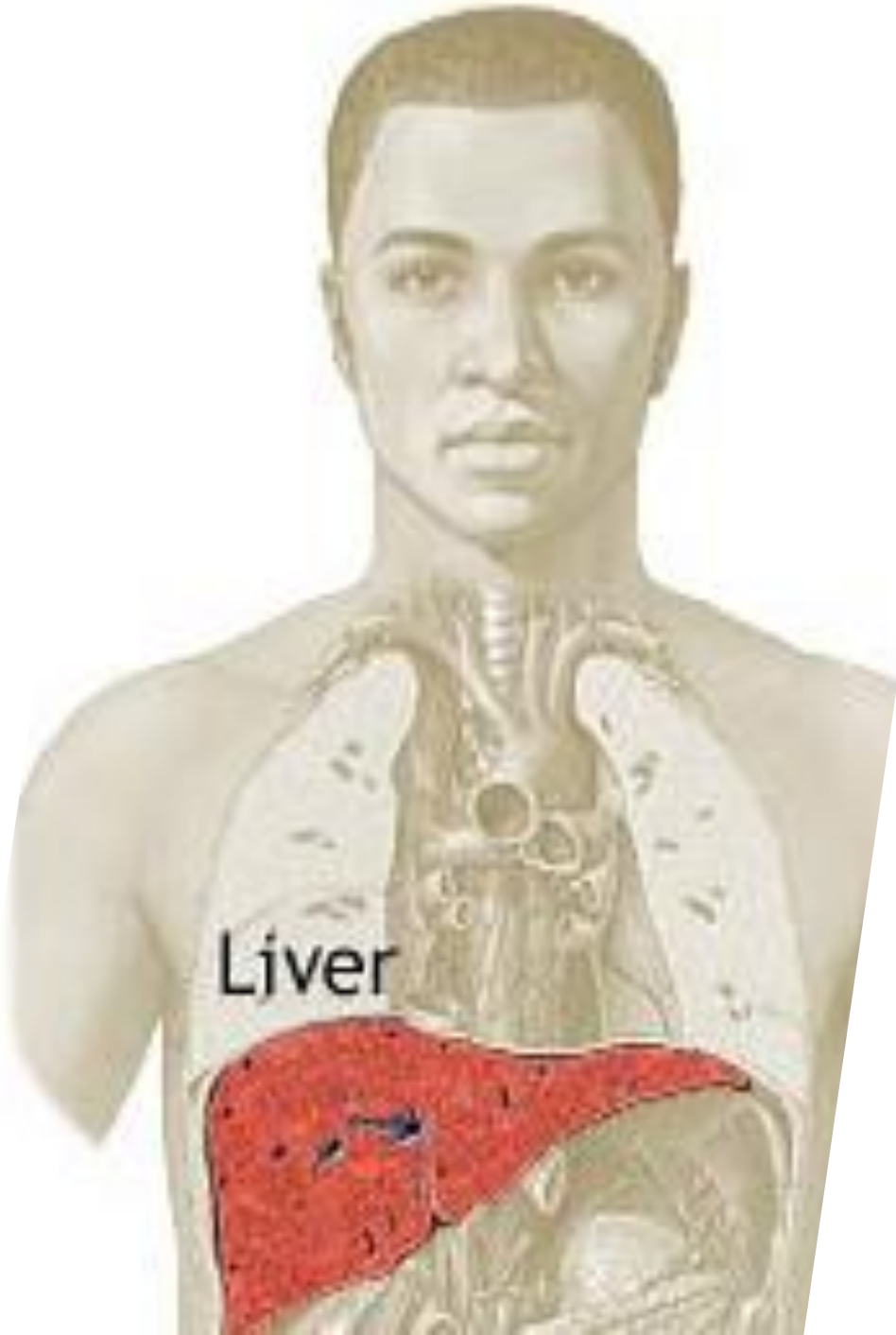
Diabetes Medications



Metformin

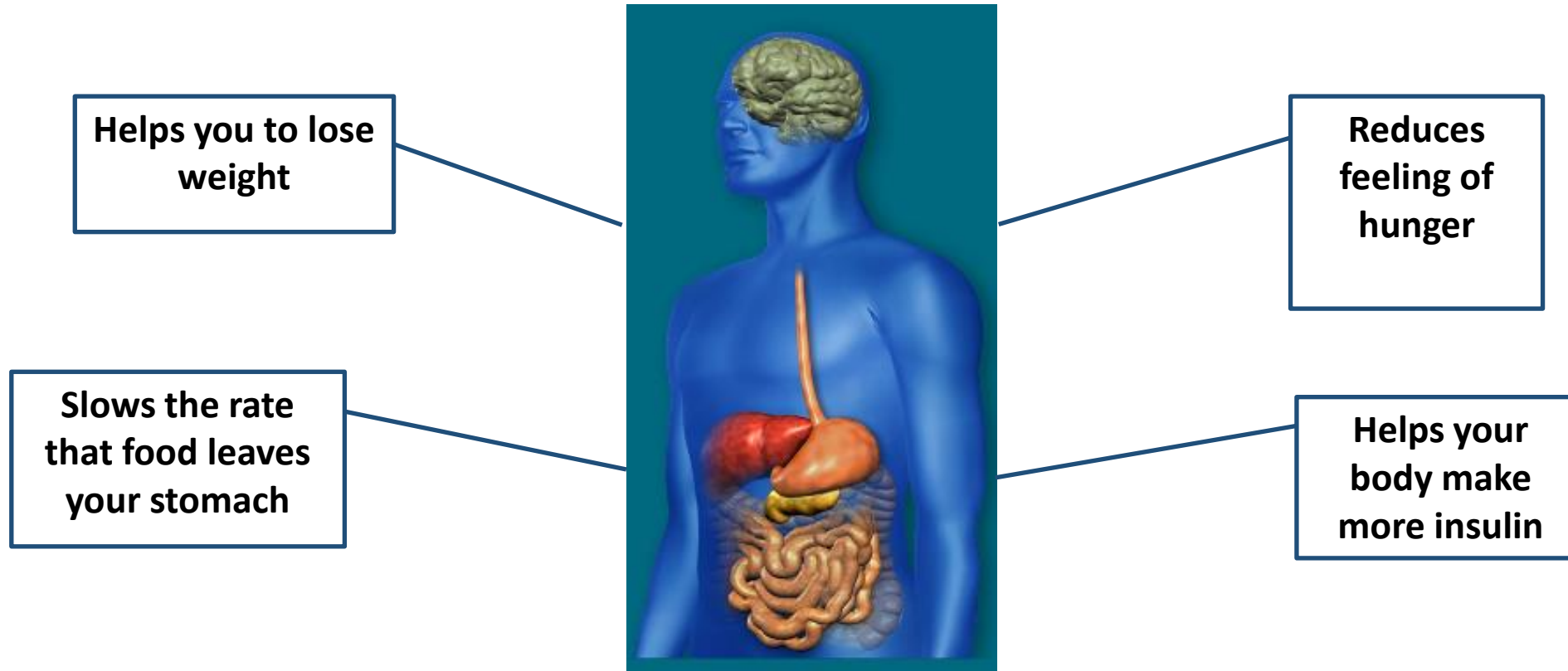


- ▶ **Function:** Reduces liver production of glucose.
 - ▶ Common, a first line medication for diabetes.
 - ▶ Inexpensive, low risk of hypoglycemia.
- ▶ **Instruction:**
 - ▶ Take with meals.
 - ▶ Call doctor if:
 - ▶ severe upset stomach or diarrhea
 - ▶ scheduled for surgery or special tests
 - ▶ Not recommended if alcohol intake is > 2 drinks/day, liver disease, congestive heart failure, or > 80 years old.



Multi-Site Diabetes Medications

- Ozempic, Victoza, Trulicity
- Work in: Gut, Pancreas, Liver, Brain
 - Injectable



Insulin

May be necessary as diabetes progresses.

Myths

- Painful
- Large needles
- Complicated syringes
- Causes Complications
- Makes diabetes a “serious concern”

Facts

- Practically painless
- Tiny needles
- Simple Pens
- Improves blood sugar control, life saving
- Diabetes has always been a “serious concern”



Blood Sugar Patterns



Pattern Practice: DAY 1



Before	2 hours after	Before	Exercise after
Breakfast	Breakfast	Dinner	Dinner
125	206	138	108

Breakfast: Large cinnamon roll, 12 ounces of orange juice
1 cup of plain oatmeal, 1 cup of milk

Lunch: 1 cup of Chicken noodle soup, salad with grilled chicken, unsweetened tea

Dinner: Hamburger with bun, 1 cup strawberries, water

*Exercise was after dinner

Pattern Practice: DAY 2



Before	2 hours after	Before	Exercise after
Breakfast	Breakfast	Dinner	Dinner
65	132	106	68

Breakfast: 6oz Greek yogurt, medium banana, coffee with milk

Lunch: Tuna sandwich on rye bread, pickle, baked chips, diet coke

Dinner: Shrimp, 1 cup of brown rice, mixed vegetables, water

*Exercise was a six mile bike ride over one hour after dinner

Pattern Practice: DAY 3



Before	2 hours after	Before	Exercise After
Breakfast	Breakfast	Dinner	Dinner
178	145	111	98

Breakfast: 2 pieces of whole wheat toast with butter, 2 eggs, small orange, coffee with 1% milk

Lunch: Turkey sandwich on rye bread, 1 cup of tomato soup, 1 cup of 1% milk

Dinner: Hot dog with bun, raw vegetables with light Ranch dip, small apple, water

*Bedtime snack night before was 1 piece of cake and 1 cup of Ben and Jerry ice cream

*Exercise was after dinner

Pattern Practice: DAY 4



Before	2 hours after	Before	Exercise After
Breakfast	Breakfast	Dinner	Dinner
198	201	224	212

Breakfast: Oatmeal, toast, coffee

Snack: Yogurt

Lunch: Salad, Cheese sandwich, Diet Soda

Snack: Apple with string cheese

Dinner: Chicken on the grill, corn on the cob, potato salad, water

*Exercise was after dinner

Remember your Glucose Targets!



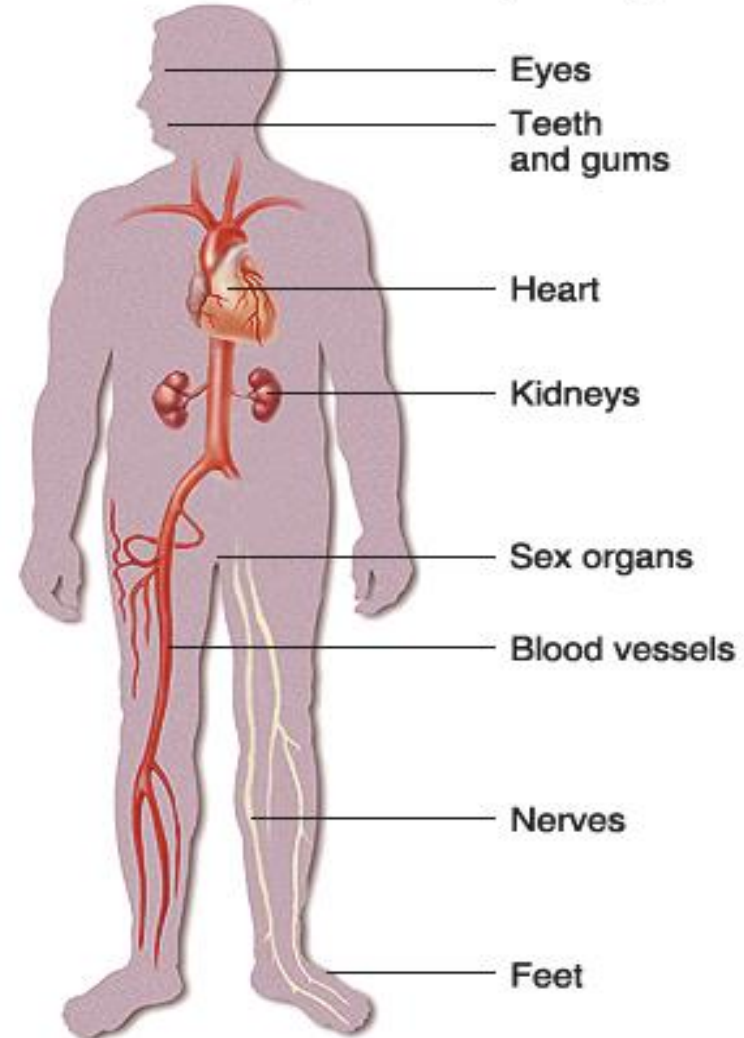
Blood Sugar	No Diabetes	Diabetes Guidelines	
		Am. Assoc. of Clinical Endocrinologist (AACE)	Am. Diabetes Assoc. (ADA)
Fasting and before meal	< 100	< 110	80 – 130
2 hr. after start of meal	< 120	< 140	< 180
A1C	5.6% or less	< 6.5 %	< 7 %

Guidelines For Checking Blood Sugar



- Check your blood sugar as directed
- Call your healthcare team if your blood sugars are consistently out of your target range.
- Ask yourself, “What is causing the change?”
 - Illness?
 - Stress?
 - Medication – (forgot or too much?)
 - How much Activity or exercise?
- ***Bring your blood sugar records and/or meter to all appointments with your healthcare team!***

Complications may affect your:



Complications of Diabetes



duly
HEALTH AND CARE



Eye Disease

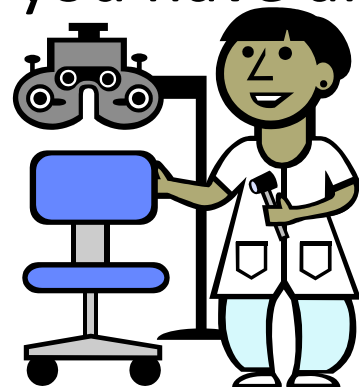
- Also called Retinopathy
- Caused by long periods of:
 - High blood sugar
 - High blood pressure
- Affects blood vessels in the retina of the eye
- May cause scar tissue in the eye
 - Blurred Vision
 - Cloudy vision
 - Black floaters in your vision
 - Difficulty driving at night



Eye Care

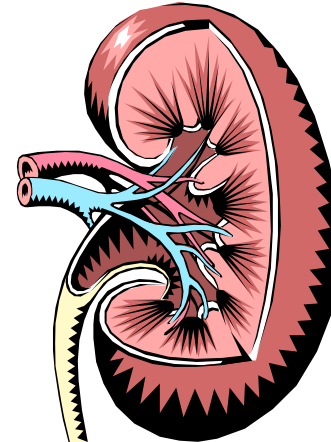


- Keep blood sugar and blood pressure in target range
- Have a dilated eye exam at least once a year with an Ophthalmologist
- Tell your health care provider if you have any eye or vision changes
- Avoid any tobacco use



Kidney Disease

- Also called Nephropathy
- People with diabetes have higher risk of kidney disease
- Can occur when these are high for long periods of time:
 - Blood sugar
 - Blood pressure



Kidney Care

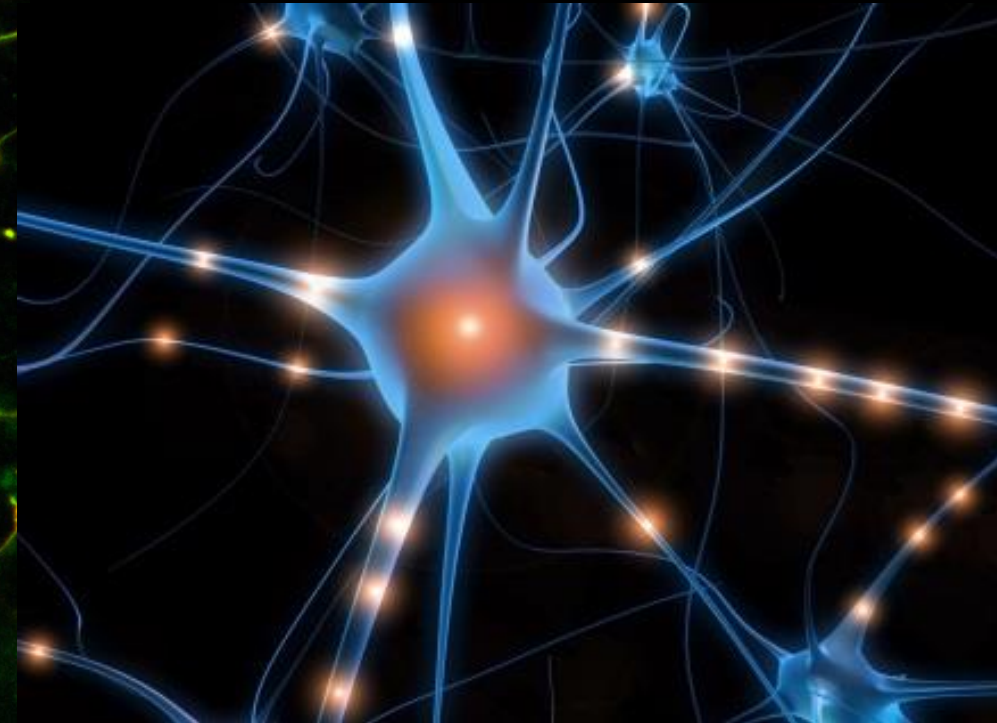


- Have a urine test once a year to measure protein, or Micro-albumin levels, in your urine
- Treat bladder infections right away
- Keep blood sugar and blood pressure in target range
- Avoid tobacco use
- Take your blood pressure medications-they help to protect your kidneys



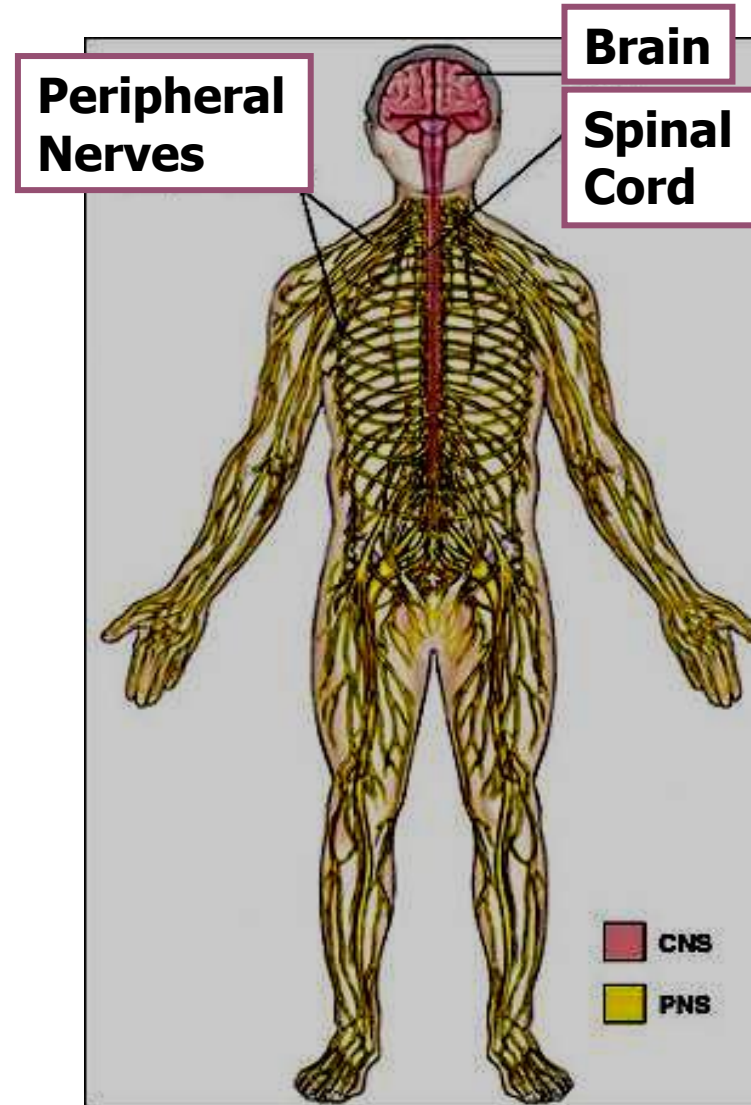
Nerve Damage

- Also called Neuropathy
- People with diabetes are at higher risk
- Nerve damage can be prevented, delayed and/or treated



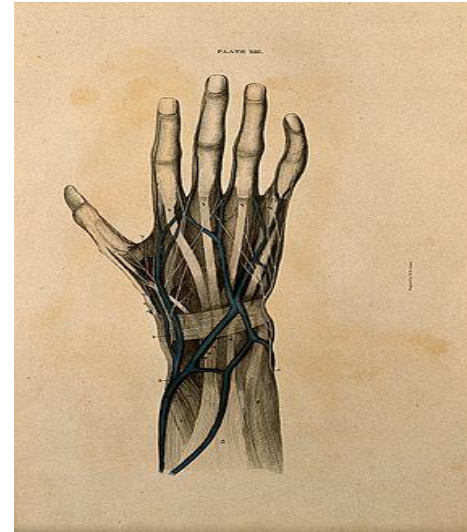
Nerve Damage

- Starts in hands and feet
- Damaged blood vessels can't carry oxygen and nutrients to the nerve cells
- Nerve damage is usually related to long-term high blood sugar

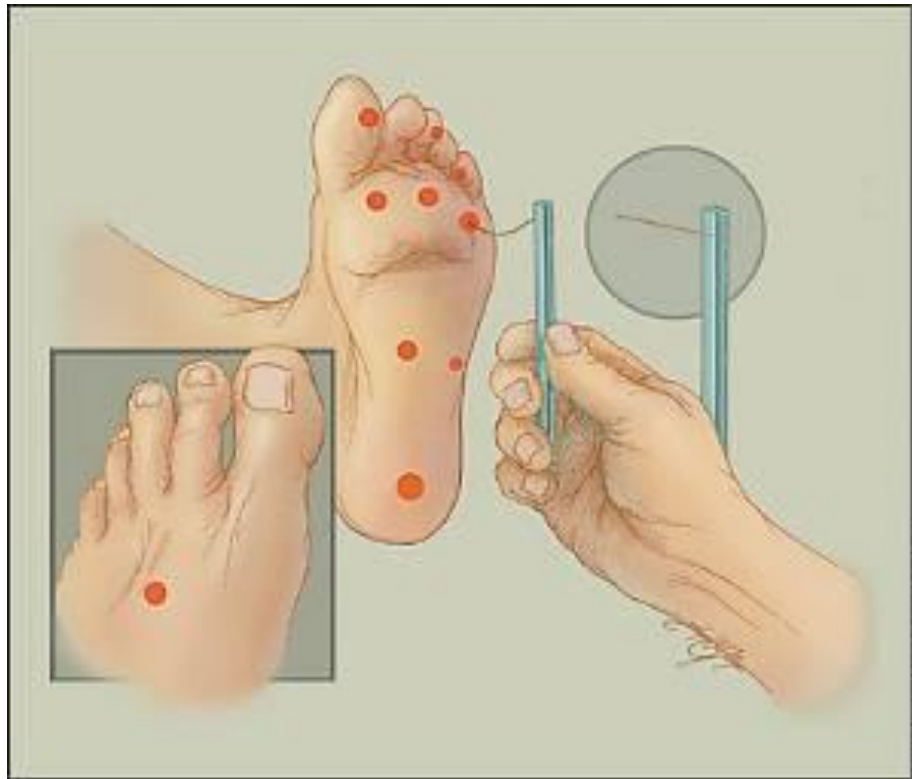


Nerve Damage- Symptoms

- Burning in feet
- Loss of feeling in feet/hands
- Loss of bladder control
- Dizziness when standing up
- Problems with sexual function
- Feeling full after eating only a small amount of food
- Nausea/Vomiting
- Constipation and diarrhea



Diagnosing Nerve Damage - Feet



Monofilament test:

A simple test done in doctor's office to check for nerve damage.

Nerve Damage In Your Feet



Common Foot Problems



Foot Care At Home



- Trim your toenails straight across
- Wear shoes and socks at all times
- Wash and moisturize feet daily (no lotion between toes)



- Check for cuts, sores, red spots, swelling, and infected toenails



- No bathroom “surgery”

- **Make sure to call your doctor if any of the above does not begin to heal**



Nerve Damage Care



- ✓ Keep blood sugar at your target goal
- ✓ Pain medications
- ✓ Pain management



Gum Disease



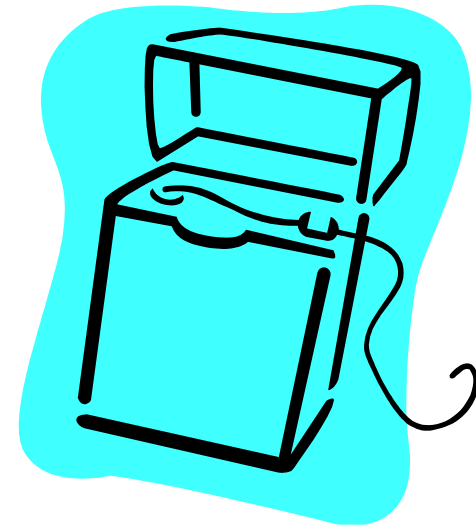
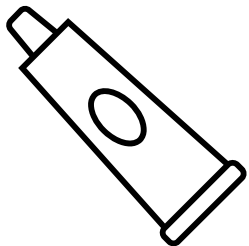
- Plaque builds up on the teeth and gums
- Gum disease can spread into the bone causing infection and tooth loss
- Make sure to ask your Dentist or Doctor about starting antibiotics before any dental procedures even cleanings.
- Symptoms:
 - Bad breath
 - Loose teeth
 - Bleeding gums



Dental Care

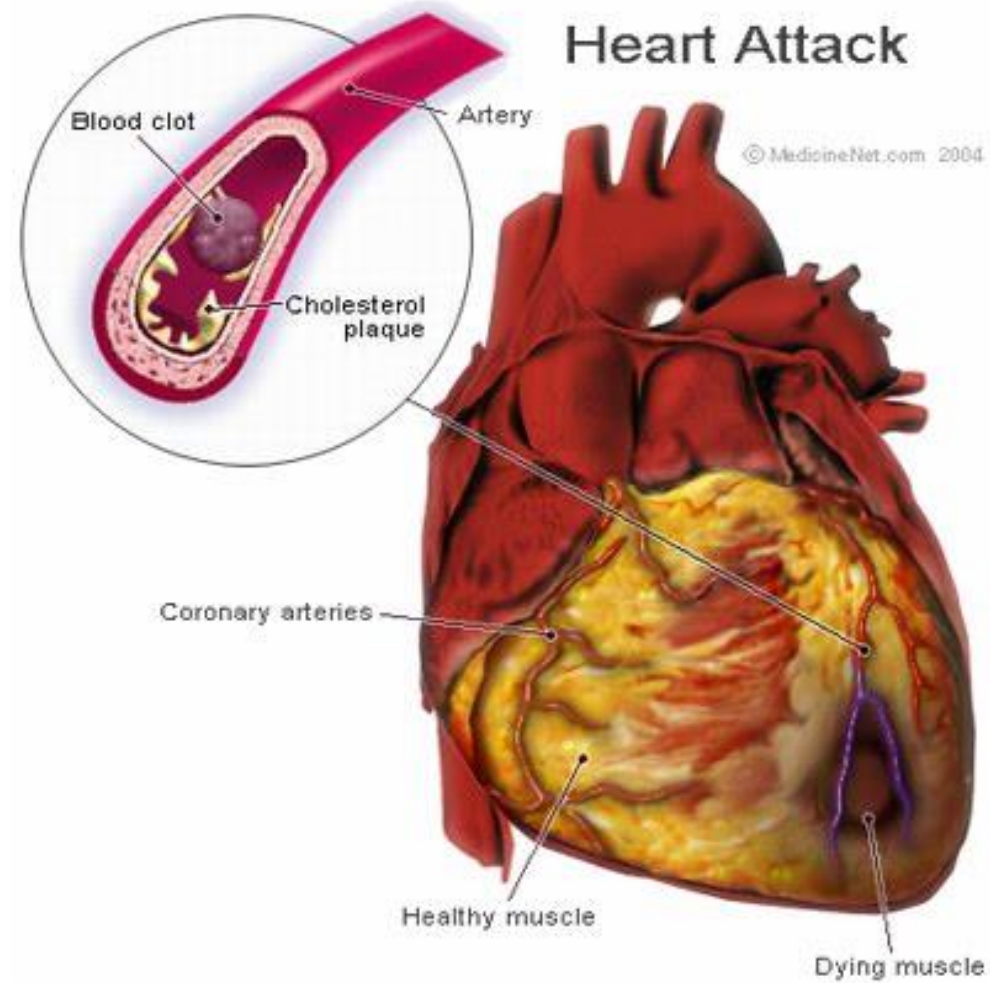


- Keep blood sugar at your target goal
- Brush teeth 2 or more times daily
- Floss teeth daily
- See a dentist twice a year



Heart Disease

**Most Common
Complication
of Diabetes**



Heart Disease Risk Factors



- **Smoking**
- **High Blood Pressure**
- **High LDL Cholesterol (Lousy)**
- **Low HDL Cholesterol (Healthy)**
- **Obesity**
- **Physical Inactivity**
- **Diabetes**



Stroke Risk Factors



- High Blood Pressure
- Smoking
- High LDL Cholesterol
- Diabetes
- Alcohol
- Obesity
- Heritage-Hispanic or African American
- Family history
- Previous stroke
- Atrial Fibrillation



FACE:

Ask the person to smile & check if their face droops from one side.



ARMS:

Ask the person to raise both arms & check if either of their arms drifts down.



SPEECH:

Ask the person to repeat a simple sentence & check if their speech is slurry or strange.



TIME:

If you observe even one of these signs, call an ambulance for emergency care right away. Every minute counts!



You can

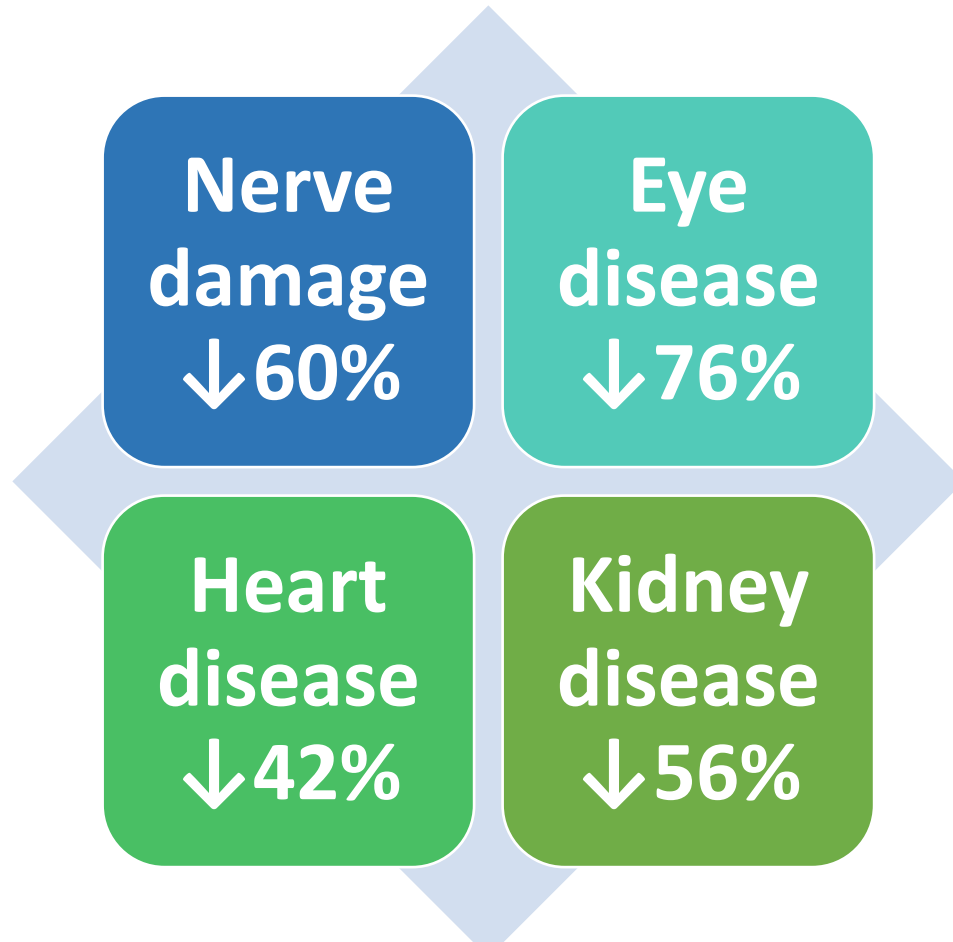


**or slow the progression
of complications
from diabetes!**

Research on Diabetes Complications



DCCT Trial showed that with good blood sugar control (A1c at <7.0 or <6.5)



More good news!



DCCT trial showed that for every 1% decrease in A1c

Nerve damage ↓30-35%

**Eye and Kidney diseases
↓30-35%**

**Heart Disease and Stroke
↓ 14%**

ABC's of Diabetes

- **A**1c < 7.0% or <6.5%
- **B**lood Pressure < 140/90
- **C**holesterol: LDL <70-100

Know your numbers!

Can you see why they are important?

Doctors Visits & Tests for Best Care

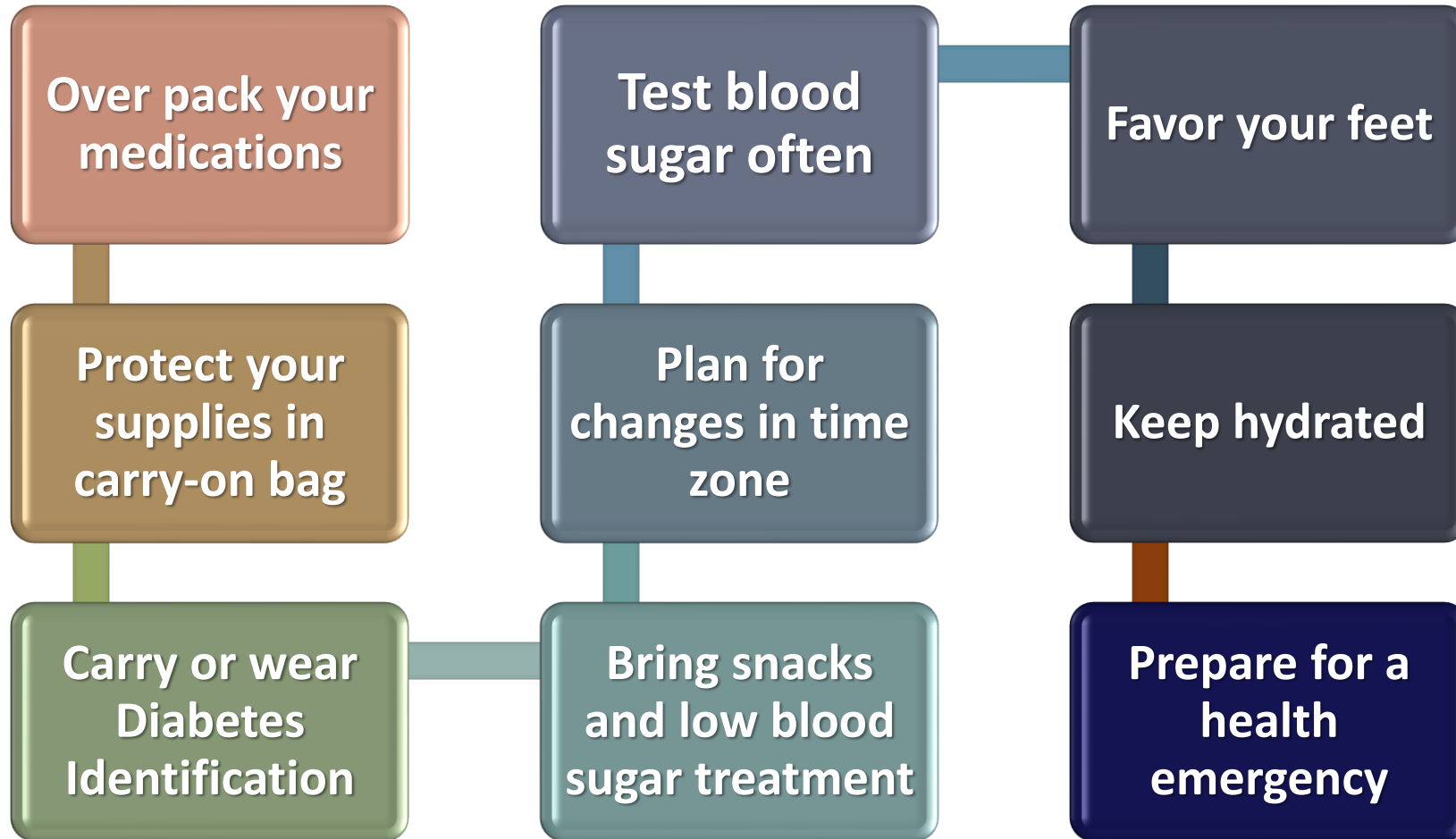


Test	When	Goal
Blood Pressure	Every visit	140/90 or less
Weight	Every visit	Healthy Weight
Foot Check	Every visit	Skin Intact Normal Sensation
A1C Test	Every 3 to 6 months	6.5 to 7% or less
Lipid Panel	Every 6 months to 1 year	LDL <70-100
Micro-albumin	Once a year	Normal
Dilated Eye Exam by Ophthalmologist	Once a year or more	No Retinopathy
Podiatry Visit	Problems with feet	Heal as quickly as possible

Travel and Diabetes

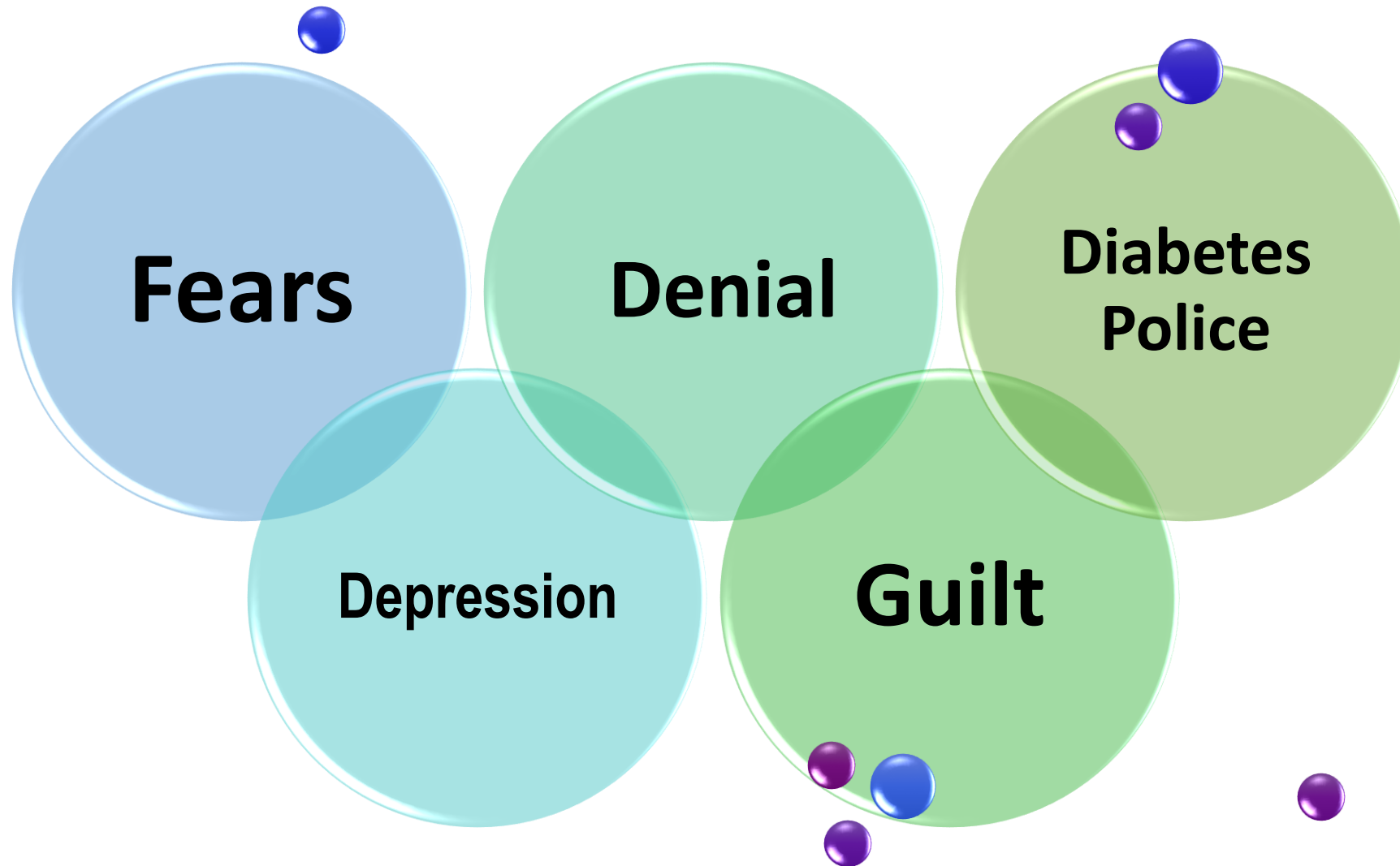


Travel and Diabetes





Emotions and Diabetes



Emotions and Diabetes

- Living with diabetes is not easy
- Depression is more common in people with diabetes.
- Negative emotions, stress and depression can affect diabetes self care behaviors.
- Diet, exercise, taking medications, testing blood sugars, regular check-ups
- **There are many things you can do to help.**



Find support in many ways...



Family



Online blogs or articles



Friends



Diabetes Support Groups



Diabetes Team



Counseling



Co-workers



**You are not alone.
Talk about it!**

Report feelings of depression to a health care provider.

Remember...

- ✓ Diabetes differs from most diseases in that the patient must be actively involved in his own treatment and do most of the hard work.
- ✓
In other illnesses the patient is a passive consumer and can sit back and swallow the tablets and let the doctor do the work.
- ✓
In diabetes, there is no alternative but to let the patient take charge.

Diabetes Goals



- Set a goal to achieve in the next 3 months.
- **SMART** goals
 - **S**pecific - what
 - **M**easurable - when, where
 - **A**ction oriented - how
 - **R**ealistic - can you do it
 - **T**ime limited - how many times, for how long

***Example:** I will check my blood sugar 2 times a day, before and after one meal, for 3 months.*

What Should I Do Now?



- **Join a Wellness Program**

- Fitness Center
- YMCA
- Park district
- Worksite wellness program or challenge
- Weight loss program

- **Visit Diabetes Websites**

- Diabetes.org
- D-life.com

- **Subscribe to a Diabetes Magazine**

- Diabetic Living
- Diabetes Forecast
- Diabetes Self-Management
- Diabetic Gourmet
- Diabetes Digest

- **Download Diabetes Apps**

- Glucose Buddy

- Go Meals

You now have the skills and knowledge to help
control your diabetes!

See you in 3 months at Class 4!

