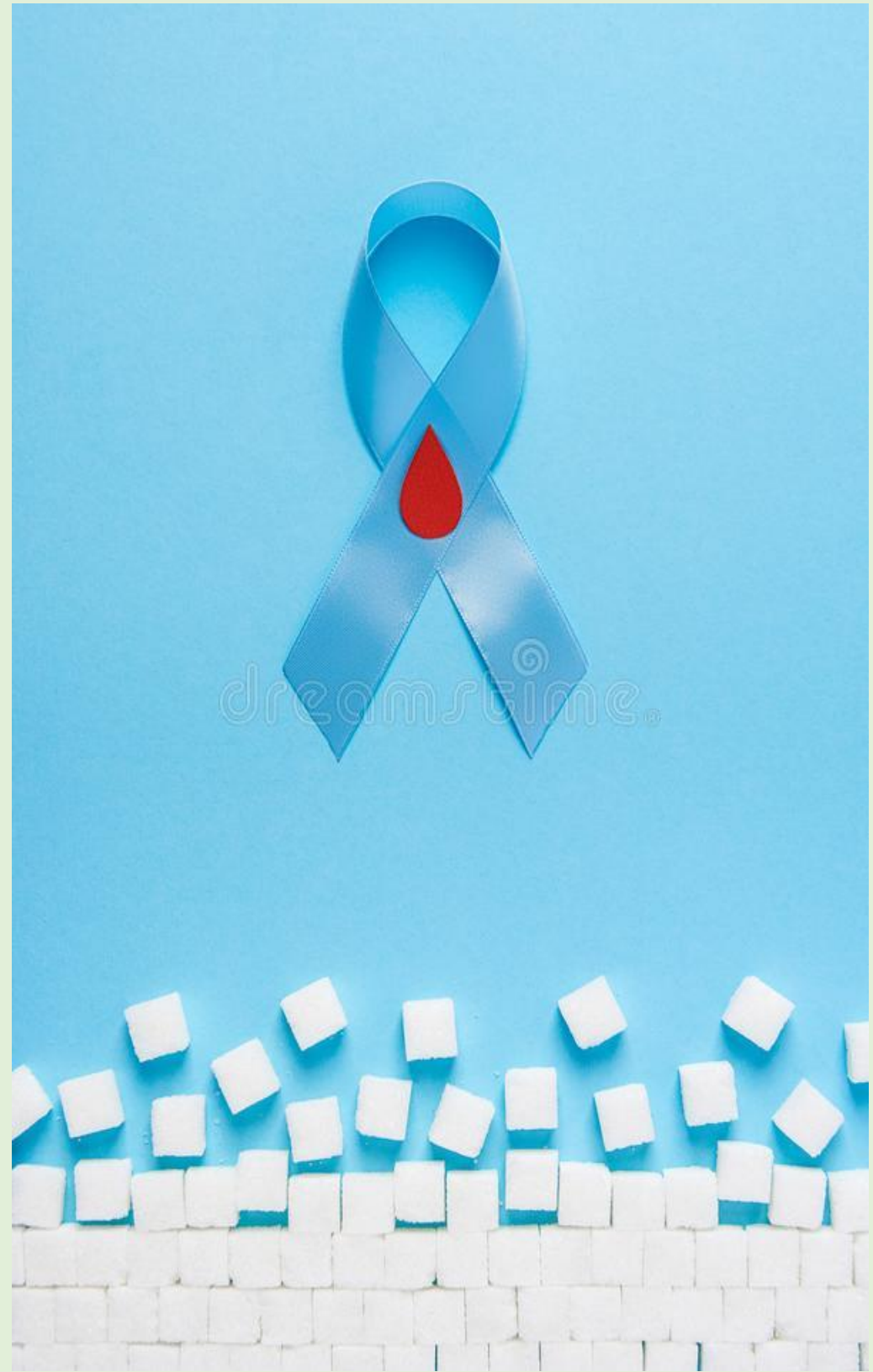




Prepared By: Ann Gutierrez Roque  
Caregiver / C.N.A. Instructor

# INTRODUCTION

**Diabetes is a disease that occurs when your blood glucose, also called blood sugar, is too high. Blood glucose is your main source of energy and comes from the food you eat. Insulin, a hormone made by the pancreas, helps glucose from food get into your cells to be used for energy.**



# BLOOD GLUCOSE OPTIMAL LEVELS

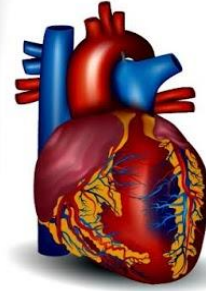
Blood Sugar Levels (mg/dL) in : Fasting: 80 - 130 2 hours past mealtime: below 180	A1C%	Mean Blood Glucose (mg/dL)	Mean Blood Glucose (mmol/L)
<b>Low</b>	4	50	2.6
<b>Normal</b>	5	80	4.7
	6	115	6.3
<b>Diabetes</b>	7	150	8.2
	8	180	10.0
	9	215	11.9
	10	250	13.7
	11	280	15.6
	12	315	17.4
	13	350	19.3
	14	380	21.1

eMediH♥lth

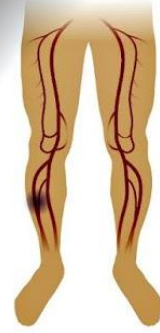


# DIABETES COMPLICATIONS

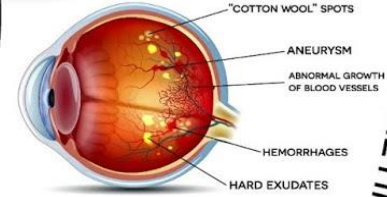
HEART ATTACK



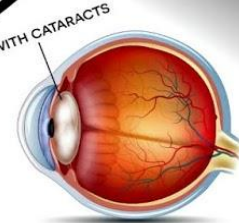
PERIPHERAL ARTERY DISEASE



DIABETIC RETINOPATHY



CATARACTS



STROKE



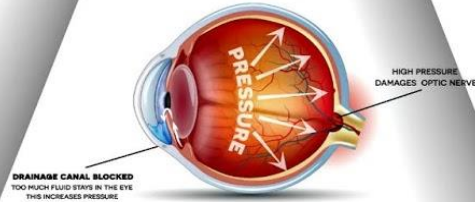
PERIPHERAL NEUROPATHY



DIABETIC NEPHROPATHY



DIABETIC FOOT



# 7 SYMPTOMS OF DIABETES

- \* **You Drink Enough Water but Still Feel Thirsty.**
- \* **You're Peeing More Than Usual.**
- \* **Your Eyesight Is Blurry.**
- \* **You Feel Starved (Even Though You Just Ate).**
- \* **You're Getting More Infections Like UTIs.**
- \* **You're Losing Weight Without Even Trying.**
- \* **You're Exhausted No Matter How Much You Sleep or Rest.**



## THE GLUCOSE LEVELS



Hypoglycemia  
(low blood sugar)



Normal level



Hyperglycemia  
(high blood sugar)

# **HYPOGLYCEMIA**

- **Hypoglycemia is a condition in which your blood sugar (glucose) level is lower than the standard range. Glucose is your body's main energy source.**
- **Hypoglycemia is often related to diabetes treatment. But other drugs and a variety of conditions — many rare — can cause low blood sugar in people who don't have diabetes.**
- **Hypoglycemia needs immediate treatment. For many people, a fasting blood sugar of 70 milligrams per deciliter, or 3.9 millimoles per liter, or below should serve as an alert for hypoglycemia. But your numbers might be different. Ask your health care provider.**
- **Treatment involves quickly getting your blood sugar back to within the standard range either with a high-sugar food or drink or with medication. Long-term treatment requires identifying and treating the cause of hypoglycemia.**

# Symptoms

**If blood sugar levels become too low, hypoglycemia signs and symptoms can include:**

- 1. Looking pale /Shakiness /Sweating /Headache /Hunger or nausea**
- 2. An irregular or fast heartbeat /Fatigue /Irritability or anxiety**
- 3. Difficulty concentrating /Dizziness or lightheadedness**
- 4. Tingling or numbness of the lips, tongue or cheek**
- 5. As hypoglycemia worsens, signs and symptoms can include:**
- 6. Confusion, unusual behavior or both, such as the inability to complete routine tasks**
- 7. Loss of coordination /Slurred speech /Blurry vision or tunnel vision**
- 8. Nightmares, if asleep /Severe hypoglycemia may cause unresponsiveness (loss of consciousness) Seizures**



# HYPERGLYCEMIA (High Blood Glucose Level)

**Causes:** Too much food, too little insulin or diabetes pills, illness, or stress.

**Onset:** Often starts slowly; may lead to medical emergency if not treated

## SYMPTOMS:



EXTREME THIRST



NEED TO URINATE OFTEN



DRY SKIN



HUNGRY



BLURRY VISION



DROWSY



SLOW-HEALING WOUNDS

## WHAT CAN YOU DO:



CHECK BLOOD GLUCOSE



CALL YOUR HEALTHCARE PROVIDER

**Call your healthcare provider** if your blood glucose levels are higher than normal for 3 days and you don't know why.

# ***HYPERGLYCEMIA***

- **Hyperglycemia, or high blood glucose, occurs when there is too much sugar in the blood. This happens when your body has too little insulin (the hormone that transports glucose into the blood), or if your body can't use insulin properly. The condition is most often linked with diabetes.**
- **Hyperglycemia is blood glucose greater than 125 mg/dL (milligrams per deciliter) while fasting (not eating for at least eight hours; a person with a fasting blood glucose greater than 125 mg/dL has diabetes).**
- **A person has impaired glucose tolerance, or pre-diabetes, with a fasting blood glucose of 100 mg/dL to 125 mg/dL.**
- **A person has hyperglycemia if their blood glucose is greater than 180 mg/dL one to two hours after eating.**
- **If you have hyperglycemia and it's untreated for long periods of time, you can damage your nerves, blood vessels, tissues and organs. Damage to blood vessels can increase your risk of heart attack and stroke, and nerve damage may also lead to eye damage, kidney damage and non-healing wounds.**

## **Early symptoms of hyperglycemia include:**

- 1. High blood sugar /increased thirst and/or hunger**
- 2. Blurred vision /frequent urination (peeing) /Headache**
- 3. Fatigue (feeling weak, tired) /Weight loss /Vaginal and skin infections**

## **Slow-healing cuts and sores /Symptoms of ketoacidosis are:**

- 1. Vomiting /Dehydration**
- 2. Unusual fruity smell on the breath**
- 3. Deep labored breathing or hyperventilation**
- 4. Rapid heartbeat**
- 5. Confusion and disorientation**
- 6. Coma**

# HYPOGLYCEMIA

## (Low Blood Glucose Level)

**Causes:** Too little food or skip a meal;  
too much Insulin or Diabetes Pills;

**Onset:** Often Sudden;  
may pass out untreated

### SYMPTOMS:



SHAKY



FAST  
HEARTBEAT



SWEATING



DIZZY



ANXIOUS



HUNGRY



BLURRY VISION



FATIGUE



HEADACHE



IRRITABLE

### WHAT CAN YOU DO:



CHECK



TREAT



CHECK

**CHECK:** YOUR BLOOD GLUCOSE RIGHT AWAY. IF YOU CAN'T CHECK - TREAT ANYWAY

**TREAT:** BY EATING 3 TO 4 GLUCOSE TABLETS OR 3 TO 5 HARD CANDIES; YOU CAN CHEW QUICKLY (SUCH AS PEPPERMINTS) OR BY DRINKING 4 OUNCES OF FRUIT JUICE; OR 1/2 CAN OF REGULAR SODA POP

# *DIFFERENT KINDS OF INSULIN*



## OMNI POD

- **Insulin pump is a battery-operated device that delivers small amounts of insulin into the bloodstream twenty-four hours a day. The OmniPod connects directly to the skin without tubes and communicates wirelessly with a Personal Diabetes Manager to program insulin delivery simply and effectively.**



## *SYRINES and INSULIN PENS*

- **Deliver insulin through a needle. Pens may be more convenient, and children may find them more comfortable than syringes.**



## *PATCH INSULIN*

- An insulin patch aims to painlessly deliver insulin through the skin similar to how transdermal patches such as nicotine patches or muscle pain relief patches work.



# STEPS IN TAKING SUGAR LEVEL OF PATIENT

## Operation steps, Easy to Use



1 Calibrate the chip, install the meter



2 Insert strips to automatically turn on



3 One-click blood collection



4 Contact with blood sample, suck blood automatically



5 Wait for 9s to display the result



6 Automatic shutdown after 2 mins of no operation



**Blood Glucose Meter**



**Test Strips**



**Lancing Device**



**Clear Cap**



**Sterile Lancet**



**Control Solution**



**Carrying Case**

A dark, moody photograph of a rocky mountain peak. A small, green plant with white flowers is growing on the rock. The background is a dark, misty forest.

Take care of your  
body. It's the only  
place you have to  
live.

Jim Rohn