

# Diabetes Nursing Care

## Assessment

### Subjective Data

- Past health Hx
- Medications
- Recent surgery
- Thirst
- Hunger
- Poor healing
- Frequent urination
- Abdominal pain

### Objective Data

- Sunken eyeballs
- Dry skin
- Hypotension
- Weak tachy HR
- Dry mouth
- Fruity breath
- OGTT >200mg/dL
- FBG > 126 mg/dL

## Risk Factors

### I

- Genetics
- Autoimmune disease

### II

- Obesity
- Genetics
- High triglycerides

## Diagnosis

- Ineffective health management
- Risk for unstable blood glucose levels
- Risk for injury
- Risk for peripheral neurovascular dysfunction

## Planning and Goals

- Keep patientt involved in their care
- Have few hyper/hypoglycemic emergencies
- Adjust lifestyle to accommodate their diagnosis and needs

## Implementation

- Monitor blood glucose frequently, especially during acute illness
- Assess the patient’s ability to perform SMBE and insulin injection
- Assess patient’s knowledge of proper diet and exercise
- Teach pt the signs and symptoms of hypoglycemia and what to do in each case
- Provide frequent oral care
- Inspect feet daily and encourage pt to wear proper footwear
- Ensure patient is prepared for travel with enough supplies
- Teach importance of wearing a medical ID bracelet

## Dietary Considerations

- Should have consult with a dietician
- Healthy balance of nutrients is essential
- Minimum of 130g of carbs per day (fruits, vegetables, whole grains, legumes)
- Limit saturated fats to less than 7%limit cholesterol to <200mg/ day
- Eat healthy fats that come from plants (olives, nuts, avocados)
- Protein should be 15%-20% of calories
- Limit alcohol intake because it stops gluconeogenesis – high risk of hypoglycemia

## Complications

- Diabetic Ketoacidosis (DKA) – Ensure airway, establish IV, give fluids, give insulin drip
- Hyperosmolar Hyperglycemic Syndrome – IV insulin and Nacl, replace k+
- Hypoglycemia – BG <70mg/dL – give 15g of simple carb and recheck BG level again in 15 minutes.

## Medical Treatments

- **Hypoglycemia** – 50% dextrose IV push or glucagon IM
- **Hyperglycemia** – insulin therapy and fluid replacement
- **Pancreas Transplant** – for type I diabetes
- **Bariatric Surgery** – for type II diabetes

### Type I Diabetes

#### Pathophysiology

- Caused by autoimmune or environmental factors that cause the pancreas to stop making insulin autoantibodies present
- Affects 5-10% of a diabetic population

#### Signs and Symptoms

- Weight loss
- Young onset (usually)
- Constant hunger
- Thin appearance
- Ketoacidosis likely

#### Treatment

- More likely to have an insulin pump to help regulate blood sugar
- Completely dependent on insulin for the rest of their life

#### Pharmacology

- Only insulin is used because antidiabetic agents cannot have an effect on damaged pancreatic cells
- Type I diabetics cannot survive without exogenous insulin

#### Nursing

- Educate about making good meal choices
- Monitor skin integrity
- Ensure pt is competent with SBGM

### Type II Diabetes

#### Pathophysiology

- Cause by a decrease or loss of function by the pancreas or insulin resistance
- No antibodies present
- Affects 90-95% of diabetics

#### Signs and Symptoms

- Obese body types
- Older onset (usually over 40 yrs)
- Rare to have keto acidosis

#### Treatment

- Less likely to have a pump and more likely to self test and inject insulin with a needle
- Can control BS with diet and exercise alone in early stages of disease

#### Pharmacology

- Insulin and other various antidiabetic agents are used
  - Biguanides – can also be used for type II prevention
  - Sulfonylureas – insulin production from pancreas
  - Meglitinides – taken up to 30 minutes before meals
  - Glucosidase Inhibitors – slow carb absorption

#### Nursing

- Focus on nursing care is about helping pt make lifestyle changes to reverse disease
- Diet modification
- Lowering triglycerides
- Incorporating exercise into daily life
- Smoking cessation

## Type I & II Diabetes

### Pathophysiology

- Can be genetically predisposed

### Signs and Symptoms

- Fatigue
- Polyuria
- Hyperglycemia
- Polyphagia
- Polydipsia
- Blurred vision

### Diagnosis

- A1C > 6.5%
- FPGL > 165 mg/dL
- 2 hr OGTT PGL > 200mg/dL

### Treatment

- Insulin injections
- Exercise is beneficial
- BS levels can be controlled with diet choices

### Complications

- Cardiovascular disease
- Neuropathy
- Macrovascular disease
- Infection
- Macrovascular disease
- Poor healing
- Kidney disease
- Retinopathy

### Nursing

- Educate about making good meal choices
- Monitor skin integrity
- Ensure patientt is competent with SBGM

## Types of Insulin

	Type	Trade Name	Onset	Peak	Duration
Rapid	Aspart, Glulisine, Lispro	Novorapid, Apidra, Humalog	10-15	1-1/2 hr	3-5 hr
Short	Regular	H u m u l i n - R , Novolin gr	30-45	2-3 hr	6 1/2 hr
Intermediate	NPH	H u m u l i n - N , Novolinge NPH	1-3	5-8 hr	14-18 hr
Long	Detemir, Glargine	Levemir, Lantus	1-2	8-10 hr none	12-24 hr 22-24 hr

