



Diabetes

Purpose/Goals

Care partners will be able to identify signs and symptoms of diabetic related conditions and will provide proper nutrition and skin care for the client living with diabetes.

Introduction

When someone has diabetes, either the pancreas is not producing enough insulin or the body is unable to use the insulin produced. Insulin's job is to control the use and distribution of sugar in our bodies. When insulin cannot do its job correctly, the sugar level in the blood becomes too high. A very important key fact to remember is that diabetic clients have a much slower healing time related to poor circulation.

There are several types of diabetes:

- ***Brittle*** – unpredictable changes in the client's glucose tolerance.
- ***Insipidus*** – there is an inadequate amount of an antidiuretic hormone that causes excessive urination and thirst. This is more common in younger people.
- ***Juvenile-onset*** – diabetes which has its onset prior to the age of 25 years. This form is usually quite difficult to regulate.
- ***Latent*** – diabetes mellitus that happens during times of stress such as pregnancy, infectious disease, obesity, or trauma. Prior to any of these reasons, there are no symptoms or laboratory findings to indicate diabetes. There is a strong chance that these individuals will develop diabetes mellitus.
- ***Mellitus*** – a disorder of carbohydrate metabolism characterized by hyperglycemia (too much sugar in the blood) resulting from inadequate production or utilization of insulin.
- ***Pancreatic*** – diabetes associated with disease of the pancreas.
- ***Renal*** – a condition characterized by a low renal threshold for sugar.

Two common types:

- ***Insulin-dependent diabetes mellitus (IDDM)*** – this type is also referred to as Type I. Little or no insulin is secreted. People with this kind of diabetes require insulin injections to stay alive.
- ***Non-insulin-dependent diabetes mellitus (NIDDM)*** – also referred to as Type II. There may be a defect in the release of insulin, but most commonly there is conflict in the action of insulin in the tissues. This type usually develops after age 40 but may be seen in obese children. 80% of NIDDM are obese. This type is almost exclusively hereditary. The onset may be prevented or postponed by calorie restriction and weight loss.

Signs and symptoms include:

Type I

- Excessive urination
- Excessive thirst
- Excessive eating
- Weight loss
- Weakness and fatigue

Type II (In early stages no symptoms)

- Same as Type I diabetes plus:
 - Slow healing
 - Blurred vision
 - Cramps in legs/feet
 - Itching
 - Drowsiness

Intervention and Management

- ***Dietary Management*** – the purpose of dietary management is to maintain ideal body weight. The meal plan is designed to contain adequate calories, protein, vitamins and minerals.
- ***Exercise*** – promotes the utilization of carbohydrates and enhances the action of insulin. Clients may develop hypoglycemia (low blood sugar) after exercise unless they take extra carbohydrate beforehand.
- ***Insulin Therapy*** – When the client cannot produce the adequate amount of insulin, it is necessary to give it by injection. Insulin lowers the blood glucose. One or more insulin injections each day is required for patients with IDDM. Clients with NIDDM may require insulin during acute illness, infection, stress, surgery, or pregnancy.

Types of Insulin

Insulin is extracted from the pancreas of slaughtered pigs and cows or is produced synthetically. The synthetically produced insulin is identical to human insulin. Human insulin is mostly used in newly diagnosed clients, temporary use (i.e. surgery or pregnancy).

- **Short acting** – starts to work in 25 minutes to 1 hour and peaks in 2-4 hours and lasts 5-7 hours.
- **Intermediate acting** – starts to work in 1-4 hours and peaks in 2-15 hours and lasts 12-28 hours.
- **Long acting** – starts to work in 4-6 hours and peaks at 10-30 hours and lasts 36+ hours.

The glucose is tested by a drop of blood from the finger. The result of this test is an indicator of how much insulin is needed. Insulin activity varies from client to client and with the site of the injection.

Hypoglycemia

Hypoglycemia is abnormally low blood sugar. It results from too much insulin. It might happen 1-3 hours after fast acting insulin is given.

Symptoms of hypoglycemia include:

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| • Sweating | • Lightheadedness | • Double vision |
| • Tremors | • Confusion | • Drowsiness |
| • Pale skin | • Numbness of the lips and tongue | • Convulsions |
| • Fast heart rate | • Slurred speech | • Coma |
| • Nervousness | • Staggering gait | |
| • Headache | | |

Management of Hypoglycemia

Give some form of sugar by mouth if the client is conscious and can swallow – orange juice, candy, lump of sugar or corn syrup and call supervisor.

Nutritional considerations

People with diabetes have to take extra care to make sure that their food is balanced with insulin and oral medications, and exercise to help manage their blood glucose levels.

One method of healthy diabetic dining includes the *Plate Method* (for more information visit www.diabetes.org . Using your dinner plate put a line down the middle of the plate.

1. Then on one side, cut it again so you will have 3 sections on your plate.
2. Fill the largest section with non-starchy vegetables such as:
 - spinach, carrots, lettuce, greens, cabbage,
 - green beans, broccoli, cauliflower, tomatoes,
 - vegetable juice, salsa, onion, cucumber, beets, okra,
 - mushrooms, peppers, turnip
3. Now in one of the small sections, put starchy foods such as:
 - whole grain breads, such as whole wheat or rye

- whole grain, high-fiber cereal
 - cooked cereal such as oatmeal, grits, hominy, or cream of wheat
 - rice, pasta, dal, tortillas
 - cooked beans and peas, such as pinto beans or black-eyed peas
 - potatoes, green peas, corn, lima beans, sweet potatoes, winter squash
 - low-fat crackers and snack chips, pretzels, and fat-free popcorn
4. And then on the other small section, put meat or meat substitutes such as:
- chicken or turkey without the skin
 - fish such as tuna, salmon, cod, or catfish
 - other seafood such as shrimp, clams, oysters, crab, or mussels
 - lean cuts of beef and pork such as sirloin or pork loin
 - tofu, eggs, low-fat cheese
5. Add an 8 oz. glass of non-fat or low-fat milk. If you don't drink milk, you can add another small serving of carb such as a 6 oz. container of light yogurt or a small roll.
- And a piece of fruit or a 1/2 cup fruit salad and you have your meal planned. Examples are fresh, frozen, or canned in juice or frozen in light syrup or fresh fruit.

Special Considerations

- Prepare regular meals and on time.
- Provide diabetic snacks.
- Inspect the skin daily and report problems immediately.
- When bathing, be sure to wash, rinse and dry thoroughly, especially the client's feet.
- Ensure the client has proper fitting socks and shoes.
- ONLY a podiatrist or nurse should cut the diabetics toenails.
- Pay close attention to the client's behavior. Note and report changes. Changes may be because of problems with blood sugar level.
- Encourage regular exercise as tolerated by the client.

Homewatch CareGivers University Diabetes	Objectives	Description (for marketer)
Diabetes: A Primer	<ul style="list-style-type: none"> • Examine the classification and symptoms of diabetes and how diet and exercise can mitigate its effects. • Evaluate the various causative factors in diabetes. • Recognize the complications of diabetes. 	Diabetes is a common disease among the elderly. Although it is generally not the presenting disease for many of our clients, it is a complicating factor. It is important to recognize the symptoms and to understand the scope of the disease as well as the interaction with other disease processes.
Recognizing and Responding to Pain	<ul style="list-style-type: none"> • Explain why pain is important in the care of the elderly. • List three signs of pain in the elderly. • List two symptoms of pain that must be reported immediately. • List three ways to treat pain other than medication. 	This course is designed to help care partners to recognize signs of pain in an elder being cared for at home or in a facility, and then to respond and document appropriately.
Immobility Dangers	<ul style="list-style-type: none"> • Define immobility and describe the problems it causes. • List several physical, mental and social causes of immobility. • Describe what happens to muscles, joints and bones when they are not moved. • Explain the role of the care partner in preventing the dangers of immobility. 	Immobility spells danger for any age group, especially the elderly. This course will identify the various causes of immobility and present strategies to prevent and review treatment effects of immobility.

Homewatch CareGivers University Diabetes	Objectives	Description (for marketer)
Prevention of Pressure Ulcers – How you can help	<ul style="list-style-type: none"> • Define pressure ulcers • List 7 risk factors for the development of pressure ulcers • Describe the main causes of pressure ulcers • List 5 things you can do to help your patients 	The care partner has a very important role in preventing pressure ulcers. Their observation skills and quick reporting of symptoms can prevent the serious damage that can be caused by pressure ulcers.
Failure to thrive in older adults (because nutrition plays a major role in managing Diabetes)	<ul style="list-style-type: none"> • Define Failure to Thrive in Older Adults (FTTOA) and establish relevance • Identify the 4 main components of FTTOA and typical presentation in the elderly • Describe nutritional interventions • Describe additional interventions that may be beneficial 	Failure to Thrive in Older Adults (FTTOA) is on the rise. The number of "at risk" elderly is growing quickly. A thorough understanding of the problem is the only way to find prevention strategies and effective treatments.

Care Partner Competencies

The expectation is to demonstrate steps in the correct order. An observer will grade performance using a competency assessment observation form. This course lists the steps that are expected to properly check a patient's skin and the rationales that explain why you perform some of these steps.

- Check Skin