



# HYPOGLYCEMIA

## What is hypoglycemia?

Hypoglycemia, or low blood sugar, happens when blood glucose drops below normal levels, usually less than 70 mg/dL.<sup>1,2</sup>

Hypoglycemia can occur suddenly, but it can be treated by eating or drinking a small amount of glucose-rich food.<sup>1</sup>

If left untreated, hypoglycemia can lead to confusion, clumsiness, or fainting. In its most severe stage, hypoglycemia can lead to seizures, coma, and even death.<sup>1,2</sup>

**Remember that “hypoglycemia” is low blood sugar and should not be confused with “hyperglycemia,” which is high blood sugar.**

## Who is at risk for hypoglycemia?

Hypoglycemia may be a side effect of diabetes treatment, including insulin and oral medications that increase insulin production.<sup>1</sup>

It is, therefore, imperative for health care professionals and patients being treated for diabetes to be able to identify and also help manage hypoglycemia.<sup>3</sup>

**If the blood glucose reading is below 70 mg/dL, one of these quick-fix food items, containing approximately 15 grams of carbohydrates, should be consumed immediately to raise blood glucose<sup>1,2</sup>:**

- 4 glucose tablets
- 1 tube of glucose gel
- 1/2 cup (or 4 ounces) of a regular—not diet—soft drink
- Hard candies (see package to determine how much to consume)
- 1 tablespoon of sugar or honey

Patients should then recheck their blood glucose 15 minutes after eating or drinking one of these quick-fix foods. If their blood glucose is still below 70 mg/dL, the normal limit, another serving of a quick-fix food should be consumed. Once the quick-fix food brings their blood glucose to 70 mg/dL, patients should eat a small snack if their next meal is 1 hour or more away.<sup>1</sup>

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## Symptoms of hypoglycemia include<sup>1,2</sup>:

- Shakiness
- Nervousness or anxiety
- Sweating, chills, and clamminess
- Irritability or impatience
- Confusion
- Rapid heartbeat
- Lightheadedness or dizziness
- Hunger and nausea
- Sleepiness
- Blurred/impaired vision
- Tingling or numbness in the lips or tongue
- Headaches
- Weakness or fatigue
- Anger, stubbornness, or sadness
- Lack of coordination
- Nightmares or crying out during sleep
- Seizures
- Unconsciousness

## Hypoglycemia unawareness

Very often, people whose blood glucose level has fallen below 70 mg/dL may not feel any of the symptoms of hypoglycemia. This is referred to as “hypoglycemia unawareness.” People with hypoglycemia unawareness need to check their blood glucose regularly so they know when their blood glucose has fallen below 70 mg/dL.<sup>1,2</sup>

Patients should consult with their doctor if they think they are hypoglycemia unaware.

## Other impacts of hypoglycemia

The incidence of hypoglycemia is often measured in clinical trials; however, the data may not approximate true rates in real-world populations.<sup>4</sup>

Current research shows that the effects of hypoglycemia are already placing an economic burden on payers.<sup>4</sup>

With the Centers for Disease Control and Prevention estimating that 1 of 3 people will have diabetes by the year 2050, management of complications associated with diabetes, such as hypoglycemia, will be of even greater concern in upcoming years.<sup>4</sup>

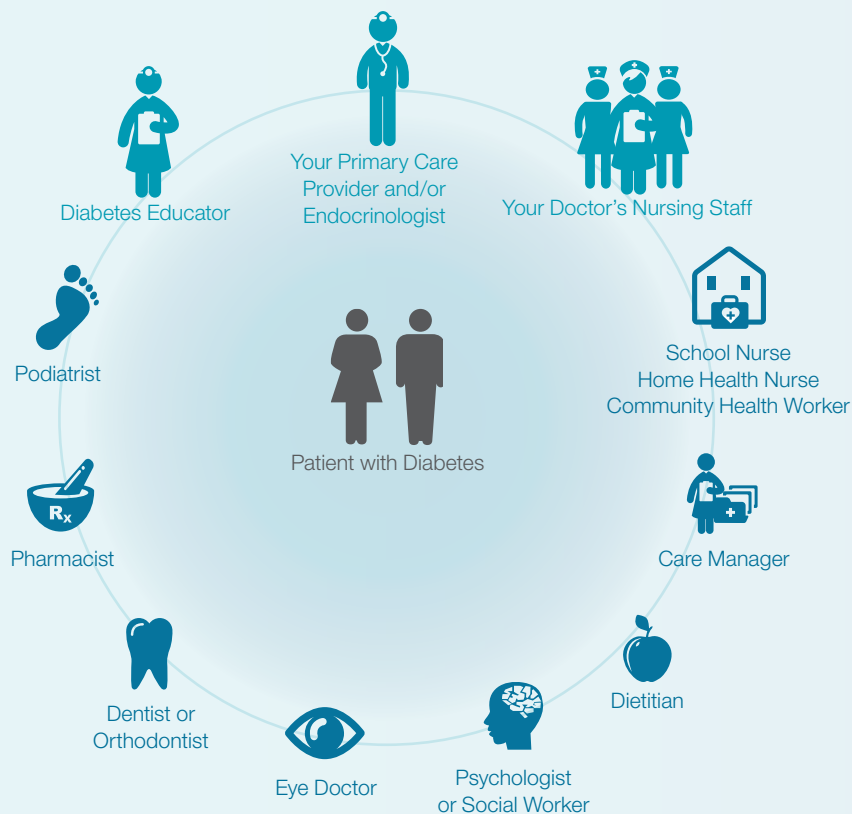




## TEAM-ORIENTED CARE FOR PATIENTS WITH DIABETES<sup>1</sup>

Collaborative teams that provide continuous, supportive, and effective care are ideal for the prevention and management of chronic diseases like diabetes.

### WHO MAY BE PART OF THE PATIENT'S DIABETES CARE TEAM?<sup>1-3</sup>



## YOUR DIABETES CARE TEAM

The benefits of diabetes team care may include<sup>1</sup>:

- Reduced risk factors for diabetes
- Improved diabetes management
- Lowered risk for diabetes complications
- Efficient patient education
- Improved glycemetic control
- Increased patient follow-up
- Higher patient satisfaction
- Improved quality of life
- Reduced hospitalizations
- Decreased health care costs

## The Diabetes Care Team: Essential questions

**Effective team care in diabetes: What does it look like?**<sup>1</sup>

The following are recommended to successfully promote team care in the treatment of patients with diabetes:

- Commitment and support of organizational leaders
- Active participation by the patient and health care professional team members
- A functional information system to identify patient population
- Adequate financial and professional resources
- Efficient payment mechanisms for team care services

**Flexible care plans help meet specific needs in patients with diabetes**

Because individual diabetes care team members are rarely involved in every aspect of patient care, a flexible plan helps determine the most effective use of team resources and provides needed flexibility. For example<sup>1</sup>:

<b>Podiatrists</b>	<ul style="list-style-type: none"> <li>• Treat people with foot-related injuries and conditions. Provide routine foot care examinations</li> </ul>
<b>Pharmacist</b>	<ul style="list-style-type: none"> <li>• Assist patients who need drug therapy for their diabetes</li> </ul>
<b>Nurse educators, diabetes educators, and care managers</b>	<ul style="list-style-type: none"> <li>• Provide patient education, support, and drug management services</li> </ul>
<b>Eye care professionals (optometrists and ophthalmologists)</b>	<ul style="list-style-type: none"> <li>• Provide comprehensive eye and vision care for patients</li> </ul>
<b>Psychologist/Social worker</b>	<ul style="list-style-type: none"> <li>• May be part of a team providing child and adolescent care</li> </ul>
<b>Dental professionals</b>	<ul style="list-style-type: none"> <li>• Conduct oral examinations; provide oral health education</li> </ul>

An opportunity exists for HCPs and health care organizations to work together toward a common goal:

- Improving the health of people with diabetes

To achieve this goal, team-oriented diabetes care should continuously strive to seek new ways to improve patient well-being and accurately assess all associated costs.

**References:** **1.** National Institutes of Health – National Institute of Diabetes and Digestive and Kidney Diseases: Executive Summary. <https://www.niddk.nih.gov/health-information/health-communication-programs/ndep/health-care-professionals/team-care/executive-summary/Pages/publicationdetail.aspx>. Accessed November 5, 2016. **2.** National Institutes of Health – National Institute of Diabetes and Digestive and Kidney Diseases: What makes a successful team? <https://www.niddk.nih.gov/health-information/health-communication-programs/ndep/health-care-professionals/team-care/successful-team/Pages/publicationdetail.aspx>. Accessed November 21, 2016. **3.** American Diabetes Association. Your health care team. <http://www.diabetes.org/living-with-diabetes/treatment-and-care/whos-on-your-health-care-team/your-health-care-team.html>. Accessed March 3, 2017.



## COMPLICATIONS OF DIABETES: SURVEILLANCE AND MANAGEMENT

Diabetes affects 29.1 million people in the United States—that's 9.3% of the population.<sup>1</sup> It has been linked to heart disease, stroke, kidney failure, and leg amputation.<sup>1</sup>

The following explains some of the problems that patients with diabetes face and the importance of recognizing and managing potential complications caused by the disease.

### Cardiovascular events

People with diabetes often are obese, have high cholesterol, and/or high blood pressure.<sup>2</sup> All of these conditions increase the risk of cardiovascular problems.<sup>2</sup> Patients with a combination of these conditions are at even greater risk for heart attack, stroke, and death than people who do not have diabetes.<sup>2</sup>

#### To help protect heart health, patients need to<sup>2</sup>:

- eat the right foods
- exercise regularly
- stop smoking
- check their blood glucose, blood pressure, and cholesterol levels often

A dietitian can help patients choose a healthy diet; if they're overweight, a dietitian can also help them lose weight safely. They may also get recommendations for physical activities that are right for them.<sup>2</sup>

It's also important for patients to have their doctor test their A1C at least twice a year so they know how they are managing their blood glucose levels. Their cholesterol should be checked at least once a year. At every doctor's visit, their blood pressure should be checked as well. If a doctor prescribes medications, patients need to take them as prescribed.<sup>2</sup>

### Renal impairment

The kidney's job is to filter out waste and extra fluid. When the kidneys are damaged and can't filter properly, waste and extra fluid builds up in the bloodstream. When the kidneys fail, patients will need dialysis several times a week to replace the lost kidney function. In more severe cases, a kidney transplant may be needed.<sup>3</sup>

Kidney disease happens slowly and silently in people with diabetes. They may not even realize anything is wrong until severe problems with their kidneys have developed.<sup>3</sup>

## COMPLICATIONS OF DIABETES: SURVEILLANCE AND MANAGEMENT

Kidney and bladder infections can also be concerns for diabetes patients. Symptoms include cloudy or bloody urine, pain or a burning sensation when urinating, or an urgent need to urinate often, in addition to back pain, chills, or fever.<sup>3</sup>

To help manage kidney problems, patients need to monitor their blood glucose and keep their blood pressure under control. It is also important that they get their blood and urine checked for kidney dysfunction every year.<sup>3</sup>

### Vision impairment

In people with diabetes, high blood glucose and high blood pressure levels cause small blood vessels to swell. The blood vessels leak liquid into the eyes, causing blurred vision. Sometimes this leaking can cause blindness. Other eye diseases more likely to occur in people with diabetes are cataracts and glaucoma. <https://www.cdc.gov/diabetes/managing/problems.html>

Treating eye problems early can help save a patient's sight. Having a dilated eye exam at least once a year is recommended. The doctor will check for signs of cataracts or glaucoma. This is important because diabetic eye disease may develop without any symptoms. <https://www.cdc.gov/diabetes/managing/problems.html>

#### Symptoms of eye disease include<sup>4</sup>:

- trouble reading
- blurred vision
- seeing rings around lights or dark spots
- flashing lights

Patients should inform their health care team about any changes in their vision.

### Infection, circulation, and amputation

Long-term diabetes can damage blood vessels and nerves, resulting in numbness, pain, and weakness in the hands, arms, feet, and legs.<sup>5</sup> An estimated 60% to 70% of people with diabetes have some form of **neuropathy**—the medical term for damage to the nervous system.<sup>5</sup>

Nerve damage can deform or misshape feet. It can lead to blisters, sores, or ulcers on limbs as well. Poor circulation can make these injuries slow to heal. A sore or ulcer that does not heal or becomes infected can lead to amputation of a toe, foot, or leg.<sup>5</sup>

Patients need to learn how to take good care of their feet. Their feet should be examined by a doctor and tested for nerve damage at least once a year.<sup>5</sup>

#### To keep their feet healthy, patients should<sup>6</sup>:

- Look for cuts, cracks, sores, red spots, swelling, infected toenails, splinters, blisters, and calluses on their feet every day. If they notice any cuts or have an infection that isn't healing, they should call their doctor right away
- Wash their feet in warm water (not hot) and dry them thoroughly
- Cut toenails (but not too short) as needed. Toenails should be cut when they are soft after washing, and toenail edges should be filed with an emery board
- Rub lotion on the tops and bottoms of feet—but not between the toes—to prevent cracking and drying
- Wear shoes that fit well. Break in new shoes slowly

## COMPLICATIONS OF DIABETES: SURVEILLANCE AND MANAGEMENT

- Wear stockings or socks to protect feet against blisters and sores
- Wear clean, lightly padded socks that fit well
- Avoid walking barefoot because it's easy to step on something harmful—shoes or slippers should be worn at all times
- Protect feet from extreme temperatures (hot and cold)
- When sitting, they should keep the blood flowing by propping their feet up, and move their toes and ankles for a few minutes at a time
- Not smoke. Smoking reduces blood flow to the feet

## NOTES:

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**References:** **1.** Centers for Disease Control and Prevention. National diabetes statistics report, 2014. <http://www.cdc.gov/diabetes/pubs/statsreport14/national-diabetes-report-web.pdf>. Accessed November 2, 2016. **2.** National Institute of Diabetes and Digestive and Kidney Diseases. Diabetes, heart disease, & stroke. <https://www.niddk.nih.gov/health-information/diabetes/overview/preventing-problems/heart-disease-stroke>. Accessed January 19, 2017. **3.** National Institute of Diabetes and Digestive and Kidney Diseases. Diabetic kidney disease. <https://www.niddk.nih.gov/health-information/diabetes/overview/preventing-problems/diabetic-kidney-disease>. Accessed January 19, 2017. **4.** National Institute of Diabetes and Digestive and Kidney Diseases. Diabetic eye disease. <https://www.niddk.nih.gov/health-information/diabetes/overview/preventing-problems/diabetic-eye-disease>. Accessed January 19, 2017. **5.** National Institute of Diabetes and Digestive and Kidney Diseases. Nerve damage (diabetic neuropathies). <https://www.niddk.nih.gov/health-information/diabetes/overview/preventing-problems/nerve-damage-diabetic-neuropathies>. Accessed January 19, 2017. **6.** National Institute of Diabetes and Digestive and Kidney Diseases. Diabetes & foot problems. <https://www.niddk.nih.gov/health-information/diabetes/overview/preventing-problems/foot-problems>. Accessed January 19, 2017.





# DIABETES OVERVIEW

Type 2 diabetes (T2D) is recognized as a serious disease and is often associated with other comorbidities and complications. These comorbidities include cardiovascular disease, high low-density lipoprotein cholesterol (LDL-C), hypertension, and obesity.<sup>1</sup> We also know that as the disease progresses, other organs are affected. There can be renal complications, neuropathic and peripheral nerve disease, and retinopathic complexities.<sup>1</sup>

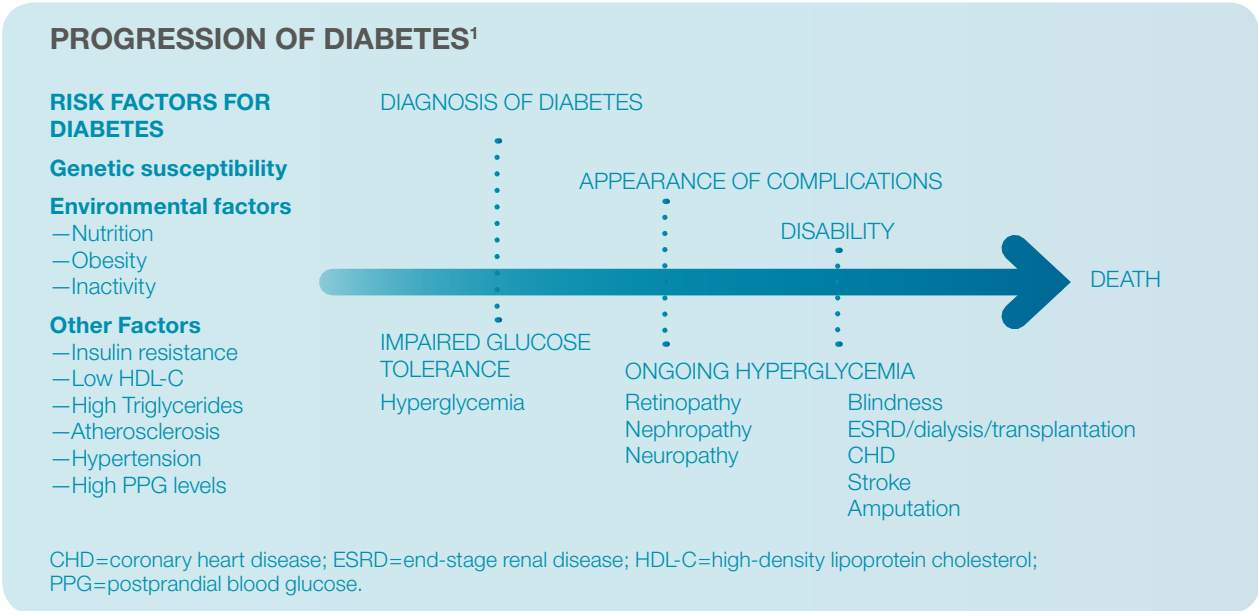
In fact, T2D has been linked to kidney failure, lower-limb amputations, blindness, cardiovascular disease, and stroke.<sup>1</sup> In 2010, diabetes was the seventh leading cause of death in the United States.<sup>2</sup>

## Your help is needed more than ever

Based on recent National Health and Nutrition Examination Survey (NHANES) data from 2010, only 55% of patients achieved an A1C <7%.<sup>3</sup>

In addition, the proportion of patients with T2D who achieved combined A1C, blood pressure, lipid, and weight loss goals was only 8% (A1C <7%, blood pressure <130/80 mm Hg, LDL-C ≤100 mg/dL, and body mass index <30 kg/m<sup>2</sup>).<sup>3</sup>

As a care manager, your role is to help ensure that your patients reach their target goals, adhere to important lifestyle changes, and get screened on a regular basis. No small task!



## DIABETES OVERVIEW

## Glycemic control is key to managing potential complications from T2D

This *Diabetes Overview* tool is designed to help you educate your patients about T2D. It was developed to help you answer your patients' questions about their T2D clearly and succinctly.

In diabetes, the pancreas does not produce insulin or cells are resistant to insulin—the hormone needed to convert sugar and starches from food into energy needed for daily life.<sup>4</sup>

This lack of insulin or insulin resistance can lead to a buildup of glucose (sugar) in the blood, which can cause damage to various organs of the body.<sup>5</sup> It is critical for patients to understand that by maintaining glycemic (blood sugar) control, they can help manage their diabetes.

Before developing T2D, patients almost always have **prediabetes**—blood glucose levels that are higher than normal but not yet high enough to be diagnosed as diabetes.<sup>5</sup> Prediabetes is usually asymptomatic. With lifestyle modifications, however, prediabetes may not lead to T2D.<sup>5</sup>

**T2D is frequently not diagnosed until complications appear, and approximately one-fourth of all people with diabetes in the United States may be undiagnosed.<sup>6</sup>**

**Type 1 diabetes (T1D)** is usually diagnosed in children and young adults and was originally known as juvenile diabetes. In T1D, the pancreas cannot make insulin; therefore, blood glucose cannot enter the cells to be used for energy. Only approximately 5% of people with diabetes have T1D.<sup>7</sup>

**Type 2 diabetes (T2D)** is by far the most common form of the disease.<sup>5</sup> T2D is characterized by an inability of the body to respond to insulin properly (insulin resistance). Over time this can lead to insufficient production of insulin.<sup>5</sup>

**A diagnosis of T2D is complicated by the fact that symptoms can be so mild that patients don't realize they may have the disease. Symptoms of T2D may include<sup>8</sup>:**

- Feeling very thirsty
- Feeling very hungry—even while you are eating
- Extreme fatigue
- Blurry vision
- Cuts and bruises that heal slowly
- Tingling, pain, or numbness in the hands or feet

Several risk factors for T2D have been identified. They include growing older, obesity, low physical activity, smoking, diet, race, family history, elevated blood pressure, and low HDL-C. Certain medications can also cause diabetes.<sup>9</sup>

## DIABETES OVERVIEW

## Tests used to diagnose and monitor diabetes

There are several ways to diagnose and monitor diabetes. Some or all of them may be familiar to you, but this list can help you explain them to your patients with more clarity.<sup>10</sup>

- **A1C:** Measures average blood glucose for the past 2 to 3 months. Fasting or special liquids are not required. Diabetes is diagnosed at an A1C level  $\geq 6.5\%$
- **Fasting plasma glucose (FPG):** This test also measures blood glucose levels. As its name implies, fasting is required for this test — at least 8 hours beforehand. Diabetes is diagnosed at fasting blood glucose of  $>126$  mg/dL
- **Postprandial glucose (PPG):** Patients can self-administer this test, which measures the spikes in glucose that occur 1 to 2 hours after the beginning of a meal<sup>11</sup>
- **Oral glucose tolerance test (OGTT):** This is a 2-hour test that checks a patient's blood glucose level both before and 2 hours after drinking a liquid containing glucose. It determines how a patient's body processes glucose. Diabetes is diagnosed at 2-hour blood glucose  $>200$  mg/dL
- **Random (or casual) plasma glucose test:** This test is a blood check that can be given at any time of day when diabetes symptoms are severe. Diabetes is diagnosed at blood glucose  $>200$  mg/dL

Please refer to other pieces in this toolkit for information on lifestyle modification, diabetes comorbidities, medication adherence, patient assistance, and more.

**References:** **1.** Brown WV. Risk factors for vascular disease in patients with diabetes. *Diabetes Obes Metab.* 2000;2(suppl 2):S11-18. **2.** American Diabetes Association. Statistics about diabetes. <http://www.diabetes.org/diabetes-basics/statistics/?referrer=https://www.google.com>. Accessed January 17, 2017. **3.** Wong ND, Patao C, Wong K, Malik S, Franklin SS, Iloeje U. Trends in control of cardiovascular risk factors among US adults with type 2 diabetes from 1999 to 2010: comparison by prevalent cardiovascular disease status. *Diab Vasc Dis Res.* 2013;10:505-513. **4.** American Diabetes Association. Insulin basics. <http://www.diabetes.org/living-with-diabetes/treatment-and-care/medication/insulin/insulin-basics.html>. Accessed November 1, 2016. **5.** National Diabetes Information Clearinghouse. Causes of diabetes. <https://www.niddk.nih.gov/health-information/diabetes/causes>. Accessed November 1, 2016. **6.** American Diabetes Association. Standards of medical care in diabetes—2016. *Diabetes Care.* 2016;39(suppl 1):S13-S22. **7.** American Diabetes Association. Type 1 diabetes. <http://www.diabetes.org/diabetes-basics/type-1/>. Accessed November 1, 2016. **8.** American Diabetes Association. Symptoms. <http://www.diabetes.org/diabetes-basics/symptoms/?loc=db-slabnav>. Accessed November 1, 2016. **9.** Valeriya L, Laakso M. Genetic screening for the risk of type 2 diabetes: Worthless or valuable? *Diabetes Care.* 2013;36(suppl 2):S120-S126. **10.** American Diabetes Association. Diagnosing diabetes and learning about prediabetes. <http://www.diabetes.org/diabetes-basics/diagnosis/>. Accessed November 1, 2016. **11.** American Diabetes Association. Common Diabetes Terms L-R. <http://www.diabetes.org/diabetes-basics/common-terms/common-terms-l-r.html>. Accessed November 1, 2016.



## DIABETES COMORBIDITIES: OBESITY, HYPERTENSION, AND HIGH LDL CHOLESTEROL

To treat type 2 diabetes (T2D), American Diabetes Association (ADA) guidelines are moving from a rigid, algorithmic approach to a multidimensional, patient-centered approach that recognizes different needs and goals among individual patients.<sup>1</sup> This new approach is due in part to the different comorbidities that individual patients may present.

The most common comorbidities found in patients with diabetes are obesity, hypertension, and dyslipidemia.<sup>2</sup>

Let's review these 3 comorbidities:

### Obesity

Over 85% of people with T2D are overweight or obese.<sup>3</sup> Obesity has become an epidemic over the past few decades. One-third of all Americans are obese and another one-third are considered

overweight.<sup>4</sup> Further, in this world of processed food, big meal portions, and fewer opportunities to exercise, it's become increasingly more difficult for people, including those with diabetes, to achieve normal weight.<sup>4</sup>

The ADA recommends that diet, physical activity, and behavioral therapy designed to achieve >5% weight loss should be prescribed for overweight and obese patients with type 2 diabetes ready to achieve weight loss.

Even a modest amount of weight loss may provide clinical benefits (improved blood sugar levels, lower blood pressure, and lower LDL cholesterol) to patients with T2D, especially those recently diagnosed. You can help your T2D patients achieve weight loss with counseling on nutrition, physical activity, behavior modification, and ongoing support.<sup>2</sup>

### What is the difference between normal weight, being overweight, and being obese?

Measuring body fat is usually done utilizing the body mass index (BMI).<sup>4</sup> Normal weight correlates with a BMI between 18.5 and 24.9. Patients are considered overweight if their BMI is 25 to 29.9, while patients with a BMI of 30 or above are considered obese.<sup>4</sup>

Your patients can calculate their BMIs by using the Adult BMI Calculator from the Centers for Disease Control and Prevention at [http://www.cdc.gov/healthyweight/assessing/bmi/adult\\_bmi/english\\_bmi\\_calculator/bmi\\_calculator.html](http://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/english_bmi_calculator/bmi_calculator.html).<sup>5</sup>

**DIABETES COMORBIDITIES:  
OBESITY, HYPERTENSION, AND HIGH LDL CHOLESTEROL**

## Hypertension

Many patients with diabetes do not have their blood pressure under control. In adults with diabetes who are aged 18 years or older, 71% had blood pressure  $\geq 140/90$  mm Hg or used prescription medications for hypertension between the years 2009 and 2012.<sup>6</sup>

**The American Association of Clinical Endocrinologists (AACE) recommend that blood pressure control be individualized, but that a target of  $<130/80$  mm Hg is appropriate for most patients.**

AACE recommends medication selection should be individualized based on patient factors. An angiotensin-converting enzyme inhibitor (ACEI) or an angiotensin receptor blocker (ARB) are preferred for patients with T2D in addition to lifestyle management. For patients with blood pressure  $>150/100$  mm Hg, AACE recommends 2 agents be given initially to achieve the blood pressure target.<sup>7</sup>

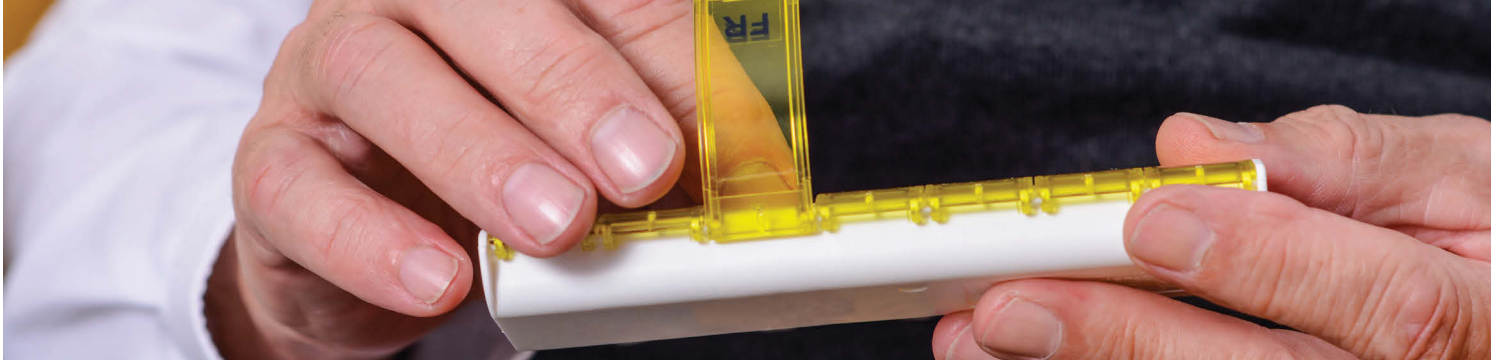
## High LDL cholesterol

In patients with diabetes aged 18 years or older, 65% had high LDL cholesterol ( $\geq 100$  mg/dL) or used cholesterol-lowering medications.<sup>6</sup>

Help your patients improve their cholesterol by reducing their intake of saturated fats, trans fats, and increase omega-3 fatty acids (found in fatty fish, such as salmon), soluble fiber (found in fruits and vegetables such as apples and peas), plant stanols/sterols (found in legumes, nuts, seeds, and whole grains), combined with weight loss (if needed) and increased physical activity, can help improve their lipid profile.<sup>8</sup>

In most adult patients with diabetes, a fasting lipid profile should be done at least annually.<sup>9</sup>





## ADHERENCE TO DIABETES MEDICATION: WHY IT'S IMPORTANT

Managing diabetes successfully can be challenging. Patients with good diabetes self-care behaviors usually attain glycemic control. However, some diabetes regimens can be complex, and many patients do not achieve glycemic control. As a result, patients continue to suffer diabetes-related health problems.

Care managers, among other health care providers, recognize that if patients with diabetes adhered to treatment recommendations, they could manage long-term diabetes-related complications. The fact that so many patients do not adhere to treatment recommendations can be very frustrating.<sup>1</sup>

### What affects adherence?

#### **There are many reasons for nonadherence to diabetes regimens<sup>2</sup>:**

- Fear of treatment side effects, such as hypoglycemia (too low blood sugar)
- Needle anxiety (injectable therapies)
- Inconvenience or complexity of a prescribed treatment
- Cost of treatment or formulary issues
- Poor patient knowledge about the importance of glycemic control

### Importance of adherence to diabetes medications

Although patients may have their reasons for nonadherence, it is important for them to understand why adhering to their treatment recommendations is essential.<sup>3</sup>

Compared with diabetic patients who are adherent, nonadherent diabetic patients are far more likely to require hospitalization and more likely to incur significantly higher health care costs.<sup>3</sup>

Data show that for every 25% increase in medication adherence, a patient's glycated hemoglobin (A1C) is reduced by 0.34%. However, only a little more than half of patients achieve an A1C target below 7.0%.<sup>3</sup>

Adherence to treatment can lead to improved glycemic control.<sup>3</sup>

**ADHERENCE TO DIABETES MEDICATION: WHY IT'S IMPORTANT**

## Patients must understand the importance of adherence

To instill the significance of adherence to patients, it is important for care managers (and other health care providers) to understand some of the factors that can play a role in nonadherence.<sup>1</sup>

Demographic factors (for example, economic status, education level), psychological factors (depression, anxiety, etc), and social factors (support systems) may all affect a patient's ability to adhere to treatment.<sup>1</sup>

Regardless of how care managers intervene with patients to achieve A1C goals, it is widely noted that when adherence to treatment regimens increases, A1C decreases.<sup>2</sup>

This is the ultimate goal, because effective and consistent treatment is important to help patients with diabetes manage their disease.<sup>3</sup>

## Reporting adverse effects and clearing the hurdles of cost with patients

When patients experience any adverse effect from their diabetes medication, they should contact their doctor immediately.

If patients can't afford their medications, contact the manufacturer's representatives or account managers about available financial patient assistance programs, such as co-pay cards, that are designed to offer help paying for the cost of treatment.

**References:** **1.** Delamater AM. Improving patient adherence. *Clin Diabetes*. 2006;24(2):71-77. **2.** Nau DP. Recommendations for improving adherence to type 2 diabetes mellitus therapy—focus on optimizing oral and non-insulin therapies. *Am J Manag Care*. 2012;18:S49-S54. **3.** Wild H. The economic rationale for adherence in the treatment of type 2 diabetes mellitus. *Am J Manag Care*. 2012;18:S43-S48.