

Overview

Have you or a family member recently been diagnosed with diabetes? You probably have many questions about how to manage diabetes and maintain flexibility in your lifestyle. You may have learned about diabetes years ago. Medical information and technology are continually evolving, however, so this course presents recent facts about diabetes self-management.

Familiarizing yourself with this material will enable you to identify the factors necessary to successfully manage diabetes.

This course is based on current recommendations, as of publication of this course, by the American Diabetes Association, the American Dietetic Association, and the American Association of Diabetes Educators. The content is not meant to be a prescription to meet individual needs. It offers information to supplement that provided by doctors and other health care professionals. For optimal management of diabetes, maintain close contact with all the health care providers involved. Discuss any specific questions about diabetes with these professionals.

This course contains ten lessons. The first lesson focuses on adjusting to visual impairment and diabetes. Lesson 2 reviews facts about the major types of diabetes and pre-diabetes. Lesson 3 describes the structure of the eye and various visual complications of diabetes. Lesson 4 explains how to control blood sugar levels. Lesson 5 indicates ways to monitor diabetes. Lessons 6 and 7 identify the importance of nutrition and exercise in diabetes self-management. Lesson 8 presents adaptive methods for administering oral medications and measuring insulin. Lesson 9 offers ways to avoid complications. Finally, Lesson 10 discusses specific adaptations and work-related concerns for people who are visually impaired and have diabetes.

For your convenience, "Terms to Know" sections at the beginning of Lessons 2 through 10 introduce words that may be unfamiliar. The review questions that follow each section of a lesson are for your personal development only. Do not send your answers to your Hadley instructor. Rather, check your comprehension by comparing your answers with those provided. You can always contact your instructor to clarify concepts or discuss your answers.

You are required to submit the assignment that concludes each lesson. The assignments have been personalized to meet your need for taking this course. They ask you to apply the information in the lesson to your situation or that of your family member. To respect your relative's privacy, do **not** identify him or her by full name in any assignment.

If you are ready to discover more about diabetes, proceed to Lesson 1: Adjusting to Change.

Lesson 1: Adjusting to Change

If you or a family member has diabetes mellitus complicated by visual impairment, major life changes may be occurring. This lesson focuses on adjusting to these changes. It discusses the impact of visual impairment on everyday life and outlines the typical adjusting process. It identifies factors that influence how well people adjust. Finally, it suggests ways to maintain self-esteem and positive relationships with others. Familiarizing yourself with ways to effectively adjust to change will help you identify the factors necessary to successfully manage diabetes.

The Hadley School for the Blind would like to gratefully acknowledge the work of Dean W. Tuttle, Ph.D., and Naomi R. Tuttle, BSN, RN. The content in this lesson is largely based on information from their book *Self-Esteem and Adjusting with Blindness* (2004).

Objectives

After completing this lesson, you will be able to

- a. discuss the impact of visual impairment on everyday life

- b. outline the process of adjusting to major life changes
- c. identify factors that influence the process of adjusting
- d. explain how to maintain self-esteem as well as positive relationships with others

The Impact of Visual Impairment

Among people with visual impairments, the degree and type of vision loss varies from person to person.

Regardless of the degree or type, visual impairment has a tremendous impact on everyday life. Initially you or your family member may feel too confused or self-conscious to deal with the changes. This temporary reaction is normal, however, and you or your family member can gain skills to fully participate in life again.

Visual Changes and Daily Life

Diabetes can affect vision in diverse ways. For example, vision may fluctuate, or change, being better at a certain time of day. Some people have dim or cloudy vision, partial loss of side vision, or impaired central vision. Others experience blotches scattered throughout the field of vision, and others have no vision at all. In addition, some may feel increased light

sensitivity or be unable to recognize forms, details, and color. Lesson 3 will discuss the various types of visual impairment in depth.

Just as the type and degree of impairment vary, the impact of visual loss varies from person to person. Being able to recognize and describe abilities and limitations is a valuable part of the adjusting process.

Visual impairment may affect a variety of independent living skills. For example, the ability to travel independently may be affected, especially in unfamiliar areas. Finding the back of a chair or locating something that drops to the floor may be a challenge. Some people can still read small print, but large print may become necessary for others. Lighting that is too bright or too dim may be problematic. Lesson 10 will give examples of specific adaptations for visual impairment that you or your family member can use.

Diabetes self-management may present a challenge when visual impairment accompanies the disease. For example, some people may find it difficult to use equipment because they are no longer able to see any distinguishing marks. Lessons 5 and 8 will discuss

adaptive devices for specific diabetes self-management tasks.

Early Reactions

After having been diagnosed with diabetes, you or your family member may have become absorbed in the specific tasks necessary to self-manage diabetes. Similarly, after working through possible feelings of shock, denial, and anger, you or your family member may focus on adjusting to visual impairment and learning new skills. Diabetes self-management may have become more difficult due to the visual impairment. In addition, you or your family member may feel self-conscious using tools like a long cane or braille, or adopting new cooking techniques. These reactions are not unique, but are common to people going through difficult circumstances. The next section will discuss typical phases in the process of adjusting to major life changes. Moreover, upcoming lessons will delve into how you or your family member can indeed manage diabetes when visually impaired. Lesson 10 will discuss specific adaptations for visual impairment.

Visual impairment varies among individuals, and its impact on life varies as well. You or your family

member may initially become overwhelmed by this major change. By making adaptations, however, it is possible to live fully again.

Section Review

Indicate whether the following statements are true or false. If the statement is false, reword it to make it true. A response follows each item.

1. Visual impairment affects everybody the same way.

False. Just as the type and degree of loss vary, the impact of visual impairment varies from person to person.

2. When losing vision, people may have feelings of shock, denial, and anger.

True

If you are satisfied with your answers, proceed to the next section. If you found the questions difficult, however, review this material before moving on.

The Process of Adjusting

People who experience major life changes usually go through certain phases of adjusting. This also applies to

being diagnosed with diabetes and visual impairment. After the initial trauma, you or your family member may experience shock and denial, mourning, and finally acceptance.

The Initial Trauma

A person usually experiences different emotions when confronted with major life changes such as a diagnosis of diabetes or visual impairment. You or your family member may have known that visual impairment due to retinopathy was a possibility. However, the actual loss still feels very painful. The trauma may not be the actual loss of vision, but the fear of further decline of vision. Great sadness may occur whenever more complications of diabetes appear or vision diminishes further. Alternatively, unhappiness may result from the negative attitudes that others may have about visual impairment.

When people first lose vision, they often feel like withdrawing socially or emotionally. Making the effort to plan a trip outside the home or to take the initiative in a conversation seems too difficult. Sometimes it may feel easier to retreat than to be embarrassed by making a mistake in public.

In addition, some people become inactive, fearing the risk of injury from physical activity, as remaining vision is not always dependable. Unaware of their options, they may become passive and dependent on people around them. They may even allow others to make decisions for them. Moreover, the roles of family members seem to be changing. For example, a teenage son or daughter may take on more responsibilities to assist a parent who is visually impaired.

When these reactions continue indefinitely, increased loneliness and isolation set in. Friends and family, however, may be quite willing to learn how to assist. It is important to realize that this adjusting period is normal.

Shock and Denial

Following the initial trauma, many people react with shock and denial. Some have described this as a feeling of numbness, unreality, and immobility. Denial or disbelief proves to be healthy and normal.

Shock and denial become abnormal reactions, however, if they persist and interfere with the rehabilitation process. For example, a person in persistent denial may refuse to consider low vision aids or a long white cane.

These reactions are also abnormal if they make people ignore their health or engage in life-threatening activities. For example, someone still in denial of diabetes may not completely follow a diabetes self-management plan. Despite recommendations of health care providers, he or she may take oral medication or insulin, but not follow a meal plan. It is also dangerous when people believe they have more vision than they actually have. Some people who are in denial of visual impairment may refuse to use a long white cane for safety or may continue to drive, endangering both themselves and others.

Mourning

When the numbness of shock starts to wear off, people begin to mourn their losses. For example, you may no longer be able to eat whatever you want. Your vision may not be good enough for routine tasks. People feel varying degrees of loss depending upon their goals, responsibilities, activities, and relationships. You may feel the loss of personal independence, sensory stimulation, self-esteem, or something else. These losses may lead to feeling inadequate socially, as though not belonging anywhere, and having low self-

esteem. Some people may also feel self-pity, apathy, bitterness, anger, and frustration.

Depression and pessimism are also common during this phase of adjusting. Diabetes that is out of control may cause or contribute to some of the symptoms of depression. These symptoms may include feelings of worthlessness, sleep disturbances, diminished activity, and decreased appetite. People may direct anger toward medical professionals, family, or friends. A desire to withdraw and become isolated is common before new skills are mastered.

Acceptance

At some point, most people outgrow negativism and self-pity. You or your family member may decide to contact rehabilitation professionals who teach the use of adaptive skills and devices. These adaptations can enable you or your family member to live as independently as possible. This independence then provides a feeling of accomplishment. The various rehabilitation professionals are introduced in Lessons 2 and 10.

In addition, you or your family member can start to understand that diminished vision is only one of many

attributes. A person with a visual impairment due to diabetes can also be a spouse or parent, right- or left-handed, and short or tall. At this time, reaffirm and redefine short-term and long-term goals. Evaluate personal capabilities and develop goals that are attainable despite visual impairment. Reexamine the meaning of life, reassessing personal assets, priorities, and values.

This entire adjusting process is fluid and continuous. Circumstances, situations, and relationships in life are constantly changing. Therefore, people continually adjust to life's demands. People may cycle back through the adjusting process when they experience further loss of vision or meet former friends who seem to be avoiding them. You or your family member can build on past experiences, however, and working through the process on subsequent occasions becomes easier.

You or your family member can adjust to diabetes and visual impairment. After the initial trauma, the phases of shock, denial, and mourning can lead to a healthy acceptance.

Section Review

Read each of the following four accounts. Each account describes a person experiencing a different phase of adjusting. Then respond to the multiple-choice question that follows it.

1. I feel numb, as though everything is unreal. Why do people keep telling me that my vision is getting worse? I know that can't be true! My wife thinks I should stop driving, but that's ridiculous. It's those other careless drivers who are the problem.

Which phase of adjusting is this person probably experiencing?

- a. initial trauma
- b. shock and denial
- c. mourning
- d. acceptance

The correct answer is (b). This person is probably experiencing shock and denial.

2. I don't feel numb anymore—I feel horrible! Life feels terrible! I can't go out for pizza with my friends, because I have to watch what I eat. I can't even read the small print on a menu anymore. I had all these dreams about going to school to become

a veterinarian, but I guess I have to give up all my dreams. I don't know what I'm going to do with my life. My friends are lucky: they all have it easy. My life just feels hopeless. I don't think I'll ever amount to anything. I mean, what college would accept me now? I can't even sleep at night anymore.

Which phase of adjusting is this person probably experiencing?

- a. initial trauma
- b. shock and denial
- c. mourning
- d. acceptance

The correct answer is (c). This person is probably experiencing the phase of mourning.

3. I just learned from my doctor that my vision would not improve. He was unable to say if my vision would get worse. One of my immediate questions was, "Would I be able to continue working?"

Which phase of adjusting is this person probably experiencing?

- a. initial trauma

- b. shock and denial
- c. mourning
- d. acceptance

The correct answer is (a). This person is probably experiencing the phase of initial trauma.

4. I have an appointment with my rehabilitation counselor tomorrow—he has a visual impairment himself. I think I’m going to ask him about learning braille. Maybe I can go back to school; if I get a degree, it will be easier for me to get a job.

Which phase of adjusting is this person probably experiencing?

- a. initial trauma
- b. shock and denial
- c. mourning
- d. acceptance

The correct answer is (d). This person is probably experiencing the phase of acceptance.

If you are satisfied with your answers, proceed to the next section. If you found the questions difficult, however, review this material before moving on.

Factors That Influence the Adjusting Process

Many factors affect the process of adjusting to diabetes and visual impairment. Overall health, the type and degree of visual impairment, age, and personality may all influence the adjusting process. In addition, the presence of a support system and the use of stress-reduction techniques are positive factors in the adjusting process.

Health

The presence of additional health complications may be the most important factor. For example, kidney failure may make a kidney transplant necessary around the same time that the visual loss takes place. The combination of an amputation and visual impairment may compound feelings of depression, inadequacy, fear, and guilt.

Vision

The stability of vision is another factor that may influence feelings about personal capability and independence. For example, you or your family member may be able to read a book in the morning under certain lighting conditions. Later on in the day, however, the print becomes a blur. Anxiety and fear of

the unknown often accompany uncertainty about vision. Or fluctuating vision may cause the false hope that no further loss of vision will occur.

Any degree of visual impairment, from a mild loss to total blindness, has a significant impact on the individual. Many people think that those at the ends of the continuum (i.e., with either a mild impairment or no vision at all) have an easier time adjusting. For example, those with a mild impairment may have fewer life changes to deal with. People with no vision, on the other hand, may accept their losses more quickly and thus find it easier to begin rehabilitation. However, those who have moderate visual impairment may still be trying, without success, to function as fully sighted. They may reject adaptive aids such as the long white cane or braille because these tools are associated with visual impairment.

Age

A person's age may influence his or her response to diabetes and visual impairment. A teenager may be concerned about driving, dating, and career preparation. A working parent may worry about meeting the financial needs of his or her family and

maintaining competence. An elderly person may already be dealing with deteriorating health and the death of friends, so dealing with severe visual impairment can be especially scary. Specific concerns may differ, although a person of any age may feel vulnerable and fear change.

Personality

Coping skills and personality traits influence responses to diabetes or visual impairment. A person who is generally positive and emotionally stable usually responds differently than someone with a more negative outlook. Someone who has dealt successfully with obstacles throughout life may view visual impairment as a new challenge to overcome. Moreover, people who fear or look down on those with physical limitations have biases to overcome. Those who have readily accepted people with disabilities usually adjust to their own limitations more easily.

You or your family member can learn strategies to develop a positive attitude, which will help in dealing with visual impairment. Optimism, hope, and confidence contribute to a more positive outcome. A desire to reach out to others and establish deep

personal relationships provides strength at this time. On the other hand, it is not unusual to react in a more negative way than usual. This, too, is normal, and it will pass.

Support System

A personal support system is another critical influencing factor. This might include family, friends, and members of a peer support group. Such groups offer an opportunity to share thoughts and feelings with people who are going through similar experiences.

Diabetes educators and rehabilitation counselors may be able to recommend an appropriate peer support group. If you live in the United States, contact the local chapter of the American Diabetes Association for a referral. Ask your instructor for information about this organization.

Stress-Reduction Techniques

The use of these techniques can be a positive factor in the adjusting process. Different people prefer different ways to reduce stress. You can try various methods to discover which ones work best for you. Some techniques include doing physical activity, expressing

your feelings, finding positive distractions, and discovering meaning in your life.

Physical activity can have a positive effect on your mood. Indeed, it can help relax muscles that are tense. Many people find relaxation exercises, such as yoga and deep breathing, especially helpful. Before starting any new activity, however, talk to your doctor. Lesson 7 will discuss the role of physical activity in diabetes self-management.

Expressing your thoughts and feelings can help you feel better about your problems, and thereby reduce stress. Consider keeping a journal or diary for yourself alone. Talk to a good friend, or write letters. In addition to using large print and braille, many people communicate by audiotope or email. Sometimes expressing feelings about a problem can help you discover new ways to deal with the situation.

Distraction is another way to lessen stress. Find positive activities that help you forget about your problems for a while. Going out with friends, listening to music, renting a movie, or reading a good book are some options. Consider joining a new club, learning a new skill, or starting a new activity.

How you or your family member looks at life can also affect stress levels. Feeling that your life has meaning may give you internal strength to deal with the challenges of visual impairment and diabetes. Many people find meditation, prayer, or other spiritual activities to be helpful.

A variety of factors influence the adjusting process to diabetes and visual impairment. These factors include health, vision, age, personality, the presence of a personal support system, and the use of stress-reduction techniques. To successfully deal with these losses, adopt positive strategies and investigate support groups in your area.

Section Review

Indicate whether the following statements are true or false. If the statement is false, reword it to make it true. A response follows each item.

1. Other health complications have little effect on the process of adjusting to diabetes.

False. Other health complications may increase feelings of depression, inadequacy, fear, and guilt.

2. Any degree of visual impairment can have a significant impact on the adjusting process.

True

3. Age is a factor in adjusting to visual impairment, as people of different ages may have different concerns.

True

4. People who have positive attitudes usually respond in the same way to visual impairment as people with more negative outlooks.

False. A person who is generally positive will usually respond differently than someone with a more negative outlook. Optimism, hope, and confidence contribute to a more positive outcome.

5. A personal support system might include family, friends, and members of a peer support group.

True

6. Physical activity can help reduce stress.

True

If you are satisfied with your answers, proceed to the next section. If you found the questions difficult, however, review this material before moving on.

Valuing Self and Others

If you are adjusting to diabetes and visual impairment, you may experience a range of feelings. However, by accepting yourself and all your attributes, including visual impairment, you are more likely to have a rich, full, rewarding life. In addition, you can understand and value the needs of others.

Self-Esteem

Recognizing one's value as a person is essential in order to successfully adjust to diabetes and visual impairment. People may develop excellent adaptive skills and be gainfully employed, yet have poor self-esteem. People with high self-esteem recognize their own worth. They are comfortable with who they are. At the same time, they are sensitive to the needs and concerns of others and their personal worth.

Accepting visual impairment and its practical implications is beneficial, both intellectually and emotionally. You or your family member may not like

being visually impaired. Acceptance simply means admitting the reality of the loss in order to begin the process of recovery.

Acceptance of the visual impairment may lead to learning to use new techniques and equipment. These abilities tend to improve self-esteem by providing a sense of accomplishment. As a person masters new skills, each task becomes routine and requires less effort and energy. By practicing new ways of doing things, you or your family member may become increasingly more comfortable caring for individual needs and dealing with visual impairment. Using newly acquired knowledge and adaptive aids, you or your family member can make wise decisions regarding personal care. Learn when to request assistance appropriately and how to refuse unnecessary help. In addition, pursue sources of current information, services, and equipment. Keeping up-to-date about new developments in diabetes care is a critical part of diabetes self-management.

Beyond the acceptance of visual impairment is the acceptance of oneself as a person who happens to be visually impaired. Avoiding extremes (i.e., exaggerating

strengths or limitations) is key. For example, you or your family member need not dwell continually on diabetes and visual impairment. Instead, welcome necessary services. This reflects a healthy adjustment to life as a person with diabetes and visual impairment.

Valuing Others

Relatives and friends may also have reactions to your or your family member's visual impairment. They may experience similar phases of initial trauma, shock and denial, mourning, and acceptance. They, too, may feel confusion, fear, guilt, and anger. They have not yet found a balance between overprotecting you or your family member and withdrawing all assistance.

To maintain positive relationships with family members and friends, talk to them about diabetes and visual impairment. Educate them about your needs, and listen to their concerns, too. Become more aware of the responsibilities they already have. Discuss any additional responsibilities they may be shouldering. Create a support system that includes family members, friends, volunteers, or paid aides.

To illustrate how a person with diabetes and visual impairment can maintain positive relationships with others, consider the following scenario:

Steven is forty years old. He is a husband, a father, a son, and a brother, and he has many friends. He has type 1 diabetes, and he has recently experienced vision loss. He now feels as though everyone is turning against him. He can't understand why this is happening. What can Steven do to have better relationships with the people in his life?

Steven decides to enter a rehabilitation program and learn new skills. There he develops confidence in his remaining senses. He also strengthens his own emotional resources. As he begins to feel better about himself, he develops more insight into how his diabetes and visual impairment affect others.

Steven then becomes sensitive to the effect of his visual impairment on his family and friends. He marvels that their responses to his loss of vision are similar to his own adjusting process. Moreover, he notices that when he

experiences negative attitudes and lack of acceptance from others, he feels personally rejected. He realizes that in the past others felt the same way when he didn't accept them as they were.

Steven sees that some of his friends and family members have confused feelings about his special needs. He talks to his family about the additional responsibilities they are shouldering to assist him. For example, they drive him to appointments, and the family as a whole faces extra expenses. Steven becomes more aware of the responsibilities that family members have. He accepts that they cannot always be available to assist him. He begins to develop a support system, asking for help from friends, volunteers, or paid aides.

Steven recognizes that the members of his support system also need help finding a balance. Some friends and family members expect life to go on with no changes. At the other extreme, others fear they will have to provide him with total care forever. As Steven

gains confidence, he becomes more aware of the needs of others. This helps him educate them about his own needs.

Steven no longer feels that the people in his life have abandoned him. Instead, he finds that by being honest with the important people in his life, he is developing even deeper relationships with them.

Self-esteem is critical to the process of adjusting to the major change of living with diabetes and visual impairment. Accepting visual impairment and recognizing one's own worth are two steps on the road to positive self-esteem. With increased confidence, you or your family member may become more aware of the needs of others.

Section Review

Indicate whether the following statements are true or false. If the statement is false, reword it to make it true. A response follows each item.

1. Accepting visual impairment means that you like being visually impaired.

False. You or your family member may not like being visually impaired. Acceptance simply means admitting the reality of the loss so that a person can begin the process of recovery.

2. Talking about diabetes and visual impairment can be helpful in maintaining positive relationships with family members and friends.

True

If you found the questions difficult, review the previous section before moving on. If you are satisfied with your answers, however, proceed to the summary and assignment.

Summary

This lesson focused on adjusting to living with diabetes and visual impairment. It discussed the impact of visual impairment on everyday life. It outlined the process of adjusting to major life changes and the factors that influence how one adjusts. Finally, it offered ways to promote self-esteem and healthy relationships with others.

Assignment 1

For general instructions on completing assignments, refer to the Welcome Letter. Then start this assignment by giving your full name, address, and phone number. Also list the name of this course, Assignment 1, your instructor's name, and the date. Be sure to include the question number along with each answer. This assignment is worth 100 points.

Multiple Choice

Choose the correct response for each of the following questions: (4 points each, 40 points total)

1. Which of the following is a valuable part of the adjusting process?
 - a. being able to recognize and describe abilities and limitations
 - b. ignoring limitations
 - c. realizing that you now have few abilities

2. What usually happens during the phase of initial trauma?
 - a. The person feels great sadness and wants to withdraw socially or emotionally.
 - b. The person becomes more active than before.

- c. The person feels little sadness.
3. Which of the following is a risk during the shock and denial phase?
- a. The person may focus too much on getting help.
 - b. The person may begin using adaptations before they're really needed.
 - c. The person may not completely follow a diabetes self-management plan.
4. During which phase would a person most likely reexamine the meaning of life, reassessing personal assets, priorities, and values?
- a. mourning
 - b. acceptance
 - c. initial trauma
5. Which of the following has a significant impact on a person's adjusting to diabetes and visual impairment?
- a. only total blindness
 - b. only low vision
 - c. any degree of visual impairment

6. Which of the following strategies can be helpful for dealing with diabetes and visual impairment?
 - a. optimism
 - b. being negative, as optimistic thinking may bring false hope
 - c. avoiding others until the adjusting process is over

7. Who can be a part of a personal support system?
 - a. only immediate family members
 - b. only members of a formal support group
 - c. family members, friends, and members of a formal support group

8. Which of the following is a way to reduce stress?
- a. avoiding physical activity
 - b. constantly focusing on your problems so that you can solve them
 - c. expressing your thoughts and feelings in a diary or to a good friend
9. Which of the following is true about people with high self-esteem who have diabetes and visual impairment?
- a. They recognize their own worth and are sensitive to the needs of others.
 - b. They believe they have greater worth than other people.
 - c. They dwell continually on diabetes and visual impairment.

10. What is a good way to maintain positive relationships with friends and family members when you are visually impaired and have diabetes?
- a. Avoid talking to them about diabetes and visual impairment.
 - b. Educate them about your needs, and listen to their concerns, too.
 - c. Ignore their responsibilities, because your needs are more important.

Short Answer

Respond to the following questions with brief, complete answers. If you feel comfortable doing so, include information about yourself or your family member. (60 points total)

11. Describe one of the phases of adjusting to major life changes. How can a person with diabetes and visual impairment deal with the challenges of this phase? (16 points)

12. List six factors that influence how a person adjusts to visual impairment. Then describe how one of these factors can affect the adjusting process. (20 points)
13. Describe what you think an ideal support system would be. (9 points)
14. Name three ways to maintain self-esteem despite visual impairment. (15 points)

Once you have completed this assignment, send it to your instructor. Then return to this course to begin Lesson 2: Diabetes Mellitus.