

CHAPTER 3

Knowing Yourself

Whenever you get behind the wheel of a vehicle, you must be certain that you are both physically and emotionally fit to drive. It is important to recognize and control physical and emotional factors that might impair the driving task.

LESSON ONE

Emotions Affect Your Driving Ability

LESSON TWO

How Vision Affects Your Ability to Drive

LESSON THREE

Temporary Physical Conditions That Affect Your Ability to Drive

LESSON FOUR

Long-Term Physical Factors That Affect Driving Ability

OBJECTIVES

1. Describe three effects your emotions can have on your driving.
2. Describe at least six ways to control the effects your emotions may have on your driving.

KEY TERM

peer pressure

Emotions Affect Your Driving Ability

Responsibility. Maturity. Self-control. No doubt you've heard these words spoken many times by parents, teachers, and other adults.

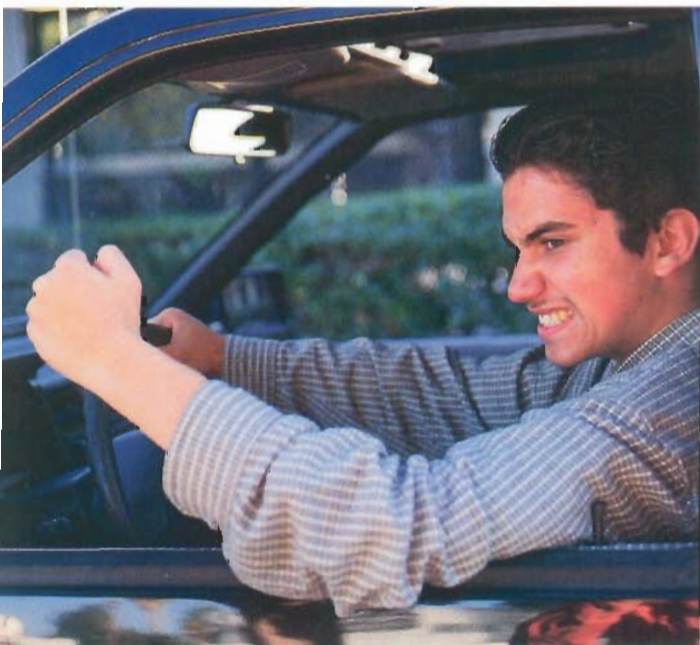
As a new driver, those **same words** will again take on important meaning for you. When you're driving, it's not just skill that matters. It's your ability to think clearly and make sound, responsible driving decisions.

How Do Emotions Affect Your Driving?

Everyone experiences strong feelings, both positive and negative: joy, sadness, anger, fear. Such feelings are part of what it means to be alive.

When you experience a strong negative emotion, you may feel the need to do something forceful. If you're driving, you may have an impulse to act out your emotion by driving aggressively—a very dangerous and irresponsible attitude to take. Aggressive driving incidents have increased so much that there is even a term—*road rage*—to describe the violence sometimes associated with these incidents.

◆ *Strong emotions can have an effect on your driving. They can interfere with your ability to manage risk.*



Inattention

Strong feelings may focus your attention on one thing. If you've just won a tough game, maybe you review the big play over in your mind. Maybe you're thinking about your boyfriend or girlfriend.

Emotions can interfere with your driving by taking your attention away from the road. You may be so preoccupied that you speed or take other risks, without even realizing what you are doing.

Lack of Concentration

Sometimes you can't seem to concentrate on anything. You may feel anxious about a date or excited about getting an A on a test. Let someone else drive or wait until you're better able to focus on the driving task.

Ability to Process Information

Safe driving is a full-time job for your mind as well as for your body. You have to see and hear the signs and signals of the roadway. You also have to use good judgment based on the information you gather.

If you are having a strong emotion, your ability to process roadway information may be diminished. This decreases your ability to manage risk.

How Can You Control Emotions?

Though sometimes it may not seem possible, you *can* learn to control your emotions when you have to. You can also take steps to avoid or minimize problems relating to your emotional state.

Maintain a Responsible Attitude

You exhibit a responsible attitude when you show respect for order and safety and take responsibility for your actions. You should assume a responsible attitude and put aside strong emotions while you drive. Be courteous even if you happen to feel angry. Concentrate on driving safely.

Avoid Triggering Aggressive Driving

Put your angry feelings aside, or you may act in ways that cause other drivers to act aggressively. You can avoid doing so by practicing common courtesy. Here are some examples.

- Keep a safe distance from the vehicles ahead.
- Apologize with an appropriate gesture when you make a mistake.
- Always signal when changing lanes.
- Keep your cool. Don't make obscene gestures or flash your headlights.

♦ *Don't let your emotions get the better of you. Instead, learn ways to control your emotions.*

Identify Troublesome Situations

Identify situations that may upset or annoy you, and deal with them in a responsible way. When a situation is likely to bother you—an unexpected traffic jam, for example—take a few deep breaths; say to yourself, “I won't let this get to me”; and focus your attention on driving.

You know, for example, that traffic is heavy at rush hour. If you must drive then, you have a choice to make. You can grit your teeth and snarl at the traffic. Or you can tell yourself, “I know traffic is going to be slow now, but this won't last forever. I'm not going to let this bother me.” Then you can drive safely and patiently.



SAFETY TIPS

Don't let conversation with passengers distract you while driving. If you have a serious or emotional matter to discuss with a companion, do so after you've parked the car.

Plan Ahead

Advance planning can reduce stress and avoid problems. Will your route take you near a stadium at the time that sports fans are crowding the roadways? You can leave home earlier. Will you be traveling on a highway that is partially closed for repair? Try to find an alternate route.

Always allow enough time to get where you are going—extra time if you know you'll be traveling in heavy traffic or bad weather.

Expect Mistakes from Others

Rather than let yourself get irritated by every instance of bad driving you encounter, accept the fact that everyone makes mistakes at one time or another. Drivers may be distracted, inexperienced, or even intoxicated. Never assume that other drivers will drive safely or obey all rules.

Don't Drive When Upset or Depressed

Anger or other strong emotions may be disturbing you. You may also have feelings of grief or intense anxiety that could last for several days. It may be dangerous to drive. Think twice and stay off the road until these feelings subside. It's better to wait until your feelings settle down and you're able to concentrate.

Don't Give In to Negative Peer Pressure

Peer pressure, or the influence of friends who are in your age group, can be very strong. After all, you want to be accepted. However, friends may sometimes encourage you to act in risky ways. For example, peer pressure can lead teens to believe risky driving is cool. Let your friends know that you think too much of yourself to give in to such pressure.

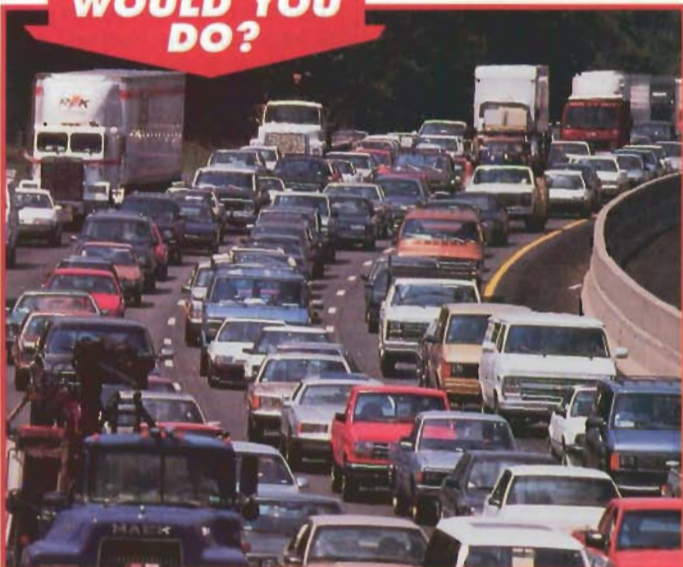
Train Yourself Always to Use Correct Procedures

Get into the habit of using safe driving procedures. Make such procedures automatic, no matter what your emotional state may be.

Lesson 1 Review

1. How can emotions affect your driving?
2. How can you control your emotions when you drive?

WHAT WOULD YOU DO?



You're already late. How will you deal with your emotions and with getting to your destination in this situation?

How Vision Affects Your Ability to Drive

Your sense of sight is the most important of the senses that affect your ability to drive. In fact, about 90 percent of the decisions you make while driving are based on information you gather with your eyes. If you are having trouble seeing, your ability to drive safely is in serious jeopardy.

Why Is Good Vision Critical to Driving Ability?

Being able to see well means more than simply having “20/20 vision.” It means being able to see straight ahead and to the sides and being able to perceive depth as well as color.

If your ability to see clearly is impaired, you will have difficulty adjusting your car’s speed and position to minimize risk. You will not be able to search the roadway far enough ahead to spot a threatening condition early. You will also have trouble identifying signs, signals, and roadway markings.

To check your ability to see clearly, you should be tested for **visual acuity** (clear vision) by a health care professional or by your local department of motor vehicles. The visual acuity test measures how well you can see and whether or not you need to wear glasses or contact lenses to improve your vision.

Field of Vision

When you are standing still and looking straight ahead, you can see what is directly ahead and **also what is** at an angle to your right and left. This is your field of vision.

Your vision is clearest in a narrow cone-shaped area directly in front of you, your **area of central vision**. Vision at angles to your right and left is called **peripheral vision**. This vision enables you to notice objects and movement to your sides. Your vision up and down, called your **vertical field of vision**, allows you to see traffic lights overhead and pavement

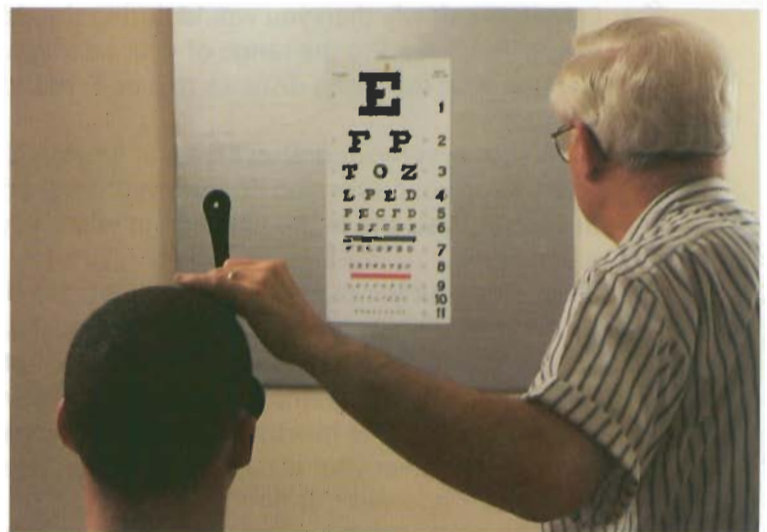
OBJECTIVES

1. Explain why good vision is critical to driving ability.
2. Explain how to compensate for such vision problems as poor depth perception, color blindness, and night blindness.

KEY TERMS

visual acuity
area of central vision
peripheral vision
vertical field of vision
depth perception
contrast sensitivity
color blindness
night blindness

◆ *Have your vision tested regularly. Good vision is crucial to risk management. Traveling at 30 mph, with 20/20 visual acuity, you can read a 6-inch-high street sign from a distance of about 180 to 225 feet, or 4 to 5 seconds away. With 20/40 vision, you would have to be within 90 to 135 feet, or 2 to 3 seconds away, to read the same sign. With 20/100 vision, you would have less than 1 second to read and respond to the sign.*



SAFETY TIPS

If you are driving with your high beams on, you can blind drivers coming toward you. Switch to low beams when oncoming traffic is within 500 feet.

markings, such as crosswalks or arrows in **turn lanes**. When you are in forward motion as you drive, your field of vision narrows. You need to move your eyes from **side to side and up and down** to detect any potentially dangerous conditions.

How Can You Compensate for Vision Problems?

If you have a problem with depth perception, distance judgement, contrast sensitivity, color blindness, or night blindness, you can compensate for the problem when you drive.

Poor Depth Perception

Depth perception gives a three-dimensional perspective to objects. It helps you judge the relative distance between two objects. Whenever you look at an object far away, you are using depth perception. You use distance judgment to estimate the distance between yourself and the object.

Depth perception and distance judgment work together. They are especially important when you drive because they help you control your following distance and adjust your position in traffic.

To compensate for poor depth perception, give yourself extra margins of space and time. For example, you can increase your following distance. You can also compare the relative speeds of the cars coming toward you.

TIPS

FOR NEW DRIVERS

Driving at Night

When you drive at night, you need to compensate for reduced visibility. Here are some steps to take.

- Drive more slowly than you would during the day. Adjust your speed to the range of your headlights. Increase your following distance to 3 or 4 seconds or more.
- Keep your eyes moving. Don't stare at brightly lit areas. Keep your attention on the street-level activities around you and in the direction in which you are heading.
- Make sure your windshield and headlights are clean.
- Use your headlights wisely. Use your high beams when possible, such as on long stretches of empty road. Switch to low beams for city driving and when following vehicles or meeting oncoming vehicles.
- Avoid driving near your usual bedtime. Your level of alertness is low at this time.

Contrast Sensitivity

Contrast sensitivity helps you see details in the driving environment. Any time you face the glare of headlights or drive when it is dark, you are using contrast sensitivity. If you have trouble seeing details because of glare or darkness, slow down and adjust your position in traffic.

Color Blindness

The most commonly used colors in traffic are red, green, and yellow. If you have normal color vision, you won't have

a problem recognizing these colors when you see them. Some people, however, have **color blindness**. These people are unable to tell the difference between red and green or between blue and yellow.

Color-blind people *can* drive safely. They can tell the meaning of signs and signals by their shape and position or by reading the words printed on them.

Night Blindness

Even if you have 20/20 vision, you do not see as well at night as you do during the day. At night your visual acuity, field of vision, depth perception, contrast sensitivity, and color vision are all reduced. For some people, seeing at night is even more difficult.

If seeing at night poses a particular problem for you, you may have a condition known as **night blindness**. Have your eyes checked, and avoid driving at night.

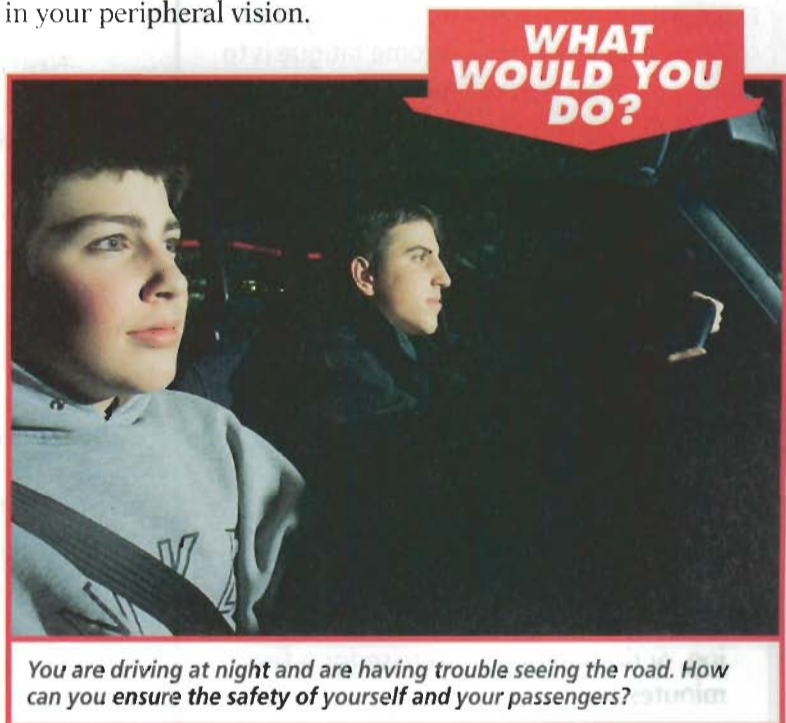
One of the biggest problems in night driving is glare caused by the sudden brightness of the headlights of oncoming vehicles. Whether you look directly at the approaching beams or not, the pupils of your eyes narrow to adjust to the brightness. Your eyes then take a moment to readjust to the darkness of night. During this time, you may be temporarily blinded.

Here are some ways to deal with the danger of glare.

- Do not look directly at the headlights of an oncoming car. Instead, look beyond them and direct your attention to the right edge of the roadway, keeping the approaching car in your peripheral vision.
- Reduce your speed if you are momentarily blinded by glare.
- Keep alert to possible glare situations that may arise, as on curved or hilly roadways. When you anticipate such a situation, turn your eyes slightly away from it, keeping it in your peripheral vision.

Lesson 2 Review

1. Why is good vision important to driving ability?
2. What can you do to compensate for poor depth perception? For night blindness?



WHAT WOULD YOU DO?

You are driving at night and are having trouble seeing the road. How can you ensure the safety of yourself and your passengers?

OBJECTIVES

1. Describe how fatigue affects driving ability and how to fight fatigue.
2. Explain the ways that short-term illnesses and injuries may affect driving.

KEY TERM

carbon monoxide

Temporary Physical Conditions That Affect Your Ability to Drive

At times, you will have to decide whether or not you **feel physically** well enough to drive—or whether it is safe to ride with **another driver**. Conditions such as fatigue, a cold, the flu, or an injury **may be temporary**, but these conditions can affect your ability to make good decisions while driving.

You've already read about two important factors affecting a driver's ability to operate a vehicle: emotional state and vision. Various other physical factors can limit or impair driving ability.

In **some instances**, you can compensate for a limiting physical condition. At other times, your wisest course of action is not to drive at all.

TIPS FOR NEW DRIVERS

Fighting Fatigue

Fatigue is usually temporary and easily overcome. The best way to overcome fatigue is to stop doing whatever you are doing **and get some rest**.

Before You Drive

- Get plenty of rest.
- Avoid heavy, fatty foods.
- Do not drink alcoholic beverages.

While You Drive

- Make sure there is a good flow of fresh air in the car. If your car is overheated or poorly ventilated, you may become sleepy.
- Wear sunglasses to cope with glare from sun and snow.
- Take turns driving with someone else.
- Turn on the radio. Sing, whistle, or talk to yourself.
- Stop regularly, get out of the car, and walk, jog, or do other light exercise for a few minutes.

How Does Fatigue Affect Your Driving Ability?

Nearly everyone experiences fatigue at times. Fatigue may be brought on by lack of sleep, boredom, illness, or **stress**. Overeating, drinking alcoholic beverages, or **riding** in an overheated vehicle all compound the **effects** of fatigue. The body's **natural rhythms** cause nearly everyone to be less alert **in the late afternoon**.

Fatigue is dangerous if you're driving. Your **senses are impaired**. You may not see objects **clearly**. You may miss critical information—signs, **lights**, sounds. You may misjudge speed and distance or take needless risks. You may drift into a state of "highway hypnosis" or even fall asleep at the wheel.

Lack of sleep is now recognized as perhaps the leading cause of traffic fatalities—even ahead of drinking. Combining too little sleep with alcohol consumption virtually guarantees a crash.

When you feel tired, you're clearly in no condition to begin a long drive. If you are already on the road and find yourself getting sleepy, you're better off pulling over than trying to continue driving. Although it is usually not a good idea to sleep in your car at the side of the road, here are some tips if you have no choice but to stop and rest.

- At night, stop at a well-lit roadside rest area. If you cannot find such an area, make sure you are as far off the highway as possible.
- Roll down a window just enough so that fresh air enters the vehicle but not enough that someone might be able to enter it.
- Turn off the engine to avoid being poisoned by carbon monoxide, a colorless, odorless gas.
- Lock all the doors.
- Leave your parking lights on, but turn off all other electrical equipment.
- Before you begin to drive again, get out of the car and make sure you are fully awake.

How Do Short-Term Illnesses or Injuries Affect Your Driving?

A temporary illness, such as a cold, the flu, or an allergy, can make it risky for you to drive. So can an injury, such as a broken bone or a pinched nerve. The discomfort or pain you experience can distract your attention from the road and lessen your ability to manage visibility, time, and space.

If you cannot avoid driving when you're ill, at least try to minimize the amount of driving you do. Allow extra time to get where you're going. Drive more slowly than you normally would, and keep your attention focused on driving, not on how you feel.

Be especially careful about driving if you are taking any medication. Always read the information that appears on medicine containers. Some labels specifically warn against driving. Indeed, some medications for common illnesses can cause drowsiness, nausea, headache, or dizziness—conditions that are extremely dangerous for the driver of a vehicle.

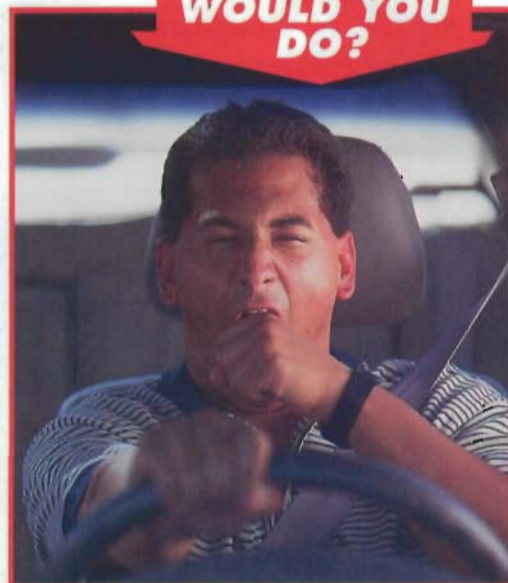
Lesson 3 Review

1. How can fatigue affect your driving? How can you fight fatigue?
2. What effect can temporary illness or injury have on your driving?

SAFETY TIPS

All vehicles emit carbon monoxide gas. It can make you physically ill or even kill you. Have your vehicle's exhaust system checked regularly. Avoid driving a vehicle that has an exhaust leak or a broken tailpipe. Such defects allow harmful exhaust gases to be trapped beneath the vehicle, even when it is moving. These gases may leak into the vehicle's interior.

WHAT WOULD YOU DO?



Describe your driving strategy for the next few hours until you reach your destination.

OBJECTIVES

1. Describe the ways that hearing loss affects driving ability.
2. Identify several ways that drivers can compensate for physical disabilities.
3. Describe how aging and chronic illnesses can affect driving ability.

KEY TERM

driver evaluation facility

Long-Term Physical Factors That Affect Driving Ability

Some people face long-term or permanent **physical** challenges. Science and medicine, along with advances in **technology**, have greatly improved the driving potential of such individuals.

How Does Hearing Loss Affect Driving Ability?

Your sense of hearing is an important **guide to conditions** on the roadway and within your own car. The **sound of a siren**, horn, or train signal warns you of possible danger. You may hear the sound of a vehicle before you actually see the vehicle. **Sounds** from your own vehicle may alert you to **engine**, **muffler**, or **tire trouble**.

Drivers with a hearing loss may be able to compensate by wearing **hearing aids**. They can rely more on their vision, frequently **searching the roadway** and making good use of **the rearview and side-view mirrors**.

How Can Challenges Caused by Physical Disabilities Be Met?

A few years ago, it would have been virtually impossible for a person with cerebral palsy or a spinal cord injury to drive. Such challenges, called **physical disabilities**, often created obstacles that were impossible to overcome. With the development of modern science and technology, however, such **disabilities** are no longer permanent **barriers**. **Although** the severity of a person's **physical disability still** has an impact on driving ability, new types of equipment,

◆ *Special devices enable many people to drive who would otherwise be unable to do so.*



such as joystick driving systems, voice-activated controls, and modified vehicles, can greatly increase his or her driving potential.

For example, many people who do not have full use of their legs are able to drive with the aid of such special devices as hand-operated brakes and gas pedals. People without arms can utilize special rings that are attached to the steering wheel, dashboard controls, door locks, radio controls, and so forth. Artificial limbs, called prosthetic devices, enable these drivers to grasp the rings and operate the vehicle.

Special vans are made for people who use wheelchairs. These vans are equipped with wheelchair lifts that can be operated from inside or outside the vehicle, as well as with extra space that permits the driver to smoothly transfer from a wheelchair to a special power seat.

Drivers who have no ability to turn their heads or shoulders can use extra-large rearview mirrors to extend their vision over a wider area.

Anyone with a physical disability who wants to drive a car, and is able to show that he or she can do so safely, can get a license. Usually, such individuals are required to undergo a comprehensive medical assessment that determines their potential to drive. A special center, called a **driver evaluation facility**, is designed specifically for this purpose.

FYI

Be especially careful when you see elderly pedestrians. People 75 years of age and older have the highest pedestrian death rates.

How Do Aging and Chronic Illnesses Affect Driving Ability?

Aging and chronic illnesses are other long-term physical factors that can affect a person's ability to drive.

♦ Older drivers can call on their experience to help them manage risk.

Aging

As a young person, your reaction time is likely to be faster and your sense of sight keener than that of an older person. Older people, however, can call on their driving experience to help them reduce risk and anticipate threatening conditions. They can also compensate for possible age-related limitations by reducing driving speed and by avoiding heavily traveled roadways.

As you encounter older drivers and pedestrians, be respectful of their age and experience. Slow down and be patient. Someone will do the same for you one day.



ADVICE FROM THE EXPERTS



Sue MacNeil

Injury Prevention Specialist, Little World Road Safety and Injury Prevention, Kinburn, Ontario, Canada

To evaluate and manage risk, you have to be honest with yourself. Are you feeling upset or angry about something? Is your mind focused on some disturbing event that just occurred? If so, you may be wise to put off driving until you feel calmer and can better concentrate.

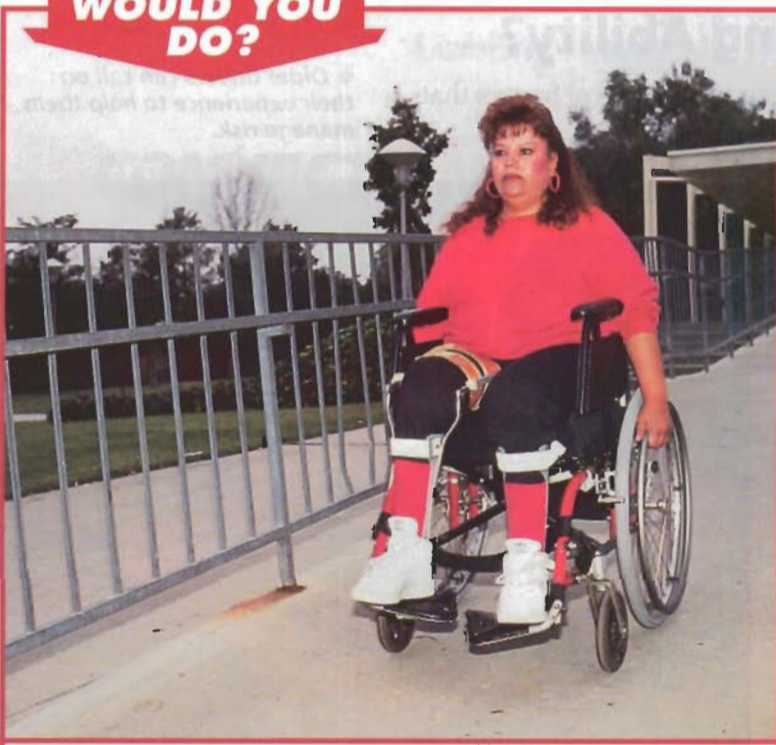
Sometimes events that upset you occur while you are driving. For example, another driver may cut in front of you. Resist the urge to let your emotions affect your driving. Don't let outside pressures interfere with your ability to manage risk.

Chronic Illnesses

A chronic illness is one that lasts over a long period of time or one that recurs often.

Some chronic illnesses, such as epilepsy, arthritis, diabetes, and asthma, can be treated and controlled by medication. However, the medication itself can result in such side effects as drowsiness, dizziness, headache, and nausea, that interfere with safe driving. To obtain a driver's license, people with chronic illnesses must furnish proof that the illnesses are under control and that medication won't cause side effects that impair driving ability.

WHAT WOULD YOU DO?



What would you tell this woman about driving?

Lesson 4 Review

1. How can impaired hearing affect your ability to drive?
2. How can drivers who have a physical disability compensate for that disability?
3. What effect do aging and chronic illnesses have on driving ability?



Kitty O'Neil

Kitty O'Neil is 5 feet 3 inches tall and weighs only 98 pounds, but her accomplishments are giant-sized. She has held the women's world land speed driving record of 512 mph and has gone on to become the second-fastest human, with a land speed of 618 mph. Of course, both of these records were accomplished in specially designed cars driven at test sites and not on highways.

O'Neil has also set records as a champion drag boat racer and water-skier, and she is a former American Athletic Union national diving champion. She uses the skills that enabled her to set these records in her work as a movie stunt woman. Among other things, she has jumped off six-story buildings, pretended to be drowning, and been set on fire.

Why does Kitty O'Neil do these things? As she says, one reason is to prove that physically challenged people "can do anything." Kitty O'Neil has been deaf since she was four months old. She believes **that** she owes her will to succeed to her mother, a woman of Cherokee descent who died when Kitty was 21 years old. She taught Kitty how to talk and play the cello and the piano and rewarded Kitty whenever she perfected a new skill. O'Neil says that she would like to show others that her mother's encouragement and support "has paid off beyond anyone's hopes."

What Do You Think Now?

Does the story of Kitty O'Neil change or confirm your opinion of the capabilities of people who are physically challenged? Explain your answer.



CHAPTER 3 REVIEW

KEY POINTS

Lesson One

1. Emotions such as joy, sadness, anger, and fear can cause you to be inattentive, interfere with your ability to concentrate, and hinder your ability to process information while driving.
2. You can make an effort to control your emotions by maintaining a responsible attitude and identifying situations that may cause you to become upset.

Lesson Two

1. You must have good vision in order to adjust your car's speed and position to minimize risk. Good vision also enables you to identify signs, signals, and roadway markings.
2. To **compensate** for poor depth perception, practice **judging** the distance between two objects; for color blindness, learn the meaning of signs and signals by their shape and position; for low-contrast situations and **night blindness**, drive more slowly than you would during the day.

Lesson Three

1. Fatigue impairs your senses. It could cause you to fall asleep while driving, miss critical

information, take risks, or misjudge speed and distance. Fight fatigue by getting plenty of rest, avoiding alcoholic beverages and heavy foods, opening the windows to get fresh air, and taking turns driving with someone else.

2. Short-term illness or injury can cause pain or discomfort, which can distract your attention from the road and lessen your ability to manage visibility, time, and space.

Lesson Four

1. Hearing loss may prevent you from being aware of sounds that warn you of possible danger, such as the sounds of sirens or horns, and can prevent you from being aware of problems within your own car.
2. People without full use of their legs can drive with the aid of devices such as hand-operated **brakes** and accelerators. With the aid of prosthetic devices, people without arms can drive using special rings and dashboard controls. Those who use wheelchairs can use specially equipped vehicles.
3. Aging can affect a driver's reaction time and eyesight. Medications for **chronic illnesses** may have side effects that **interfere with safe driving**.

PROJECTS

1. Emotional factors play an important part in the way people drive. What are some ways that people could be reminded to maintain a responsible attitude and to be courteous and patient while driving?
2. **While you are a passenger, close your eyes. Use your other senses to gather information. Can you identify the sounds you hear? Can you tell whether the car is speeding up, slowing down, or making a turn?**

interNET CONNECTION



Use the Internet to investigate the problems of aggressive driving, which may also be called road rage.
drivedred.glencoe.com

CHAPTER 3 REVIEW

CHAPTER TEST

Write the letter of the answer that best completes each sentence.

- Strong emotions can
 - affect your night vision.
 - help you drive safely.
 - interfere with your driving judgment.
- If you are severely fatigued, you should
 - avoid driving.
 - drive with your high beams on.
 - drive quickly to your destination.
- A physical factor that may affect driving ability is
 - the effects of medication.
 - the color of your eyes.
 - a feeling of sadness.
- A person who cannot see well at angles to the left and right has difficulty with
 - night vision.
 - depth perception.
 - peripheral vision.
- One way to deal with headlight glare is to
 - look right at the car's headlights.
 - look at the right edge of the road.
 - increase speed to get past the car quickly.
- As a driver, it is your responsibility to drive
 - your friends to school.
 - only when you are able to concentrate.
 - no matter how you are feeling.
- Drivers who are unable to turn their head or shoulders can use
 - revolving seats.
 - extra-large rearview mirrors.
 - a thickly padded seat cushion.
- To control your emotions in traffic
 - yell at other drivers.
 - daydream about pleasant events.
 - expect others to make mistakes.
- If you use correct procedures, you will
 - reduce risk no matter how you may feel.
 - never have a collision.
 - be able to drive without paying attention.
- Most of the information you gather about traffic situations comes from
 - other drivers.
 - your vision.
 - your sense of hearing.

Choose the phrase that best completes each sentence.

field of vision	wheelchair lifts
responsible attitude	lack of concentration
depth perception	sense of hearing

- Your _____ helps you judge the distance between cars.
- Having a(n) _____ means respecting others' well-being and an awareness of the consequences of your actions.
- Your _____ includes what you can see directly in front of you, up and down, and at an angle to the sides.
- Strong emotions can lead to a(n) _____ when you drive.
- Modified vehicles for people who are physically disabled may include _____.

DRIVER'S LOG

In this chapter, you have learned about how emotional and physical factors can affect driving. Write at least two paragraphs giving your ideas on the following questions.

- What "sets you off" emotionally?
- How will you control these factors and your emotions?