You will remember from Chapter 4 that having a chronic disease usually doesn't mean that a person can't exercise. If you have a client with a chronic disease, both you and the client need open communication with the client's physician. You need to be sure the disease is stable before prescribing exercise. Suggest that your clients discuss with their doctors the signs and symptoms that indicate trouble during exercise.

There was a sample form letter included in Chapter 4 for you to send to the client's physician to disclose your role as a personal trainer. Make sure you ask for the doctor's input about any limitations that might be necessary for that patient. Due to legal issues related to new privacy laws called HIPPA, it might be difficult—if not impossible—to obtain information from a physician before the client grants permission for disclosure. In other words, the doctor will usually require a written release from the patient before answering your questions. Be aware that the doctor might not know much detail about exercise. Focus your discussion on discovering pertinent information about flare-ups or acute conditions that might limit exercise in this particular situation. Request specific descriptions of signals that would indicate trouble. Depending on the problem and the type of medical treatment that has been administered, there could be an exercise protocol already established by a therapist or physician. ASK FOR IT! The time you take to request this information from both the doctor and the client will not only protect you if a future problem does arise, but it will help you build a rapport with numerous physicians who might make referrals to you in the future.

Next we will look at chronic diseases and some of the drugs used to treat these diseases. You will also learn to identify the special concerns related to exercise for each condition. Your goal with new clients will be to work at a very gradual and moderate pace to ease them into their programs regardless of whether they have a special condition or not. This should be an easy task given what you already know about exercise and armed with the information in the next section!
Provide positive feedback, and if you find yourself getting frustrated, CORK IT! Try to empathize with your client; if you feel frustrated, imagine how your client must feel.

Seated exercises might be necessary for this group due to mobility issues.

**Stroke — Know the Signs — Call 9-1-1**

To a bystander, someone having a stroke might just look unaware or confused. Stroke victims have the best chance at survival if a nearby person recognizes the symptoms and acts quickly. If you believe someone is having a stroke, call 911 immediately.

The symptoms of a stroke are distinct because they happen quickly.

**What are the symptoms of a stroke?**

- Sudden numbness or weakness of the face, arm, or leg (especially on one side of the body)
- Sudden confusion, trouble speaking or difficulty in understanding speech
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, loss of balance, or lack of coordination
- Sudden severe headache with no known cause

**DIABETES**

There are two types of diabetes, but our focus here will be on Type 2 or non-insulin-dependent diabetes. It is called non-insulin-dependent diabetes, but sometimes type 2 diabetics have to resort to insulin to control this disease. Most often, people with Type 2 diabetes take oral medications. In addition, exercise and diet can work together to keep blood glucose levels under control. In general, the intensity, frequency, and duration of exercise for this group will have to be based on overall fitness level more than anything else. Accompanying diabetes are usually other complications like high blood pressure, so the general precautions for diabetics will be the same as for people with heart disease. A special concern with diabetics is a hypoglycemic event where blood sugar drops below 60 mg/dl.

Hypoglycemia, also called an insulin reaction, can result from taking too much insulin, eating an inadequate amount, or participating in strenuous exercise without adequate food intake. Oral medications can cause the same problems as insulin, but the reactions are typically not as severe. The person might feel hungry, weak, dizzy, sweaty, nauseous, have slurred speech, or appear to be intoxicated. At this point, they need simple carbohydrates immediately to prevent an emergency situation. The simple carbohydrate you provide can be a non-diet soda, orange juice, sugar, or honey. Low-fat milk also works well. Liquids are the preferred choice since they will be absorbed more quickly than solids and can thus raise the blood glucose level faster. A person experiencing hypoglycemia should drink the
equivalent of half a soda, a cup of juice, a tablespoon of sugar, or a couple of tablespoons of honey. Simple sugars that are high in fat like cake frosting, whole milk, or chocolate candy will not be absorbed quickly due to the fat content; therefore, they are not good choices.

If a person is non-responsive, do not attempt to put liquid into that person’s mouth. If sugar or honey is available, pour about a tablespoon in between their gums and outer lip after calling for emergency help. There are gels and tablets available at most pharmacies that will quickly raise glucose levels. You might want to consider buying some and having them on hand if any of your clients are diabetic. As a matter of fact, we suggest that glucose tablets be a part of every personal trainer’s supply kit. They are not expensive and you will be glad you have them if a problem ever arises. In general, the gels are effective for those who are unconscious, while the tablets are for those who are responsive. Always remember — call 911 if a client ever loses consciousness.

If a client has a mild episode of low blood sugar, she should take approximately 15 grams of simple carbohydrate or the equivalent of 3 glucose tablets. To prevent another rapid drop in blood glucose level, she should snack on something with complex carbohydrate and protein. An example would be half of a sandwich or a glass of milk. After blood sugar returns to normal levels and after eating a snack, your client can continue to exercise.

Clients who are having problems regulating blood sugar levels should bring a glucometer to the exercise session to check the blood sugar level before, during, and after exercising. Their blood glucose levels should be between 100 and 250 mg/dl. If it is above 250, they should not exercise until blood sugar drops since exercise can cause an even greater increase. If the level is below 100, a snack should be eaten before the exercise session. Again, the snack should contain some complex carbohydrate combined with protein, a combination that best maintains blood sugar level. The greater the intensity and the longer the duration of the activity, the more calories needed to complete it. Simple carbohydrates by themselves can cause a quick rise and then a sharp fall in blood sugar. Add protein for sustenance.

Diabetes causes deterioration in the small blood vessels in the feet which results in diminished blood flow to this area. This can lead to the formation of ulcers that do not heal. Special care should be given to a diabetic’s feet. Shoes should fit well, and if ulcers are present, weight bearing or jarring exercises should be avoided. Diabetes can also cause damage to the nerves, a condition called neuropathy. This contributes to foot problems, too, and can impair heat regulation.

**Special concerns for diabetics:**

- Avoid hot temperatures which can increase the risk of heat injury due to neuropathy.
- Avoid cold temperatures which can exacerbate existing problems by further impairing circulation.
- Make sure that the client has comfortable, well-fitting shoes.
- Avoid exercises that can increase blood pressure (such as isometric contractions, lifting weights overhead, or exercising at high intensity) as this can harm blood vessels in the eyes that might already be damaged by the disease.
Chronic Diseases and Exercise

- Recommend that clients carry or wear a medical ID when exercising, especially when doing so alone.
- Make sure adequate breaks are taken. Higher than normal blood sugars will lead to thirst and more frequent urination.
- Remind clients to drink adequate fluids.
- Discourage participation in group programs when working with a diabetic. Again, this is an area where individual programs are best because of the amount of necessary monitoring.
- Balance might be compromised by neuropathy in the feet (or a lack of sensation due to nerve damage) and vision lost from retinopathy.

Be aware that beta blockers can mask the symptoms of an impending insulin reaction, so be cautious with your diabetic patients who are taking them. They might have an even lower blood sugar level before recognizing a problem. *This means you will need to react even faster.* Buy those glucose tablets!

**PARKINSON’S DISEASE**

As mentioned earlier, Parkinson’s disease is most often seen in individuals over 50 years old. It is a chronic, progressive disease that causes movement and postural problems. Tremors, muscle rigidity, and loss of postural reflexes are specific symptoms. During the early stages of the disease, the main symptom is shaking or tremor of the hands. Other noticeable changes include slowness in walking and dressing, difficulty standing up from a seated position, stooped posture, and difficulty in initiating movements.

**Special concerns or indications for those with Parkinson’s disease:**
- Relaxation techniques are very helpful in reducing tremors.
- Exercises that include backward, forward, and rotational movements help with muscle rigidity.
- Encourage exercises that draw back and strengthen the shoulders and expand the chest to help with posture.
- Warm up and change positions slowly.
- Expect symptoms to fluctuate from day to day.
- Be aware that the person might need extra time to complete each movement. This can be very frustrating for someone with Parkinson’s, so be considerate and understanding. DO NOT be impatient.
- Break down each exercise into steps if possible. This can help provide the extra time needed to complete the movement.
- To counteract postural instability, loss of postural reflexes, and stooped posture, remind clients to monitor their own posture and practice posture exercises.