

Safety and Monitoring for Mature Clients

Learning Objectives

1. Describe the role of assessment in keeping students safe during an exercise program
2. List the warning signs for a heart attack, stroke and hypoglycemic episode and the appropriate steps to take when they are identified
3. Identify strategies for monitoring mature adults before, during and after exercise
4. List characteristics of a safe exercise environment

Introduction

When working with any type of student their safety should be the instructor's utmost concern. With older students this concern is of even greater importance because of the higher prevalence of risk factors, medications and chronic diseases in this population. However, instructors should not fear working with older students simply because the potential for injury or a health complication is greater. When the appropriate steps are taken to ensure a safe exercise experience (e.g. assessment, monitoring, physical environment) the risk of an untoward event is greatly reduced. Age may no longer be considered an independent risk factor for cardiovascular disease but older adults have the greatest prevalence of cardiovascular conditions compared to other age groups. Age is also an independent risk factor for falling. The two major events that must be guarded against when working with mature adults in an exercise environment are cardiovascular complications and injurious falls. A third, but less serious threat, is orthopedic injury or aggravation of an existing orthopedic condition (especially the spine). Keeping your students safe should be your number one priority. In this module we will discuss methods and strategies for guarding against untoward medical complications.

First, keep in mind that sooner or later someone is bound to get have a potentially dangerous event. Someone with diabetes will fail to eat properly before they workout and will have a hypoglycemic (low blood sugar) episode requiring intervention. Someone with a cardiovascular condition will push themselves too hard and trigger an arrhythmia or will develop angina (chest pain). A student working to im-

prove their balance will trip and fall. Our expectation should NOT be to avoid any and all problems because that is just not realistic. However, our goal should be to take the appropriate preventive steps in order minimize the prevalence of these events and then to respond quickly and appropriately when they do.

The Importance of Assessment

As discussed in greater detail earlier, the first line of defense against an event is some kind of health assessment. It is much more difficult for the group exercise instructor to get assessment information, however with the mature market it becomes more important. The assessment can be obtained through a health history form that is filed out and given to the instructor, some fitness assessments done in class, or just observation information that is gathered during the exercise class. This knowledge is power and will help to develop a safe program. Sometimes this means saying no. If you get a potential student that has ongoing medical complications or conditions with which you are incapable of dealing with then refer them to a physical therapist, cardiac rehab program or some other medically supervised program. Once they successfully complete that program then they could be allowed to attend the class. This will also give you the opportunity to interact with medical professionals, develop a relationship with them, and demonstrate your expertise. In addition, teaching the students to self-monitor is crucial. They need to understand their limitations regarding exercise

type, time, and intensity as well as how to recognize signs and symptoms of common problems such as low blood sugar, stroke, or heart attack. These have been described below as well as the appropriate actions to take should they occur. Bear in mind that individuals experience different symptoms and to different degrees. Therefore, if the student has experienced symptoms previously, they need to focus on the reoccurrence of similar feelings.

Signs and Symptoms of a Heart Attack

THE WARNING SIGNS

Many heart attacks involve discomfort in the center of the chest that lasts more than a few minutes or that goes away and comes back. It can feel like uncomfortable pressure, squeezing, fullness, or stabbing pain.

However, not all heart attacks are preceded by chest pain.

Heart attack symptoms include the following:

- Chest discomfort
- Discomfort in other areas of the upper body: one or both arms, the back, neck, jaw or stomach
- Shortness of breath with or without chest discomfort
- Pounding heart, change in heart rhythm
- Heartburn, nausea, vomiting, abdominal pain
- Breaking out in a cold sweat
- Nausea
- Dizziness or lightheadedness

These warning signs are particularly common in women:

- Sudden onset of weakness, shortness of breath, nausea/ vomiting, indigestion, fatigue, body aches, or overall
- feeling of illness (without chest pain)
- Unusual feeling or mild discomfort in the back, chest, arm, neck, or jaw (without chest pain)
- Sleep disturbance

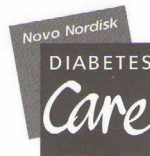
Signs and Symptoms of a Stroke

If you or someone you're with has the following symptoms, call 911 immediately and tell them you or the person you're with is having a stroke and you need to go to the closest stroke treatment center.	
A feeling of numbness or weakness in the face, arm, or leg (You might notice it on one side more than the other.)	
Vision problems in one or both eyes	
Dizziness or loss of balance; difficulty walking	
Confusion	
Problems speaking or understanding what other people are saying	
Severe headaches without warning or explanation	
Women may have the same symptoms as men, but they've also reported a few others. These symptoms also happen suddenly and unexpectedly:	
Pain in the face or legs	Feeling weak all over
Hiccups	Chest pain
Nausea	Shortness of breath
Rapid heartbeat	

Signs and Symptoms of Low Blood Sugar

HYPOGLYCEMIA

(Low Blood Glucose)



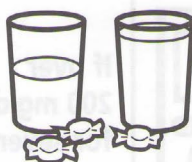
Causes: Too little food, too much insulin or diabetes medicine, or extra activity.

Onset: Sudden, may progress to insulin shock.

SYMPTOMS

		 SHAKING		 FAST HEARTBEAT
 SWEATING	 DIZZINESS	 ANXIOUS	 HUNGER	
 IMPAIRED VISION	 WEAKNESS FATIGUE	 HEADACHE	 IRRITABLE	

WHAT CAN YOU DO?



Drink 1/2 glass of juice or regular soft drink, or 1 glass of milk, or eat some soft candies (not chocolate).



Within 20 minutes after treatment **TEST BLOOD GLUCOSE**. If symptoms don't stop, call your doctor



Then, eat a light snack (1/2 peanut butter or meat sandwich and 1/2 glass of milk).

Treatment may vary with different medications.

Monitoring Clients

During any exercise program it is crucial to continuously monitor the students and to check for any signs and symptoms of a medical condition. This should be accomplished through formal and informal mechanisms. Formal checks include: directly asking the students if they are experiencing any signs or symptoms; performing heart rate and/or blood pressure checks pre-exercise, during exercise and post-exercise; asking students pre-exercise if they have taken their medications, eaten properly, or experienced any problems since their last visit; and assessing RPE, SOB (shortness of breath) and angina, using the appropriate scales, during exercise. Informal checks include: observing the student's gait pattern; checking their face for signs of distress; chatting with the students to assess alertness; and encouraging frequent rest and water breaks. This is more challenging in open gym environments or large group exercise classes but is just as important. Proper spotting can help to prevent injuries. This is vital when performing balance and agility exercises. Stay close to the students without impeding their movement or distracting them. For students that are unsteady on their feet, a gait belt could be useful. Perform these exercises in an open room away from equipment such as treadmills or resistance machines. If the group is large, it is important to have an assistant if possible or break the class down so that only part of the class is moving at one time. This gives the instructor the ability to spot as needed and the participants time to learn from observation which can be very beneficial. If an individual needs to be belted, there must be an assistant present. It is helpful to perform many gait and balance movements next to a wall, or chair so the student can use it to

steady themselves if needed. If gait movements are done on the floor, several lines may be formed to divide the group so the instructor can spot and assist a smaller number at one time. Observing other students can be a large part of learning, as well as a recovery period before moving down the floor again. Students learn mostly by seeing and will mimic what they see even if the instructions are verbally opposite.

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The Exercise Environment

The physical environment plays a significant role in the safety of your students. In general, the facility should be very well-lit, well organized, free from clutter, keep electric cords secure and out of the way, have non-slip (and preferably padded) flooring, keep a reasonable temperature with good air flow, be free from busy visual distractions, and not too loud. The outside of the facility is important as well. The parking lot, sidewalks and entrance are important areas to take into consideration if you are going to serve those with gait or balance issues or use an assistive device such as a cane,

walker or wheelchair. While these seem to be common sense on the surface it is amazing how many facilities violate many of these basic guidelines.

Successful mature fitness business owner and pioneer, Dottie Drake, described a facility she once visited in order to consult with them about how to improve their reach into the senior market. First, the building was above the parking lot so that she had to climb a couple flights of stairs in order to get to the front door. The front doors entered directly onto the fitness floor.

The front desk was situated in the middle of the room with no clear and direct path to it from the front doors. Once the manager met with her he took her upstairs and down a long hallway to show her their “seniors” area which was isolated from the rest of the facility. Obviously, they did not understand the needs of the population they were trying to serve and this situation is multiplied many times over throughout the fitness industry.

Every facility should adhere to the following guidelines:

- An AED placed in a central, easy to access location
- All staff current in Basic Life Support with AED
- Emergency protocols established to deal with any emergency situation
- Practice emergency drills for staff conducted on a periodic basis
- First aid kit placed in a central, easy to access location
- Conduct regular equipment safety checks
- All staff should be aware of high-risk students
- Perform routine locker room checks during the day

As long as the appropriate preventive measures are taken to ensure student safety from an individual and facility perspective the number of accidents and medically related events should be held to a minimum.