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Resource Manual for Active Seniors

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A Resource Manual for Active Seniors

Articles written by Carolyn Petersen

Third Edition

INTERNATIONAL INSTITUTE FOR
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The Benefits of Exercise

Sometimes it can be hard to make time for exercise. Family members need attention, errands seem more urgent, and work or social responsibilities take longer than expected. Although exercise may take time away from other activities, regular physical activity gives back something too: better day-to-day health, increased longevity, and through better health, a higher quality of life.

Many health improvements result from the practice of regular exercise. Some of these benefits include:

Easier Weight Control--As people age, they often become less active. Taking on a more sedentary lifestyle often results in weight gain, all or nearly all as fat. Studies of adults who cycle, swim, run, row, or practice other activities regularly have found that those in their eighties have nearly the same body composition as those in their thirties. Regular exercise maintains the metabolic activity experienced in earlier years and helps prevent accumulation of fat.

Lower Risk of Chronic Illness--Because active adults are less likely to be obese, they also are less likely to suffer from weight-related chronic illnesses such as diabetes, hypertension, and heart disease.

Maintenance of Bone Density--As adults age, the levels of important hormones in their blood change too. The net result is typically a decrease in the density of bones, which makes it more likely that a hip or wrist fracture will occur if an individual falls. Weight-bearing exercises like walking signal the body to maintain greater bone density throughout the body, reducing the likelihood of a disabling injury.

Improved Heart Function--Even moderate exercise can stimulate

significant increases in the heart's ability to tolerate stress. Regular activity increases the amount of blood pumped with each stroke and reduces the number of times the heart must beat each minute to deliver oxygen to the organs and limbs. Thus, the heart of an active person does not have to work as hard as that of a sedentary person during routine activities such as housekeeping and yard maintenance.

Greater Strength--Although few older adults can experience the increase in muscle size typically seen in young adults, researchers have established that active people of all ages can increase muscular strength by engaging in regular resistance training. Weight lifting has been popular among some groups, but less strenuous programs that use resistant bands and balls yield strength increases too.

Increased Flexibility--Many adults experience stiffness and movement difficulties as they age. Studies indicate that all adults can maintain adequate range of motion, even when the activity is not designed specifically to increase flexibility. Leisure activities such as swimming and walking go a long way toward helping you stay flexible.

Improved Balance--The ability to move about without falling becomes more difficult for many adults as they age. Regular physical activity, however, stimulates the brain and the nervous system to maintain the functions needed for good balance. As a result, day-to-day activities like grocery shopping pose fewer challenges.

More Efficient Metabolism--As people age, their bodies become less efficient at converting carbohydrates and other nutrients into fuel. Physical activity, however, helps maintain desirable insulin production and metabolic function.

With so many benefits, it's clear that regular exercise is one of the easiest and least costly ways to maintain and improve overall health. This booklet will help you make physical activity a regular part of your life.

Getting the Most from Medical Care

No one wants to be ill, and when they are, they want to regain their health as quickly as possible. Building a good relationship with one's doctor before a health problem arises can make it easier to get the right health care when you need it. These tips will make it easier to develop

a positive relationship with your physician.

- Consult your doctor promptly when you become aware of possible health concerns. Symptoms that do not go away by themselves within a week may be signs of a serious problem. By getting prompt attention from your doctor, you may avoid more significant problems later on.
- Give a full health history when asked by medical personnel. Answer all questions on medical intake forms as fully as you can, and ask for additional sheets of paper if the space provided is not adequate. It may be helpful to keep a record of all medical visits, treatment(s) provided, and medications prescribed for future reference.
- Take a list of all the medications you are currently taking, including the dosages, with you to medical appointments. This will allow your doctor to avoid prescribing medications that should not be taken at the same time. It will also help the doctor determine whether health problems are caused by the drugs being taken.
- Be sure to finish every prescription your doctor gives you, even if you feel better before all the medicine is gone. Some conditions require treatment for several days or weeks before they can be considered "cured."
- Drugs that are prescribed for daily use should be taken every day at the appropriate time(s). Some medications are effective only when a certain level of the drug is built up in the body. Missing even one dose may prevent these drugs from being effective.
- Make a list of symptoms, including the dates and times you noticed them, before going to the doctor. Also note any questions you have, and take the list with you to your medical appointment. This will prevent you from forgetting important details when you meet with the doctor.
- If you do not understand something the medical staff tells you, ask for the information to be explained in simpler language. You cannot make the health decisions that are right for you unless you know what your choices are, so be sure to ask for all the details you need. In addition, the doctor may have pamphlets or other health education materials to help you understand.
- When your physician suggests lifestyle changes such as a lower fat diet or more exercise, do your best to follow the guidelines.

Note any problems you encounter on the program (e.g. conflicts between your schedule and that of the local pool, thereby preventing water exercise) so that you can discuss alternatives with your doctor at a later date.

- Work with your doctor to develop a schedule for regular checkups that include health screenings appropriate for your age. These screenings may include blood and cholesterol level counts, blood pressure check, urinalysis, Pap smear, breast exam, sigmoidoscopy, electrocardiogram, and others.

Getting Into the Exercise Habit

When people first begin to exercise, sometimes they feel a little tired during the first few weeks. Some people become so concerned about this fatigue that they are afraid to take up regular exercise. With a little planning, however, it is possible to ease into the exercise habit without significant discomfort or fatigue.

Aerobic exercise that increases the heart rate to 60-70 percent of maximum is thought to offer the most health benefits, but it is not necessary to start at that level. By changing the way daily activities are accomplished, it is possible to get the body ready for this kind of exercise.

At the shopping center, for example, most people look for a parking space near the entrance. When the weather is poor, that makes good sense. In fine weather, walking across the parking lot is an easy way to prepare for a walking program. By gradually increasing the distances walked to complete errands, joints and muscles are gently stretched and strengthened in preparation for planned walks.

A similar approach can be used to integrate resistance exercise into the daily routine. Although heavy yard work may not be possible, small tasks that can be accomplished over several days can be a good way to stimulate muscles. For example, raking leaves for 10 minutes every other day will provide light resistance for upper body muscle groups, as well as some contraction of the lower body muscles for maintaining balance. Keeping the sessions short and alternating with rest days will reduce the likelihood of muscle pain or general exhaustion.

Other ideas for integrating exercise into daily life include:

- Sometimes planning social events to include physical activity makes exercise more appealing. Instead of meeting at a restaurant for lunch, try meeting a half-hour earlier and taking a short stroll before sitting down to the meal.
- Television commercial breaks are a great time for stretching or taking short walks around the house. Resistance exercises with bands, as discussed elsewhere in this guide, also can be performed at this time.
- Ask supermarket clerks to bag groceries so that the bags feel just a little heavy. Then push the grocery cart out to the car and load the bags without help from a clerk. As long as the bags are of an appropriate weight, the lifting will provide a light effort against resistance without causing strain.

The Proper Way to Stretch

Most people have heard that it is important to stretch before exercise. Stretching is a useful way to reduce the risk of injury, but only if it is done correctly. By following the GASP method, muscles can be stretched safely and comfortably.

GASP stands for Gentle, Active, Steady, and Progressive stretching. Keeping these four ideas in mind makes it easy to enjoy-and benefit from-regular stretching practice.

Gentle: Stretching should always be performed with a gentle, voluntary effort. Applying extra force on a muscle, either by pulling on it or by having someone push on it, may cause pain or injury. Any movement that results in more than a light sensation of lengthening is too extreme for the body.

Active: Although stretching should never be practiced to the point of pain or exertion, it still requires an active effort. Focusing on the

specific movement and the desired change in the muscle being stretched while stretching reduces the possibility of injury and increases the likelihood of improving flexibility.

Steady: Before sophisticated research methods were available, people were advised to stretch with a bouncing motion. Researchers now know that applying slow, steady pressure on the muscle being stretched is the best way to increase flexibility.

Progressive: To get the most out of stretching, it is often best to perform the same stretch on a muscle two or three times, holding each stretch for 15 to 20 seconds. As the muscle relaxes, the stretch can gently be taken a little further. This progressive approach avoids creating resistance in the muscle being stretched.

In general, it is a good idea to stretch each of the major muscle groups once or twice each day. Some simple stretches include:

- Arms straightened up above the head, with palms pointing toward the ceiling
- Arms extended, one at a time, across the front of the body and to the side
- Arms extended behind the back as far as is comfortable
- Up and down shrugs of the shoulders
- Turns of the head from side to side with the chin in regular position and lowered
- Trunk bends to each side that lower the fingers toward the ground
- Bends forward from the waist (rest hands on a table for support)
- Toe touches
- Rising up onto the balls of the feet
- Ankle circles with the toes pointed and drawn up toward the body
- Movement of the leg in front of, to the side of, and behind the body
- Raising of the knee toward the chest
- Raising of the heel toward the buttock.

Stretches can be done after four or five minutes of a light activity such as walking. They also should be done after an exercise session, when the muscles are thoroughly warm and loose.

These tips will make stretching easier and more effective:

- Wear loose clothing that permits movement in all directions.
- Select a comfortable place to stretch. This may be a mat, carpeted floor, a firm bed, in a doorway that can be used for support, or on a chair that permits free movement of the upper body.
- Remember to breathe throughout the exercises. Deep, full breaths will bring fresh air into the body.
- A list of stretches or notes will reduce the possibility of overlooking stretches.
- Soft music in the background may make it easier to relax during the stretches.
- Avoid eating a heavy meal immediately prior to stretching.

Working Out in the Water

Sometimes it is not convenient or safe to undertake an outdoor exercise like cycling or jogging. However, these situations don't mean that one has to give up physical activity. Water exercise is another effective way to get a healthful workout.

Most people have had some experience swimming, even if they do not consider themselves very proficient at it. But swimming is only one form of water exercise. Water aerobics and deep-water exercise also provide excellent opportunities to get the benefits of exercise in a safe, healthy fashion.

Water aerobics are similar to the dance and step aerobic classes held on land, except that they do not subject the body to such strong impacts. In the classes, participants perform many of the same moves that are done on land, but more slowly and gently. They may wear flotation wraps on their hands and feet to add resistance to movement in the water. Sometimes members perform strengthening exercises using floatable "dumbbells" or flexible foam tubes. These tools allow them to add resistance to the exercises without creating the possibility of injury.

In deep-water exercise classes, participants wear flotation belts or vests that suspend them off the bottom of the pool. Staying off the bottom allows class members to simulate jogging, cycling, cross country skiing, and other activities without sustaining impact. Strength exercises with dumbbells and tubes can be performed in deep water, too. This type of exercise may sound easy, but many competitive athletes use deep-water exercise as a way to train while injuries are healing or during noncompetitive times of the year.

In many cities, recreation districts sponsor water aerobics and deep-water exercise classes. Most pools provide strength training equipment such as dumbbells, and many provide flotation belts as well. If the belts are not available at the pool, they may be purchased by mail for approximately \$50—much less than the cost of a consultation with an orthopedic surgeon or sports medicine specialist. Purchasing a flotation belt for personal use ensures that the exercise routine can be maintained while traveling or visiting friends or family in other regions.

Of course, swimming is also a good way to work out. It has an advantage over some other activities in that it works all the major muscle groups in the upper and lower body, rather than just the lower body, as in running and cycling. Swimming permits the use of just one part or region of the body. For example, the legs can be worked by performing kicking drills while holding a kickboard. In a similar fashion, a foam float placed between the legs allows the swimmer to work just the upper body.

No matter which exercise form is chosen, a plastic water bottle is a key piece of equipment. Like those exercising on land, water workouts cause the participant to sweat. Because the sweat is less obvious, many people forget to take in liquids while working out in the pool. In reality, water exercisers need to drink just as much as those who exercise on land.

Another benefit of water exercise classes is the opportunity for socialization. During activities such as jogging and dance aerobics, it may be difficult to talk with friends. Because exercise in the water does not raise the heart rate as high as on land, many participants find that they can carry on a conversation and still get a good workout. Meeting friends at the pool, too, makes it easier to stick with the exercise habit.

Walking is a Workout

At one time, walking was thought to be little more than a way to get from the parking lot to the locker room. But in studying the health of people who walk regularly, exercise scientists have discovered what walkers have known for decades-walking may not be a sport, but it is a workout.

How does walking compare? A study comparing walkers and runners concluded that moderate activity-the energy equivalent of five brisk 30-minute walks each week-is enough to keep adults out of the "sedentary" category with the highest risk for premature death. The Centers for Disease Control and Prevention has estimated that sedentary living is a primary factor in at least 200,000 deaths a year from heart disease, cancer, and diabetes.

What's more, the 30 minutes of activity can be broken into 10-minute segments of activity. Thus, walking is ideal for those with hectic lives or health conditions that prevent longer periods of exertion.

Getting started on a walking program is not difficult. The best program is one that takes into account personal preferences and can be followed consistently. In planning a walking program, several factors should be considered:

- the days and times that are most convenient for regular walks
- areas where walking will be most pleasant, such as around the neighborhood, at a nearby high school track or fitness club, in an indoor mall, along lightly-traveled country roads, or at a favorite place
- the weather and its changes; for instance, what alternate plans can be put into action when inclement weather will interrupt the walks
- the transportation that will be needed to get to and from the walking site, and
- a good walking partner who will be reliable and fun to have along.

Making these decisions before getting started greatly increases the

likelihood of staying with-and thus benefiting from-walking.

Walking does not require any special equipment beyond a pair of supportive shoes. Several companies make shoes especially for fitness walkers. These shoes typically have a beveled heel, evenly distributed cushioning through the middle and front sole of the shoe, and a moderate downward angle from heel to toe. Such shoes are generally recommended for use when several miles are walked each week. Other shoes that provide good support and permit a brisk pace also can be worn, as long as they are comfortable and injuries do not occur.

In addition, many foot specialists suggest alternating between two or more pairs of walking shoes. This reduces the likelihood of overuse injuries.

As with any other physical activity, there are right and wrong ways to move. Following these technique tips for walking will enhance the benefits of the exercise and reduce the likelihood of injury.

- Keep the head up and the eyes looking forward, not down toward the ground.
- Keep the back straight (but not rigid) with the spinal and abdominal muscles contracted.
- Carry the arms at a 90-degree angle, moving them back and forth rather than from side to side.
- Walk "from heel to toe," touching the heel to the ground first and rolling the entire foot across the ground.
- Push off the toe into the next stride.

Another positive aspect of walking is the fact that people of all ages and abilities can practice it. As walkers increase their fitness, they can walk more quickly, even including "walk sprints" in the walk. The same basic principles of walking apply to speed walking, with these modifications:

- Move the arms more quickly, being sure to keep them moving forward and backward.
- Take shorter, more frequent steps, rather than longer strides.
- Allow the hips to roll from side to side.
- To minimize lower back discomfort, avoid leaning forward

Ideas for Resistance Training

Resistance training, also known as strength training or weight lifting, provides important health benefits that cannot be gained from other forms of activity. Bone mineral density, which usually declines with age, can be maintained by performing regular resistance exercise. In addition, strength training helps to build and maintain muscle, which makes it easier to do day-to-day activities. It is a necessary complement to aerobic activity such as walking or swimming.

Fortunately, it is not necessary to lift very heavy weights to benefit from training. Research comparing different training programs has found that moderate weight can increase bone mineral density and physical strength when a regular program is followed. Virtually all the major muscle groups can be strengthened using hand-held dumbbells, exercise bands, or specially designed exercise machines. That means that strength training can be safe as well as effective.

Most people find it easiest to start resistance training using exercise machines at a fitness club or local YMCA. These machines have several advantages:

- They work one muscle or muscle group at a time
- They place the body in the correct position to complete the exercise
- The weights are contained in an apparatus so there is less risk of injury, and
- They do not require an assistant, as do some free weight exercises.

Some exercises, such as the biceps curl, usually must be performed with dumbbells. These exercises generally can be performed safely as long as participants use light weights while learning to do the exercise and add weight gradually.

In general, a resistance training program includes one or two exercises for each of the large muscle groups of the body (e.g., the shoulders, thighs) for a total of eight to twelve different exercises. The American College of Sports Medicine recommends that older adults perform one set of eight to twelve repetitions of each exercise with a two- to three-minute break between exercises.

Exercise scientists do not agree about how often to perform strength exercises. Some believe that twice a week is adequate, while others think that three times a week is better. Of course, the best schedule is one that can be followed consistently. It is probably best to do the exercise once a week for four to six weeks and then progress to two or three times a week. If resistance training is done three times a week, a day of rest should follow each session.

The specific exercises to be performed depend on the individual's health history, physical limitations, and personal preferences. Most exercise facilities provide new members with an orientation to the equipment, and many will provide assistance with exercise selection. Facilities that are unwilling to show new members how to use exercise equipment are not likely to provide assistance later on, so they should be avoided.

Working Out at Home With Exercise Bands

Sometimes it is not convenient to go to a fitness club to get exercise. By using equipment such as elastic bands, however, it is possible to get a good workout at home.

The use of elastic bands is a handy, low-cost way to do resistance exercises without the equipment typically found in a gym. Instead of contracting a muscle against weight suspended on a strength machine, muscle is contracted against bands of varying stiffness. Some exercise bands are made from 4-inch wide elastic, while others use rounded rubber tubing. Both types of bands permit the user to exercise the major muscle groups safely and effectively.

How do the bands work? They can be used to perform many of the same exercises that are ordinarily done with dumbbells. In the biceps curl exercise, for example, the dumbbell is lifted upward toward the chest while the upper arm is held in a vertical position. With a band, this exercise is done by standing on the band and raising the arm with the same motion. If it is not comfortable to stand on the band, it can be affixed to a table leg at the floor level. This arrangement will allow the biceps curl to be performed from a chair or side of the bed.

Bands also can be used to perform leg exercises. To strengthen the

muscles on the outside of the right hip, the ends of the band can be attached to the right ankle and to a table on the user's left. The right leg should then be raised in an arc to the right side, away from the other leg and the table. To work the muscles on the inside of the hip, the user can turn around (so the table is on the right side) and swing the right leg in an arc to the left. Doing exercises in this type of sequence helps to avoid muscle imbalances.

Some bands have handles on each end to make them easier to grip or stand on. Others have open ends so the user can wrap them around the hands or tie them to sturdy objects easily. Each type of band is effective; the only difference is the user's preference.

Bands are available in several degrees of stiffness to allow users to select the correct amount of resistance. Bands are usually color-coded to make it easy to tell them apart. People who use bands regularly often keep several strengths handy so they can work all the major muscle groups correctly.

Avoiding Dehydration

Physical activity can be a pleasant, invigorating experience-or a fatiguing, uncomfortable event. Dehydration is one of the most common reasons people feel tired and irritable during exercise. Drinking enough liquids during exercise not only makes exercise more pleasant, but also much safer.

Several negative effects result from failure to take in enough liquid before, during, and after exercise. When body fluid is not replaced, the blood thickens, thereby forcing the heart to work harder to maintain the same level of activity. Blood flow to the skin is an important mechanism for removing heat from the core of the body; when blood thickens, it becomes harder for the body to get rid of the heat produced during exercise. Finally, as individuals become dehydrated, the same level of performance feels more difficult to maintain, which may cause people to cut short an activity.

Why do exercisers of all ages become dehydrated during physical activity? Several reasons account for this problem.

Some people find it difficult to drink during exercise. Runners, rowers,

and others who actively use both the upper and lower body may have difficulty swallowing while in motion. Although swimmers may exercise strenuously, they can take drinks from a water bottle between laps. Walkers usually can drink while moving because they do not experience as much vertical motion as runners.

Others are not aware of how much water can be lost during even moderate periods of activity. Depending on the activity, the environment, and individual characteristics, a person may sweat away a half-gallon during an hour of exercise. A loss of this size makes it critical to drink before exercise and begin replacing fluids soon after activity begins.

Sometimes individuals will forsake drinking during exercise because obtaining water is inconvenient and "not that important anyway." Keeping one or two empty plastic bottles in the car or a locker at the fitness facility makes it easy to have a bottle on hand. By filling the bottle with fresh, cool water before beginning to exercise, replenishment will be handy when it is needed.

Others assume that they can gauge their need for water by the sensation of thirst. Research has shown that people typically drink only 30 percent to 40 percent of the fluid that has been lost.

In addition to water, many types of sports drinks are available. These drinks typically contain a mixture of sugars and salts designed to provide nourishment and replace the salt lost through sweating. However, sport scientists do not agree on whether these drinks are necessary for recreational athletes who are active for sixty minutes or less. Unless weather conditions are extreme, the fluid needs of these individuals can likely be met through plain water.

The American College of Sports Medicine recommends drinking one to two cups within two hours of the start of physical activity. During exercise, it suggests drinking two to four cups of liquid depending on the strenuousness of the activity. Following an exercise session, it is a good idea to drink one or two cups, and then continue drinking water or noncaffeinated liquids for the next few hours.

Progressing to Higher Levels of Activity

After a few weeks of regular activity, many people find their programs seem easier than when they first started exercising. Exercise scientists call this response the training effect—the changes that naturally occur as the body becomes more accustomed to increased physical effort. These changes may be noticed as a faster walking pace, the ability to swim or walk farther, less difficulty with tasks that require lifting, or other changes in physical capacity.

As exercise becomes easier, these changes in physical capacity can be maintained but not increased. Individuals who want to continue improving their endurance, strength, or flexibility must increase their activity level to make further progress. With a little planning, activity levels can be increased safely.

Researchers have different ideas about how to increase activity levels. Most agree, however, that the increases should be made in small increments over the course of several weeks. Seeking progress in small amounts reduces the likelihood of injuries or discomfort that can result in long-term setbacks.

With regard to aerobic or endurance type exercise, a general rule of thumb is to increase the distance covered or exercise time by no more than 10 percent per week. Thus, a person who walks 30 minutes per session would increase his or her time to 33 minutes. Someone who walks 2 miles per session would increase the distance to 2.2 miles. In the pool, a workout of 600 yards could be increased to 660 yards, or about one more lap in the standard 25-yard pool.

Another important question is how often the distance can be increased. Among professional and competitive recreational athletes, weekly increases of 10 percent to 15 percent are common. However, these groups usually are more willing to risk injury than those who exercise for health improvement. Activity level increases every second or third week will provide consistent progress at lower risk of injury. Of course, the activity level should not be increased until the current level of exercise can be performed without significant discomfort or fatigue.

With regard to resistance training, it can be more difficult to determine when increases are appropriate. Healthy adults exercising for fitness normally are advised not to increase the weight lifted until the last one or two repetitions of an exercise do not feel slightly challenging. When they do increase the weight used, they reduce the number of repetitions and gradually increase repetitions. For example, someone doing 15

repetitions of the leg press with 40 pounds of weight might change the program to include 10 repetitions with 50 pounds. Such an individual would not add additional weight until 15 repetitions at 50 pounds could be handled comfortably.

Most health professionals agree that the best approach is to use comfort as a guide. Small, incremental increases generally can be undertaken safely as long as the body is given time to adjust to each change. When in doubt, it is best to wait additional days or weeks until increasing the level of activity.

Working Out in Cold Weather

It's easy to be motivated to exercise in the spring and fall, when the weather is moderate. During winter, maintaining the exercise habit may be more of a challenge, particularly when the temperature drops below freezing. By dressing properly, inclement weather need not be a deterrent to physical activity.

The biggest challenge to working out in cold weather is dressing to avoid sweating. When sweat accumulates on the skin and wind blows across it, the body is cooled very rapidly. If the individual continues to exercise in the wind, the body temperature can drop dangerously low. When a condition called hypothermia (significant loss of body temperature) sets in, an individual can die.

The windchill factor is the most important variable to monitor when preparing to exercise outdoors. The windchill factor is a measure of the combined effect of temperature and wind velocity. For example, if the temperature is 40 degrees and the wind is 15 miles per hour, the windchill factor is 22 degrees Fahrenheit. In effect, the body will react as if the temperature were nearly 20 degrees colder than the thermometer reading.

If you plan to exercise in the cold often during the year, investing in a windchill factor chart is a good idea. Such charts are included in many exercise books, as well as in books about the weather. Television weather channels often provide this information along with temperature, wind, and precipitation readings.

Other tips to stay warm during the cold season include:

- Layer lightweight clothing that can be removed and tied around the waist, such as long-sleeve sweatshirts, to make it easier to adjust to changing conditions. The layer next to the skin should be a fabric that wicks moisture away from the body, such as polypropylene. Zippered vests and pullovers are other good choices.
- Dress to be slightly cool at the start of the workout. This will minimize the formation of sweat as the body produces heat during exercise.
- As much as 40 percent of the body's heat can be lost through the head, so keep the head covered to reduce heat loss.
- Take special care of the fingers, toes, ears, and nose. These areas are most prone to frostbite.
- Exercise in the warmest part of the day.
- If the walking or running route requires exercise in a headwind, do so early in the workout. This reduces the possibility of moving into the wind after warming up and beginning to sweat.

Heat-Related Illnesses

Anyone can experience illness as a result of exposure to excess heat, such as a high environmental temperature. Older adults, however, may be more susceptible than others due to the presence of other health conditions, changes in the body's ability to regulate internal temperature, and use of medications.

Common heat-related illnesses include heat cramps, heat exhaustion, and heat stroke. While heat cramps are uncomfortable, they rarely cause long-term health problems if treated promptly. Heat exhaustion is more dangerous, but it too can be managed. Heat stroke, the most critical of the three conditions, may result in death if treatment is not swift.

Heat cramps are one early sign that the body is having difficulty handling environmental conditions. When cool water is provided and the individual rests in a cool place, recovery may occur within a few hours.

Heat exhaustion occurs when the body sweats too much, producing

dehydration and salt loss. Symptoms of this condition include cramps, weakness, dizziness, disorientation, vomiting, and clammy skin. The skin tone is pale or flushed, and the pulse becomes weak and slow.

Heat stroke, the most serious of these conditions, occurs when the sweat system fails to maintain a heat balance and the victim stops perspiring. Its presence can be recognized by high body temperature, dilated pupils, increased blood pressure, weakness, offensive body odor, confusion, a pounding pulse, and hot, flushed, dry skin. In addition, the victim may experience seizures or lose consciousness.

Heat stroke is an emergency situation and victims should be taken to a hospital immediately.

Because heat-related illnesses involve the body's ability to regulate temperature, several conditions may predispose individuals to problems in the heat. Atherosclerosis and other cardiovascular diseases, diabetes, cystic fibrosis, hypothalamic diseases, neuropathies, scleroderma, and infections such as malaria are common chronic conditions that may increase the likelihood of heat-related illness. Alcohol and some drugs (beta-blockers, anticholinergics, tricyclics, phenothiazines, amphetamines, and diuretics) also may increase the possibility of heat illness. Other factors such as constrictive clothing, high humidity, rapid changes in air temperature, and dehydration also influence heat illness development.

Although many factors contribute to heat illness, avoiding health problems is not difficult. Drink at least eight glasses of water each day, and increase water consumption when the weather is hotter than usual. If traveling, chilled water bottles can be taken along in a cooler. If the temperature feels uncomfortable, move out of the sun and into a cool building. Sit down and rest, drink additional water, and sponge the body with cool water. If you must be outdoors in the heat, wear lightweight, loose fitting clothing that allows perspiration to evaporate.

Eating to Be Active

After taking up exercise, a common question is how to eat to fuel the additional activity. For most healthy adults, eating for an active lifestyle is not difficult-it's really no different from general healthy eating guidelines.

The main components of food include simple and complex carbohydrates, proteins, fats, and alcohols. Most foods are made up of a combination of these components, though some foods contain mostly one form of nutrient.

Most people are aware of the importance of diet through media reports about nutrition, fad diets, and the medical consequences associated with specific eating habits. Many of these reports are confusing, and some seem contradictory.

The key to a healthy diet is eating a variety of foods in moderation. Trying to eat specific amounts of certain foods is difficult, particularly when an individual eats many meals away from home. Furthermore, dietary research indicates that only individuals who are extremely active—for example, professional athletes—need to modify significantly a basic healthy diet. By eating a good selection of foods, the likelihood of missing a crucial nutrient is reduced.

What is a healthy diet? The U.S. Department of Agriculture (USDA) has developed a Food Pyramid to help Americans maintain good health. As people age, however, their nutritional needs change. To account for those changing needs, researchers at Tufts University have developed what they call the 70+ Food Pyramid. By following this plan, older adults can ensure that they meet their daily nutrient requirements.

The 70+ Food Pyramid, shown on the next page, recommends that older adults include the following foods in their diets each day:

- 6 or more servings of bread, fortified cereal, rice, and pasta that include sources of fiber
- 3 or more servings of vegetables
- 2 or more servings of fruit
- 2 or more servings from the meat, poultry, fish, dry beans, eggs, and nuts group
- 3 or more servings from the milk, yogurt, and cheese group
- Small amounts of fats, oils, and sweets
- Possible use of calcium, vitamin D, and vitamin B-12 supplements

Unlike the USDA's Food Pyramid, the 70+ Food Pyramid also includes a recommendation for eight glasses of water each day. Tufts researchers included this component because adequate hydration is a chronic problem for many seniors. Some adults experience decreased thirst as they age, and many medications commonly taken for chronic conditions such as hypertension promote dehydration. By drinking at least eight glasses of water each day, older adults can reduce the likelihood of problems related to dehydration.

Another difference between the two charts is that the 70+ Food Pyramid suggests the possible use of vitamin D and B-12 and calcium supplements. Absorption of calcium and vitamin D decreases with age, and when the body receives inadequate amounts of those nutrients, the likelihood of bone fractures increases. Some older adults experience decreased absorption of vitamin B-12, a nutrient that is important for proper nerve function. The flag by these nutrients on the 70+ Food Pyramid indicates that seniors should discuss their use with their physicians.

Determining the appropriate serving size is a matter of experience. A 3- to 4-ounce serving of poultry or meat is about the size of the palm. Some people use small scales to help themselves prepare the correct portion size. Most medical centers can provide more detailed information about serving sizes or direct patients to trustworthy sources of information.

Such a diet provides a good mixture of carbohydrates, proteins, and fats. Of course, those who eat a special diet to help manage other health conditions such as diabetes should follow the dietary guidelines provided by their doctor.

Ready, Set, Rest

Physical activity is a great way to get energized for daily activities. To get the greatest pleasure from exercise, active adults need to be sure they get plenty of sleep.

One common misconception is that people need less sleep as they get older, according to researchers at the Mount Sinai (NY) School of Medicine. In fact, all adults need an average of eight hours of sleep each night.

Another myth that prevents older adults from getting the rest they need is the belief that it is natural to sleep less soundly as they age. Falling asleep during the day is a sign that night sleep is inadequate, not a normal result of the aging process.

Chronic conditions that occur more frequently as people age, however, do affect sleep. Arthritis and other bone and joint problems, respiratory problems such as emphysema, and psychological conditions such as depression are among the most common culprits. When these conditions make it difficult to sleep through the night, a physician should be consulted.

Some prescription medicines interfere with a good night's sleep. If the problem persists beyond a few weeks, it may be worthwhile to explore the use of different medications with a physician.

Some individuals find that their sleep patterns shift as they get older. They may feel sleepy earlier in the evening and wake up earlier in the morning. When this is the case, it may be wise to consider exercising in the early morning. Completing the workout in the early morning frees the rest of the day for social and family engagements.

Sleep deprivation need not accompany the aging process. These suggestions provide several ideas for reducing sleepless nights:

- Avoid exercising close to bedtime. Physical activity increases body temperature, as well as general alertness, so it may make it more difficult to fall asleep.
- Use daytime naps sparingly. There's nothing wrong with a few winks of shut-eye, but naps longer than 30 minutes may upset the body's natural rhythms, making quality night sleep less likely.
- Go outside during the day. Exposure to daylight reinforces the light-dark cycle that is central to good sleep.
- Keep the bedroom cool. A slight drop in body temperature during sleep is natural. Trying to sleep in a warm or stifling room may impede sleep.
- Check the bed for adequate support. If the bed does not provide good support for the back, as well as a comfortable "feel," falling and remaining asleep will be more difficult.
- Ask your doctor to consider changing medications if drug side effects may be causing lost sleep. Drugs that cause drowsiness

during the day may impede night sleep too.

- Avoid consuming caffeinated beverages and foods (e.g., chocolate) in the evening.
- Limit intake of alcohol and other fluids in the two to three hours before bedtime. This will reduce the likelihood of a need to get up in the middle of the night.
- Go to bed each evening and wake up each morning at the same time, or as close to the same time as possible.
- Follow the same bedtime routine each night, including a brief period of something relaxing.

Routine Eye Care a Key to Preventing Vision Damage

Most adults have heard the admonition that if they don't have adequate light when reading, they'll go blind. While this statement isn't completely accurate, it is true that taking proper care of the eyes will help avoid vision problems later on. Because several eye conditions become more prevalent with age, regular vision checkups are an important tool for prevention.

Good eye care is particularly important for active older adults. Maintaining good vision helps to reduce falls and permits full enjoyment of physical and social activities.

What eye conditions cause the most trouble? Some of the more common problems include cataract, glaucoma, and macular degeneration.

A cataract is a cloudy area in the lens of the eye. It blocks the passage of light to the back of the eye, which makes it more difficult for a person to see. Cataracts become more common as people age, and affect about half of Americans aged 65 to 74 and about 70 percent of those aged 75 and over. Cataracts usually affect both eyes, but may not develop to the same degree in each eye.

Cataracts may not be noticeable until they have been developing for several years. The primary symptoms include painless blurring or dimming of your vision, increased nearsightedness, distortion or ghost

images in either eye, and sensitivity to light and glare, especially in bright sunlight or while driving at night.

Glaucoma is a condition in which the optic nerve, which carries the images we see to the brain, is damaged. Damage to the optic nerve can cause blind spots to develop. In some people the pressure of fluid within the eye damages the optic nerve, while in others the cause of damage is not as obvious.

Glaucoma develops slowly, with the field of vision slowly becoming smaller. Many people do not realize they are losing their sight until some damage to the optic nerve has occurred. Those who develop a condition called angle-closure glaucoma experience blurred vision, severe eye pain, headaches, haloes (which may appear as rainbows) around lights, and nausea and vomiting.

Macula, tiny structures in the center of the retina, enable the viewer to see fine details. This sharp, straight-ahead vision is necessary for such activities as driving, reading, recognizing faces, and sewing. There are two common types of macular degeneration, dry and wet. The aging and thinning of the macula causes dry macular degeneration, which accounts for about 90 percent of all cases. This type develops fairly slowly, and vision loss may not be severe. In wet macular degeneration, new blood vessels grow beneath the retina, leaking fluid and blood that can cause a large blind spot in the center of the visual field. This form is much more noticeable than the dry form.

Macular degeneration is most common in people after age 60, but may develop in individuals during their forties and fifties. It often runs in families. The most common symptoms include blurry or fuzzy vision, a dark or empty area in the center of the field of vision, and the wavy appearance of straight lines such as sentences on a page, telephone poles, and door frames.

The good news is that most health problems involving the eyes can be treated. Although surgery often is required to restore full vision, early detection of problems will improve the outcome significantly.

Dance (Includes a variety of dance forms)