

# **HANDBOOK FOR TEACHING SENIOR SKIERS**

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## ***INTRODUCTION***

This handbook is meant to help ski instructors understand issues surrounding senior skiers and use that understanding to provide quality instruction to the growing number of prospective senior clients. The information is broken down into theory and practice. That is, *PART ONE* provides background information about senior skiers, and *PART TWO* provides concrete suggestions, based on the background information, for instructors to use in teaching these clients.

## ***PART ONE: THE THEORY***

### RATIONALE

The ski industry today faces new horizons in ski instruction. The leveling-off of skier days in the industry and thus the need for ski instruction necessitates many new approaches. One of the most important indicators of a need for change is the demographics of our current population and the future population of seniors that these figures predict. The population of the United States is growing older at a rapid rate. The over-fifty age group is a formidable force, and because it is

increasing each year, the aging Americans will soon be in a position to control our society politically, socially, and economically.

While the ski industry has been dealing with a fairly young population for the past few decades, this is changing to reflect the demographics of our nation.

Thirty-eight is the average age of today's skiers. But this age group is not expanding, while our over-50 group is. According to a survey by Sports Marketing Research (SMART) in Princeton, N.J., of skiers now aged 55 and older, 42% learned to ski after age 36. One in five skiers over 55 hit the slopes for the first time after age 45.

This does not mean that we must change the instruction of skiers completely, as this is by no means feasible. Rather, we must develop specific ways to make skiing more enjoyable for our senior population and teach our instructors how best to impart this information to our senior clients.

### WHAT IS A SENIOR SKIER?

Who are senior skiers? While one defining characteristic is chronological age, it is certainly not the only characteristic. In an article titled "The Aging Athlete," (1989) Dr. Darrell Menard and Dr. William D. Stanish explain that people age at

different rates depending upon such things as their genetic makeup, their lifestyle, and disease processes. The aging process causes a gradual breakdown of organ systems which erodes function and leaves the individual more vulnerable to metabolic disturbances, environmental stresses and disease.

For our purposes here, we consider senior skiers to be those skiers who are approximately age 50 and older. Naturally, this is just a guide and will vary with each client (see “Physical Characteristics” and “Psychological Characteristics” below for more information). Senior skiers possess a wide range of physical abilities and psychological outlooks regarding skiing. Some are out of shape and have a very conservative attitude about their age and abilities. Others are in great shape, work out on a regular basis, and maintain the attitude of their youth regarding their age and abilities. Still others fall somewhere in between. These clients work out moderately and feel confident about their abilities, yet they understand that their bodies have aged and as a result, they have to make certain adjustments to accommodate for this aging process.

Senior skiers may be grandparents with limited background in skiing whose grandkids are beginning to ski, so they want to give skiing a try in order to share in their families’ leisure time. Others may have skied while in high school or college but have skied very little since. They may now be interested in picking up

the sport again as a way to stay in shape and spend their retirement days. Still others may have skied consistently for 25 or 35 years but are in a rut and feel it is time to investigate how to improve. Perhaps they have new boots, bindings, poles, skis and accessories, but they ski the same way they did years and years ago and are ready to learn new techniques to match their new equipment.

Regardless of their motivation, senior skiers are becoming a larger part of the ski industry's landscape, and it is our job as professionals to create a niche for them.

Thus, now is the time to hone our teaching practices to meet the unique needs of these enthusiastic athletes. We can do this by first examining the physical and psychological characteristics of senior skiers and using that information to create a learning environment that takes into account their unique differences and provides the best possible opportunity for them to continue appreciating all the sport has to offer.

## PHYSICAL CHARACTERISTICS

Many of the physical characteristics listed below do not pertain directly to skiing, but they nonetheless affect seniors' enjoyment of the sport.

Skin: As people age, their skin becomes more sensitive to cold temperatures.

Exposed areas such as the face and head need more protection from cold and

wind-chill. Hands and feet may be more susceptible to low temperatures. Also, exposed areas are more sensitive to ultra-violet rays. Therefore, greater care must be taken for protection from sun and cold exposure.

Sight: Eyes must be more diligently protected from the sun. The eyes of senior skiers do not adjust as rapidly as they once did, especially when moving fairly rapidly, and they take more time to focus from distant objects to closer ones. Bifocals and trifocals are a definite factor requiring special considerations, as fewer seniors utilize contact lenses than their younger counterparts. Glasses fog more readily than goggles, and thus create a visual handicap as well as being a genuine nuisance. Stigmatism and glasses frames can affect peripheral vision. Wind and snow can make eyes tearful, which can cause all kinds of performance problems. Depth perception decreases with age. Various shadows and different intensities of natural light can make focusing difficult, especially while moving.

Sound: The sound of wind, the sound of one's own skis on the snow as well as those of other skiers and snowboarders, the sound of lifts and snowmobiles, and the sound of the instructor's voice all create a vast amount of stimuli for the nervous system to absorb and consequently to act and/or react to. These sounds may not impact experienced skiers' ability to perform, but they can certainly affect novice and senior skiers' ability to perform. Hearing aids can alter

these stimuli, which can affect the reaction of the nervous system. Even a small amount of hearing loss can affect one's ability to perform.

Balance: As age increases, the performance level of the inner ear decreases, including the sense of hearing and balance. Thus, the ability to perform certain physical tasks necessary to ski becomes more difficult. The blurred images, both visual and auditory, of other skiers going past (many times too closely) create stimulations that may be very disturbing to one's balance.

The body: Joints, tendons, ligaments, muscles and bones are an integral part of performance on skis. As a person ages, changes in the make-up and performance levels of these various body parts impact skiing performance. For example, strength and endurance are affected by an increase in age. In addition, older muscles experience increases and accumulation of lactic acid during physical exercise. While a quality and well-maintained exercise program would certainly help with these issues, many senior skiers have not participated in such a program. Therefore, their muscles may be tight and constricted, making it more difficult to perform certain physical tasks. Arthritis and other partially disabling diseases also have an impact on skiing ability.

Menard and Stanish explain that the greatest threat facing the elderly is Osteoporosis. Osteoporotic bone alteration could represent a serious threat to

aging athletes, particularly if they begin their sporting program when they are 50 or older. This is of special significance to the senior client taking up skiing for the first time or after a long lay off and also to the one-week-a-year skier. For those individuals who remain active throughout their lives, osteoporosis is less of a concern since physical activity appears to counteract the process of demineralization. Considerable research has focused on Osteoporosis as a disease phenomenon and demonstrates that regular physical activity may not only prevent Osteoporosis but to some extent may even reverse the process.

Muscle strength decreases beyond the age of 50, so by the age of 65, a person maintains only between 75% and 80% of their peak strength. This decline parallels the decline in muscle mass that also occurs with aging. The aging athlete is usually the victim of two sets of injuries: those that occurred in his/her youth, and those that result from current activities. Aging athletes are by no means immune to injuries of high velocity, but these types of injuries take a backseat to injuries based on degenerative tissue problems, such as wear and tear disorders resulting from chronic overuse of trauma experienced over years of athletic stress.

Breathing: Breathing can be affected by age. Older bodies are not as efficient in the exchange of oxygen and carbon dioxide. Adjustment to higher elevations, or the lack of ability of the body to do so, is a factor to consider in working with

senior skiers. Not all seniors are in good physical condition and for many, simply breathing while skiing can be a problem. Menard and Stanish explain that there is a question of how much oxygen a person can use in maximum exercise.

There is a decline in this use of oxygen while exercising at a maximum as a person matures. This decline is a direct result of the reduction in the maximum obtainable heart rate that occurs as people become older.

In addition, there is an increase in the time required to return to resting heart rates following exercise. The consequence of these changes is a limitation of cardiac output and maximum aerobic capacity. Performance of the respiratory system also deteriorates with age. Many of the changes which occur manifest as an increased sense of respiratory effort experienced during exercise. As a consequence, the older athlete will experience more breathlessness during a given athletic endeavor than a young athlete. The aging process encourages a number of changes in the respiratory system. The ability of the lungs to have highly efficient elastic recoil is affected. There is also a reduction in the strength of the muscles of the respiratory system. The result of these changes is a reduction in the arterial oxygen pressure of aging athletes. Thus, during exercise they are unable to deliver the same quantity of oxygen to the working musculature as their younger counterparts.

Reaction Time: The ability of the senior skier to react quickly is reduced. Skiing demands quick responses of various parts of the body to implement the necessary physical skills. Menard and Stanish confirm that the function of the central nervous system is adversely affected by the aging process. There is a decrease in nerve conduction velocities by as much as 15% by the age of 80. The ability to coordinate complex motor activities and maintain balance also diminishes with maturity. In terms of deteriorating function, the aging athlete experiences a slowing of reaction time and difficulty in preserving superior skill levels. While these decreases in function of the central nervous system are classically attributed to aging, they can also be exaggerated by inactivity.

Feet: Age frequently affects feet. Feet play an integral part in skiing. Feet tend to change with years. They may get wider. Pronation that was not very pronounced at one time in life can increase and adversely affect one's skiing. The feet may become bonier. Bone spurs may develop, thus making proper boot fit difficult. Since modern ski technique utilizes the feet to a great extent, any problem with the feet can cause problems with skiing.

Miscellaneous: Things that we never think about, such as the teeth and gums being more sensitive to cold, may actually have certain adverse effects on one's ability to perform physically just because discomfort inhibits physical performance. Another issue to consider is that skiing requires the ability to use

both sides of the body. Senior skiers have a more difficult time being ambidextrous. Finally, excess weight carried by seniors tends to exacerbate all of the physical limitations discussed above. With regard to general emotional comfort, senior skiers may find crowded slopes, lift lines, food lines, and restroom lines discomforting.

### PSYCHOLOGICAL CHARACTERISTICS

As people get older, their concern about injury becomes greater. They are not as daring as they once were. Skiing is considered a high-stress activity. It is generally accepted that physical injuries to the human body mend slower and with more difficulty for our senior population. So naturally, seniors are concerned about their safety and well-being. The more daring characteristics of the younger generation are generally lacking with this crowd.

Lifelong fears become more apparent with age. Fears that were not self-evident to the individual can quickly manifest themselves when a person partakes in a high-stress activity. Driving a car is a high-stress activity in many parts of our country, but it is an activity in which people have been involved for a long time and psychological adjustments have been made. However, when people begin ski instruction, they cannot rely on psychological adjustments because of the newness of the activity. Thus, ski instruction may bring out latent fears: fear of

speed, fear of height, fear of embarrassment, fear of peer pressure, and fear of not having 100% control of the situation. Even a minute lack of control can create a great deal of anxiety. Not having control creates a great deal of stress in what is often an already stressful endeavor. Many distracting stimuli exist in skiing, and because of senior skiers' diminished physical skills, they may feel an increased loss of control over their environment and a subsequent increase in their stress level.

One final psychological component to consider is the ability to concentrate, to bring to bear one's complete mental processes in obtaining the results desired in physical manipulations of various parts of the body. Total concentration by the client is necessary to get body parts to respond in such a way that necessary skills are developed. The ability to concentrate may be one skill that senior skiers have developed more than their younger counterparts. As a result of other physical activities and sports, the skill of concentration may have been nurtured to a high degree in these clients.

## CATEGORIZING SENIOR SKIERS

Although each senior skier possesses unique characteristics, seniors as a group often exhibit similar behaviors on the ski hill. Therefore, they can be categorized into four general groups. To aid in the discussion, we have taken the liberty of

naming them as follows: Senior Rippers, Senior Explorers, Senior Cruisers, and Senior Rookies. Senior Rippers tend to be more contemporary skiers, often willing to ski a little faster and experience a wider variety of terrain. Senior Explorers are usually a little older but are still good skiers. They can ski the whole mountain, so bumps, steeps, crud, powder, and other advanced skiing is in their realm. However, they will tackle these conditions with slightly less “reckless abandon” than the Rippers. Senior Cruisers tend to be the most advanced in age, and they are usually skiers who enjoy blue and black groomed runs, love to carve turns, but don’t have to ski twenty runs to have a good day. Senior Rookies are 50 and older but are beginning skiers. By considering these four groups, we account for the desire and comfort level of most of our senior skiers. Further, we improve our ability to reach all seniors and make contemporary skiing fun for everyone.

## ***PART TWO: THE APPLICATION***

Once ski instructors understand the physical and psychological characteristics of senior skiers, they can begin to apply this understanding to the development of quality lessons that account for these characteristics. In this section, we will discuss the unique needs of skiers as they relate to the Common Threads and the Teaching Model. We will provide specific information regarding how to account for the physical and psychological characteristics of seniors both on and

off the hill so that instructors can help to create a totally positive mountain experience for these clients.

## APPLICATION AND THE COMMON THREADS OF CONTEMPORARY SKIING

### Stance / Balance

This skill, the basic building block for all the other Common Threads, must be mastered in order for senior skiers to progress very far in the development of skiing skills. The senior skier's physical limitations complicate feeling sensations that are necessary to acquire an athletic position. The eyes, ears, joints, lack of sensitivity of the foot to body position, along with other characteristics of the senior student make getting into this position more time consuming and difficult. Senior clients will probably be more contrived in their stance and not as relaxed as they should be. It may be necessary to alter equipment such as finding a less demanding boot or working without skis to facilitate obtaining this balanced stance. Psychologically, the fear of the unknown in trying something completely new may affect student performance.

Because senior skiers have many physical and mental characteristics that affect equilibrium, the instructor must be willing to utilize multiple approaches to help the client achieve a balanced position. Since a student of any age must master

this athletic stance and/or position, providing adequate time is important. In fact, time is probably the most important factor to be addressed in dealing with senior clients. When teaching Senior Rookies (see “Categorizing Seniors” above), create opportunities for them to achieve functional balance while standing, walking, and moving down an incline. For the other categories of seniors, ample time must still be spent on stance / balance, but this can often be done on skis. Since one of the psychological characteristics is fear of not having control of the situation, the instructor must not proceed to another skill until the client is comfortable with the new skill he is learning.

### Rotary Movements

Rotary movement, or movement of the body around the axis of the body, may confuse those senior skiers who skied many years ago and perhaps had lessons at that time. If it was during the 40s, 50s or 60s, they will probably rotate the upper body rather than using a rotary movement of the whole body around a central axis. They are not using the feet to turn the skis by steering, but are using the upper body to initiate and complete the turn. So the feeling of moving the body around an axis is not new to them, but what is new is using the whole body to rotate around the central axis of the body by using feet and legs to turn the skis. With today’s equipment, the use of feet and legs to turn the skis requires far less muscular effort than rotating just the upper body. This is just one of many reasons why seniors need to be encouraged to ski today—it takes

far less energy to turn the ski, and less energy expended is what senior skiers need. They do not have a lot of surplus energy to waste on inefficient movements.

### Edging Movements

### Pressure Control Movements

### Rhythm and Flow of Movements

## APPLICATION AND THE TEACHING MODEL

### Introducing the Lesson

Introducing the lesson may look dramatically different for seniors. Many ski areas have already developed senior programs, wherein the introduction takes place indoors, often with continental breakfast and friendly chit-chat. Ski instructors should participate with the clients during this period, as it provides an authentic opportunity to establish rapport and create an open, friendly, and

supportive lesson environment. In addition, it minimizes certain psychological factors, such as crowded food lines, and allows the clients to feel completely comfortable with the process of skiing.

Regardless of where the introduction takes place, instructors should find out about the professional and athletic lives of the clients. This information will help in determining learning styles and physical fitness, both of which will be critical in planning the lesson objectives and activities. For example, even though the client's present lifestyle may not be compromised by old injuries, it helps tremendously if the ski instructor is made aware of previous injuries before beginning the lesson.

This is also a good time to determine whether the clients' equipment is appropriate. Instructors need to be aware of specific problems and be able to make suggestions in order for the client to benefit from instruction. Because of the above-mentioned physical characteristics, many seniors may require special equipment, such as special supportive belts, orthotics, pile grips for arthritic fingers and wrists, and knee braces for warmth and support. All should have modern skis and boots that have been fit by a professional. Boot fit is more critical with feet that have changed over the years, so it is not advisable for clients to use older boots. In addition, clients may need or desire boot warmers.

Skis should have an appropriate side cut in order to minimize the muscular strength needed to carve a turn. Warm gloves and/or glove warmers are important, as they address the circulation characteristics of seniors. Quality goggles will help with many of the vision problems mentioned in “Physical Characteristics.” For example, goggles with fans may prevent eyeglasses from fogging. Clients should apply sunscreen and take additional sunscreen in a pocket for future applications.

### Determining Goals

When determining goals for each client, certain psychological characteristics of senior skiers need to be considered in order to best meet their skiing needs. One consideration is why they are interested in taking skiing lessons. Are they partaking in instruction because of pressure from a spouse? Perhaps one spouse has been skiing all along and now that the kids are gone and the nest is empty the other is trying to share their mate’s interest in the sport. Are they partaking in instruction because of pressure from friends or colleagues? Perhaps everyone in the office skis and the urge to share in the fun pushes seniors to tag along. Are seniors simply skiing to keep physically active? Perhaps they see skiing as an activity that allows them to do so in the winter months. Answers to these questions will help instructors to help the clients to establish goals for the lesson.

The instructor will also need to ascertain the skiing ability of the clients.

### Planning the Lesson Objectives / Activities

### Presenting Information (Telling How and Why)

#### Demonstrating

During demonstrations, instructors should use back and forth turns. This will enhance the control, confidence, and comfort of the client. To clarify, all turns in skiing can be generally described as either back and forth turns or fall line turns. Turns that make a 180 degree shape and bring the skier back perpendicular to the fall line are back and forth turns. Turns that are less than 180 degrees and bring the skier back to the fall line within less than 90 degrees are fall line turns. Back and forth turns control speed while fall line turns tend to accelerate the skier.

#### Practicing

Since skiing is a stressful sport, it is necessary to keep this stress at a low level. While practicing, it is important that clients practice in their "comfort zone" as much as possible. Since control leads to confidence and confidence to comfort, every effort must be made to ensure that clients feel control during their practice. Terrain selection is critical and probably needs more emphasis than other

aspects of instruction. For the beginning senior, terrain must be very gentle and non-threatening, where complete control can be achieved with little if any stress. Even with more accomplished skiers, it is necessary to practice on terrain that is easy for them so they may more readily learn a new skill. Most skiers ski at a rate of speed above their ability level. In order to facilitate acquiring new skills, the clients need to slow down so they can bring full mental processes into focus and concentrate on that new skill. Moving to easier terrain is often the answer.

In addition, instructors should include more rest periods during the lesson to accommodate senior clients' aging bodies.

Checking for Understanding

Summarizing the Lesson

AN EXAMPLE OF A SENIOR SKI LESSON