

# VISUAL SKILLS REQUIRED FOR **SKIING/SNOWBOARDING**

## Accommodation and Convergence

Skiers must be able to focus rapidly on parts of their run and allow their eyes to track obstacles in their path to determine and affect the proper maneuvers. For the alpine (downhill) skier, moguls offer a challenging situation. The skier's eyes must track the ideal path to engage in and must accommodate rapidly to the hills or mounds that seem to pop up on the slope. As for the slalom skier, he/she experiences a combination of focusing flexibility and peripheral awareness as he/she projects his/her sight to the forward gate and tightly squeezes by the immediate one.

## Anticipation Timing

Perhaps more than others, this skill is most important and evident in freestyle events. Judging when to act, as dictated by the visual system, is the key to effective performance. In order to succeed, physical movements must be made at the right time. Whether the ski jumper is performing aerials off the 'kicker' or travelling at speeds of around 60mph down specially prepared ramps (in runs) before taking off to perform flight jumps (which can reach over 400 ft. in some cases), the ability to anticipate and react at the precise moment is a major factor to effective execution.

## Concentration

Unwavering focus on every bit of pertinent action, near and far, and the discipline not to be distracted constitutes the concentration that the downhill skier must maintain. Straight downhill runs or mogul runs are two events for which the highest levels of concentration are mandatory in negotiating the descents. These events are unforgiving, and an out-of-control skier is in danger of injury.

## Depth Perception

A skier's ability to instantly and accurately judge distance and speed is crucial to the timely execution of maneuvers. Executing somersaults and negotiating moguls are especially challenging to the skier who must rapidly adjust physical responses in accordance to his/her position on or to the slope. When the skier's eyes are working in unison, they have a clear, three-dimensional image of the surroundings on which to base physical adjustments and positioning.

## Eye-Hand/Foot/Body Coordination

Planting the poles in the snow, as an aid to turning control when parallel skiing, requires good eye-hand coordination, as it is necessary to plant the pole precisely between the boot and ski tip while executing the turn around the pole. For the slalom skier, precise maneuvering around the gates can make the difference between immediate disqualification and completion of the run.

## Peripheral Awareness

Most skiers have experienced particular weekends when the slopes are inordinately crowded, and under these conditions, it is imperative that one be aware of the traffic on the slope. At the same time that skiers are concentrating on their fall line, they must be peripherally aware in order to avoid immobilized or out-of-control skiers traversing the fall lines.

## Speed and Span of Recognition

The amount of information and the speed at which it is absorbed and processed enhances the skier's ability to be in continuous control while negotiating the ski run. This skill is most valuable for those skiers who enjoy the back-country slopes through forested and rough terrain. The skier's speed in recognizing off-piste obstacles will have a great effect in terms of his/her ability to remain in control. Instantaneous recognition drives the physical impulses to a better reflex level as the reflex action becomes more automatic and less thought out. An increase in the amount of information one is able to take in at once and rapidly digest or interpret also quickens the skier's physical responses and makes them more accurate and efficient.

## Visual Reaction Speed/Time

It is imperative for the competitive alpine skier to possess quick visual reaction. The amount of time available to process visual information and initiate a physical response is extremely limited because of the high speeds involved in these events. The downhill skier must rapidly choose the best fall line and initiate the transition almost instantaneously.