

Skiing Simplified: Foot Position

Foot Position

The purpose of this document is to define foot position in skiing. Before we understand how our body moves when skiing, it is helpful slow things down to understand the strategic body positions at key points in that movement that control balance. Those key points are defined when the forces of terrain, gravity and momentum change, requiring balance changes like changing the dominant foot. The only thing different between this presentation of balance and others is that it is a strategic (not tactical) description. For example: instead of focusing on the tactical extension movement of the leg it describes the strategic positions of the foot (in relation to the rest of the body) before and after that movement.

Strategic Positions define Tactical Movements

Strategies are static views for understanding, so positions are strategic. Because they are static, strategic positions are easier to see and understand than movements. In other words, the first step in understanding a tactical movement would be to understand the start and the finish of that movement. In skiing, those movements flow together seamlessly so there is no visible start or finish. But, there are forces like gravity, terrain and momentum that help us feel and define those starts and finishes. A common example (describing the strategic start and finish of a tactical movement) would be a local person giving directions to a confused visitor. It would be courteous for the local to first describe the start or where they are, then describe the finish (what the visitor will see when he gets there and the relationship between the start and finish, the distance and general direction between the two points) so he will know where he is going, before describing the movements or turns to get there. So, like foot positions in skiing, the start and finish positions and their relationship are strategic positions. All positions are strategic, and strategic definitions are for understanding.

Body positions from other sports like catching

Strategic body positions control balance. Balance is not unique to skiing. So, the proper balance positions in every sport can probably be used to describe skiing positions. To communicate what I mean by foot position and balance, I believe stepping outside the box of skiing to another sport may help. Because I have been a catcher in fastpitch softball for many years, I am going to use catching positions (that most everyone has seen) to describe strategic body positions in skiing. I use catching balance positions because (like skiing) they are rather extreme. Most of the time we see the catcher squatting with his knees bent to the extreme. In this position his feet are back in relation to the rest of his body. Then, when he is ready for action chest comes down and his feet come forward. The ready position is just like a “tuck” in downhill racing, and the squatting position is like the way we absorb bumps in a mogul field or start a turn. As you know, the catcher’s two positions are both rather extreme. Foot position “back” describes one body position and foot position “forward” describes the other.

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Foot Position defines Body Position

Foot and hand positions reflect the whole body position. Because our body is attached to our skis at our feet and we balance on our feet, I believe foot position is an easy way to describe these strategic body positions. Of course, foot position is not the only way. Over the years the other ways have been: hand position, elbow position, shoulder position, hip position, and knee position. They are all connected. The hands are good because they are visible to the skier in motion. But hands really just reflect the more important position of the feet. Because the feet are the in the center of balancing forces, first to move and most sensitive of these connected parts, foot position defines body position.

Foot Position determines Knee Health for all sports

For health considerations, the foot “back” position has extreme tension and the foot “forward” position minimal tension on the knee joint. When I say tension I am describing how it feels as a catcher and skier. In other words, I do not pretend to be a medical technician, just a skiing and baseball technician. In these sports, minimal tension on the joint means max tension on the muscles. (For example: I also have experience standing up, but the opposite is true when standing up. Standing up with your feet forward and butt out and back would also be max tension on the knee joint, so you want to distribute the tension between knee joints and muscles when you stand up by keeping your butt forward and feet back.) Back to skiing and baseball: since my ready position for catching is just like a tuck I probably use it more than other catchers. This may be the reason I have been able to catch for almost 60 years. In skiing, keeping your foot back (when it should be coming forward) can also cause serious knee health problems.

Foot Position for Terrain, Gravity and Momentum Changes

In skiing, the forces of terrain, gravity and momentum change. Skiing is fun when we initiate or control that change. This document defines the understanding of start and finish foot position for that control. My previous documents have defined: those forces, [momentum, gravity and terrain](#); the change in those forces as we go [left, right and down](#); the importance of the [“L” shape](#) of the ski boot in managing those forces; the [use of the arms in balancing](#) on skis; [when to extend in a turn](#); and the pendulum effect of [forward movement](#). All these documents are strategic definitions for understanding, but this one may be the most static. Using the definitions in those previous documents, foot position is “back” and “coming forward” at the start of the “down portion” of a turn. It is forward and coming back at the bottom of the down portion of a turn. In the beginning of the transitions going left or right, foot position is forward coming back, and at the end of the transitions it is back coming forward. In relation to picking up the terrain at the end of a turn, foot position is forward coming back. In the relation to absence of terrain at the beginning of a turn foot position is back coming forward. In relation to gravity at the beginning of a turn the downhill foot is forward coming back and the uphill foot is back coming forward. In relation to momentum at all times the feet are between us and our momentum. Notice how the change in forces cause changes in foot position, and the relationship between foot

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position and our balance on each of these forces: momentum, gravity, and terrain. Since we balance on our feet, and (like in all sports) the feet move first, foot position also drives the whole body position.

Summary: Foot Position

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