

Skiing Simplified: Arms and Balance

Arms and Balance

The purpose of this document is to define the use of the arms in balancing on skis. In skiing we initiate movement with the lower body and the upper body reflects and (through balance) empowers that movement. In other words, proper upper body movement results from proper ankle, leg and hip movements. Because they reflect what is happening in the lower body, the arms indicate sensually to the skier when things are going well down below. So, if the arms both look and feel good, we are doing something right with the lower body. Because they are visible to the skier, since day one ski instructors have talked about things like pole plants. Throughout my [“Skiing Simplified”](#) documents my theme has been the relationship between slowing down and speeding up. They are both required, they are opposites, and learning to do one efficiently will help in learning the other. Because the end of the turn is usually the same for both, a point at the beginning right before we go [down](#) or through the turn keys their efficiency. Of course (like all opposites) at that key point the arm position for slowing down is opposite the arm position for speeding up. Plus, to fully define how arms relate to balance on skis, this document also defines arm movement from that key point through the turn and transition.

When slowing Down (Balance Chest out and Arms apart)

Whenever a skier uses his edges to slow down, the chest is out and therefore the arms are apart. At the key where we begin the turn and slow down we balance with the chest out and therefore arms apart. Remember from [The L Shaped Tool](#) document, we slow down by using the heel and outside of the foot to rotate around the upper leg of the “L” and then extending into the [terrain](#) for max friction. The best balance position for this movement is chest out and therefore arms apart. However, to avoid fighting gravity we avoid riding the brakes all the way around the corner. So, we usually finish a decelerating turn by speeding up balanced with the chest in and arms together. In all cases, after we rotate, we extend the legs.

When speeding Up (Balance Chest in and Arms together)

Whenever a skier uses his edges to increase speed, the chest is in and therefore the arms are together. When the chest is in, we use the arms in an opposite way to balance than when the chest is out. The arms still go up when we extend the legs, but since our chest is pointed down (when we are crouching), they are going up in relation to our body and forward in relation to our skis. When speeding up, the emphasis (steering, weight and balance) will be on the outside arm. So, when in a crouch with our chest in, we will emphasize the opposite or outside arm, and it will be right in or just ahead of the moment of the momentum. Remember from [“The L Shaped Tool”](#), we speed up by using the big toe and the inside of the foot to rotate around the lower leg of the “L” and then extending away from the terrain for minimum friction. The best balance position for this movement of the foot and ankle is chest in, arms together, and opposite arm in or just ahead of the momentum. In all cases, after we rotate, we extend the legs.

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Arms move up when extending the legs

In either turn, after we rotate we extend the legs. To balance, arms move up whenever we extend our legs. They move up to stay at chest or sternum level. If we do not actively move them up they will drop and throw us out of balance. When balanced for a decelerating turn, it takes more effort to move the inside arm up keeping it at sternum level. When balanced for an accelerating turn, the opposite is true. It takes more effort to move the outside arm forward to stay in or be just ahead of the momentum, and with the chest in the relaxed inside arm will be even further ahead of the momentum. Because you are in a turn, this up movement is also forward, keeping you balanced over your skis with no forward or backward pressure in your boots. So, whether slowing down or speeding up we extend our legs at the key right after the rotation. We extend them right into the [momentum](#) with our hips facing that momentum (as it turns around the corner). If our lower body is right in relation to that momentum, it will feel good to move our arms up and in line with our skis as we extend the legs. If it is not right in relation to momentum, it will not feel good to keep our arms up and in line with the sternum. So, the inside arm will drop down and in, the outside arm will move forward, this rotation causing a forward sideslip. So, to stay balanced on top the skis, we raise the arms to keep them up with the sternum, especially the inside arm (up and inside, down and outside).

Arms move down when contracting the legs

Arms move down whenever we contract our legs. They come down to stay with the sternum. After we apply the brakes or put on the gas by extending the legs, we contract our legs as we balance over the skis. We contract the legs to lower wind resistance, to absorb bumps, to stay forward on the skis, and to manage the pressures of terrain and gravity. When accelerating out of a turn we come down into the transition, and (to keep the skis from skidding or slipping forward) the focus of balance is on the outside or opposite arm to stay in the momentum. So (to stay centered on our skis) our arms move down and outside, up and inside, and they stay in line with our hips.

Arms move up in transition and down in the turn

A decelerating turn ends with an up arm movement. It is a response to the extension that moves us over our skis into the [transition](#). In most cases, we should be extending out of that turn across gravity, with the inside arm using gravity to help us get back over the skis to the uphill ski in transition. In other words, we extend and contract in transition to go [right on the right foot and left on the left](#). Arms move up when we extend in transition, again especially the inside arm up and forward (like feet, right lead with the right arm and left lead with the left). If there is a delay (extended turn) they can go up twice in transition. The pole plant is when the arms go down in the turn. The extension is in advance of the pole plant.

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Skiing should feel good: Use decelerating turns

As stated before, it feels good to ski with proper arm movement. Plus, it feels good to use both types of turns: accelerating and decelerating. Because they are opposites, they use different muscles. If all we do is arc accelerating turns, we end up using only half our muscles and working our arms too hard most of the day. Because they require lower arm positions, decelerating turns are much more comfortable. Take advantage of the steep terrain and decelerate. Watch for [chest out on the steep in World Cup](#) or see [Japanese drift racing](#) for examples of decelerating turns. Notice how many World Cup races are won on the decelerating turns.

Summary: Arms and Balance

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