Skiing the Bump from Day One

The purpose of this document is to define the things we need to know to stay balanced when skiing. These strategic things need to be known before put into practice, and they are practiced by both racers and first day beginners. These things are twisting, pulling and pushing. To stay balanced, we twist the skis forward, and pull or push them backward. It's all about bumps. Some bumps are real and others are apparent. It is even about avoiding bumps for both racers and first day beginners.

Real and Apparent Bumps

First, I will define two types of bumps: the real terrain bumps we see in the snow and the apparent terrain bumps we feel as we change direction. As we ski, we see those real bumps in the snow and have to make a choice where to turn. Likewise, the hill appears and feels steeper heading straight down than across. In the arc of a ski turn we head across the hill to straight down to back across the hill. That defines the apparent terrain change. The apparent bump is defined by the edge change required to transition from one direction to another. That edge change always happens at the top of the bump. Even if the hill is perfectly smooth, it seems like we go up the front side of a bump on one edge or arc, skis flatten over the top side and down the back side on the other edge.

Rolling, Diving and Twisting to stay Balanced

Now I will define what I mean by staying balanced over and around those bumps. If we are balanced on skis, our thigh muscles are relaxed. With all these bumps, it is very easy to do nothing and fall back on our thigh muscles. If they are tight, we are out of balance. To stay balanced over both real and apparent bumps we push, pull and twist. Like we learn on the flat, twisting is how we flatten the skis to the snow while changing edges and keeping our balance on the front part of our skis. Pulling is how we pull our heels and our skis back to roll forward to keep our balance on the front part of our skis. Pushing is how we push our toes and skis back to (open pike) dive forward to keep balance forward of middle of skis.

Avoiding Bumps to Stay Balanced

Avoiding the bumps first day and in racing: Twisting is used to avoid the bumps first day and in racing. The first day we avoid the bump by twisting to the back and slipping backwards in the to keep our balance on the front part of the skis. Twisting is also used to avoid the real bump when bump skiing by all people. We have a choice, in both choices we focus on the bump and move toward the bump. If we want to arc around the bump to avoid it, we twist to change edges and roll or dive our upper body as it moves right over the center of the bump. If we want to use the front side spine of the bump to slow down, we twist to drift straight into that side with a

slightly backward sideslip and then twist to move towards the next bump with another back sideslip. To get back on line, the racer avoids the hump by making an L shaped turn. So, whether we are an expert or a beginner we focus on the bumps to avoid the bumps.

Learning to Twist, Arc and Change Edges the First Day

Now that we know about avoiding the bumps real and apparent, this is what we will practice the very first day. The first day we will practice moving forward on our skis with a twist forward, keeping our balance off the thigh muscle.

Walking around on the flat

We will just walk around on the flat, using twisting to flatten and edge the skis. Even though we are "just" walking around on the flat, we want to be conscious the arcs of the skis. Since the skis are shaped in an arc, we will move forward from arc to arc and backward from arc to arc, always facing the tangent of those arcs. Where are we when the feet pass? If we are doing it correctly, we are balanced with the weight off both thighs with both skis flat on the snow. On the flat, the arc in our skis give us some traction. We generate the twist from both feet and there is a little float in the middle when the feet pass.

The Wedge or Snowplow

At this time, we might introduce the wedge, but point out it is only good for going straight or almost straight down the hill at slow speed. For example: it is good for the lift line.

The Arc and the Back Sideslip

A better way to ski with the breaks on is to master that back sideslip that keeps us in balance. The skis are designed for us to balance on the front of the skis. They are wider on the front than the back. They are shaped to make an arc when moving forward and a nice sideslip when moving on an arc backward. So, we keep the balance off the thighs by arcing forward and slipping backward. In other words, we never want to slow down with a forward sideslip. To slow down moving forward we just arc up the hill, using gravity. As we do this, we introduce the dive and roll to stay balanced and overcome inertia. This develops patience and belief in that arc Once slowed down by gravity, the twist will get us back off the hump into a nice backward sideslip with the balance still in front and off the thigh muscle.

The Falling Leaf

Combining the forward arc and backward sideslip creates a falling leaf pattern down the hill. We can move back and forth across the hill as we go down by shortening or lengthening either the arc or the back sideslip. In other words, very early in the day we can completely control where we are going.

The Pivot and Edge Change

After mastering the falling leaf pattern, the next step is a back sideslip both ways by twisting both ways. Remember, walking on the flat. The twist starts from both feet with the little float in the middle. Twisting should always flatten the skis to the snow. They can pivot during that little float. It is just a few degrees and you can practice the pivot on the flat. We will be twisting our upper bodies to forward to face the direction we want to move and we will be moving in that direction with a back sideslip because of the twist. We will be twisting forward into a back sideslip moving left, then forward into a back sideslip moving right…left…right, moving down the hill like the bump skier. Never going forward over the hump, heading straight to the bumps but not over the top. That should be the goal for the first day. The next day we practice the other side of the bump. The second day our upper body moves straight to the bump, and, our skis arc around it on the other side. We will still be twisting to get forward, flatten our skis, while changing edges or arcs. When we get to the bump, we must float around it. This is something even racers need to learn and perfect.

Learning to "Float" the Second Day

The second way to avoid the bumps is to arc around them on the other side. To do this we need to never fight gravity. We need to keep the balance off the thighs. We practiced arcing yesterday. We practiced twisting, diving and rolling to keep our balance and begin the arc. We practiced trusting the arc to get us around the corner without us doing anything but keep our balance. We also practiced keeping our bodies facing the tangent of the arc. We practiced using gravity to slow down. We practiced twisting to flatten the skis and change edges. Today we have to put it all together, by changing edges at the top of the hump. For most people, the only problem will be trying to slow down while moving forward, but we know to keep the balance off our thighs. If we need to slow down, we already know how to twist into a backward sideslip while facing the direction we are moving with the upper body. The "float" is the result of all this, and a good name for what we do to balance in the arc without slowing down. The "float" is what we do to never fight gravity. The "float" is why racers can ski on ice.

Speaking of Racers – Two Kinds of Turns – Two Kinds of Floats

This paragraph is about where we are going after the turn. The fall line is the path water would fall down the hill. In skiing, sometimes we want to ski right down the fall line in a series of turns and sometimes we want to "reset" or delay for at least a beat before making another turn. The first could be called a slalom turn and the second could be called a giant slalom turn. But some giant slaloms have a lot of slalom turns and every slalom has at least two resets. The difference is the "reset". There is no "reset" in short swing or slalom turns where the spring of the skis gives us enough energy to float from fall line to fall line. The "reset" is where we use the twist to perfectly flatten our skis to the hill as we traverse and flatten out the top of the hump with our balance on both feet and over those flat skis in an athletic position so we can dive forward

in line with the skis to begin the arc. For those who have seen a skateboarder or snowboarder in a half-pipe, this move accelerates and increases the float. So, the float goes from reset to reset or from fall line to fall line, depending on where you want to go.

Staying Balanced in Traverses and Cat Tracks

Using what we learned the first day, we will apply it to skiing long traverses and those narrow cat tracks, without using the thigh muscles. When we went forward the first day, we did it in an arc. When we wanted to slow down, we used the back sideslip. At first, the falling leaf went straight down the hill. Then by shortening the back sideslip, we could move forward and right or forward and left. Then we learned to twist to change edges without changing direction. Combining these abilities, we could go any direction under control and off the thigh muscle. We could even link arcs. Unless we are on speed skis, our skis are not designed to go straight down or across the hill without a forward sideslip. So, we can stay forward across the hill with linked arcs that draw a garland shape on the snow. To slow down that garland we can add some short back sideslips. On the cat tracks we can link arcs, or link back sideslips, or any combination, all from what we learned on the first day.

Any Questions?

Any questions on what was meant by the aforementioned, the answer is keep the balance off the thigh muscle and face the direction of motion (which is on the tangent of the arc). If you ever wondered if you would ever use geometry or trig, here is your answer. These skis we now use do not have a grove down the middle. They are designed to be used on an arc, all the time. If not, we are in a forward sideslip, unbalanced and uncomfortable. Besides gravity and terrain, we use momentum to balance, and it is on the tangent of the arc. We always face the tangent, and it is turning. This slight turn is accomplished in the ankles, driven by the inside ankle, because we are balancing on the outside ankle.

Summary: Getting over the Hump

The purpose of this document is to define the things we need to know to stay balanced when skiing. These strategic things need to be known before put into practice, and they are practiced by both racers and first day beginners. These things are twisting, pulling and pushing. Keeping the balance off the thighs, and facing the direction of motion. It's all about bumps. Some bumps are real and others are apparent. It is even about avoiding bumps for both racers and first day beginners. Even if the hill is perfectly smooth, it seems like we go up the front side of a bump on one edge or arc, skis flatten over the top side and down the back side on the other edge. I defined rolling, diving and twisting to stay forward and balanced in bumps. Forward and balanced means our thigh muscles are relaxed. The rest of the document describes what we learn on the first day and how it relates to the next day and all the way to racing.