

All Mountain Ski Alliance

Movements in Motion: Fundamentals of Skiing

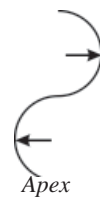
- Cookie Hale and PJ Jones

The following thoughts, behaviors and tactics represent the core of contemporary ski technique. It is a basic check list for coaches, instructors and skiers that enable all to sharpen their self awareness of good skiing behaviors, as well as guide others in their pursuit of great skiing performance: When I watch skiers, these are the main check points I watch for:

1. **Tracks** in the snow, usually round.
2. **Functional** stance or carriage that is **loose** and **mobile** so you can **feel** and always be balancing in the forces:
 - a. Balancing over foot soles always (not forward or back), sweet spot is the **arches** - "home"
 - b. **Cat back** - small of back is rounded, not arched, shoulders rounded forward and relaxed, this allows for hips to stay mobile and help with dynamic balancing
 - c. **Hips lined up with knees and feet**, more square to skis and not twisted (countered or rotated) - functional lower body, knee working as a hinge joint. (Feel the hips come through the turn with your skis.)

(This basic skiing posture allows us to use our lower body to steer, edge and pressure the skis, our base of support, while coordinating it with our upper body.)

3. Moving into the turn - **timing and direction (foragonal)**.
4. **Early** and **progressive** foot-to-foot (lateral) flow of weight distribution - begin to move to new foot right after apex so that right about edge change, new foot is dominate, but still more two-footed.
5. **Bending/unbending** (flexion/extension), all joints, to manage pressure of turn forces - **loose and mobile**. (Feel the thighs become vertical and move over into the turn. After the apex, as you "sink/bend" feel the shins drive into the boot cuffs pressing forward and to the inside of the turn.)
6. Upper body (core from waist up, hands, arms, head) is **guided** and **directed**, aiming where it is going next, apex of next turn, taking the inside line while the skis (base of support) take the outside line. Pole swings smoothly in the direction of the new turn.
7. Steering is with the **whole leg** using the feet and calf/shin muscles as well as the stronger thigh and hip muscles and coordinated with the balancing upper body. (Feel the foot continually rolling and slightly "twisting" inside the boot by using the calf/shin muscles and with the power coming of the butt and upper thigh muscles.)
8. Edging results from **active shins**. Rolling of the feet in the boots starts the shin movement, steering the skis onto the edges. The thighs and hips are aligned and coordinated with balancing upper body over the feet, the base of support. (Feel the arch of outside foot and the knee/thigh of the inside leg as you tip your skis.)
9. Steering, edging, pressure management are progressive and continual, always **blended** together and coordinated with turn shape, speed, terrain. **Feeling** the skis in the snow. **Dance** with the forces. Surf gravity (as the Frenchman says).



Following are some photos to illustrate the above concepts.

1. Tracks in the Snow



2. Functional, aligned, loose, mobile stance - over the foot soles

a. Balancing over foot soles, arches, always (not forward or back) - “home” on your arches



Cat back - Round the Small of Your Back

b. **Cat back** - small of back is rounded, not arched, shoulders rounded forward and relaxed, this allows for hips to stay mobile and help with dynamic balancing



Not This!!!

But like These!!!!



Ted Ligety



Ted Ligety



Phil Mahre



Functional Lower Body - Hips-Thighs-Shins-Feet Lined Up



- c. **Hips lined up with knees and feet**, more square to skis and not twisted (countered or rotated) - functional lower body, knee working as a hinge joint. (Feel the hips come through the turn with your skis.)



Functional Lower Body - Hips-Thighs-Shins-Feet Lined Up



c. **Hips lined up with knees and feet**, more square to skis and not twisted (countered or rotated) - functional lower body, knee working as a hinge joint. (Feel the hips come through the turn with your skis.)

(This basic skiing posture allows us to use our lower body to steer, edge and pressure the skis, our base of support, while coordinating it with our upper body.)

Moving into Turn

3. Moving into the turn - timing and direction (foragonal).



- pole swinging into the new turn.

Early, Progressive Flow of Lateral Weight Distribution



4. **Early** and **progressive** foot-to-foot (lateral) flow of weight distribution - begin to move to new foot right after apex so that right about edge change, new foot is dominate, but still more two-footed.



Bending and Unbending to Manage Pressure of Turn Forces



5. **Bending/unbending** (flexion/extension), all joints, to manage pressure of turn forces - **loose and mobile**. (Feel the thighs become vertical and move over into the turn. After the apex, as you “sink/bend” feel the shins drive into the boot cuffs pressing forward and to the inside of the turn.)



Upper body (core from waist up, hands, arms, head)

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Steering with foot/ankle/shin/thigh/hip



7. Steering is with the **whole leg** using the feet and calf/shin muscles as well as the stronger thigh and hip muscles and coordinated with the balancing upper body. (Feel the foot continually rolling and slightly “twisting” inside the boot by using the calf/shin muscles and with the power coming of the butt and upper thigh muscles.)

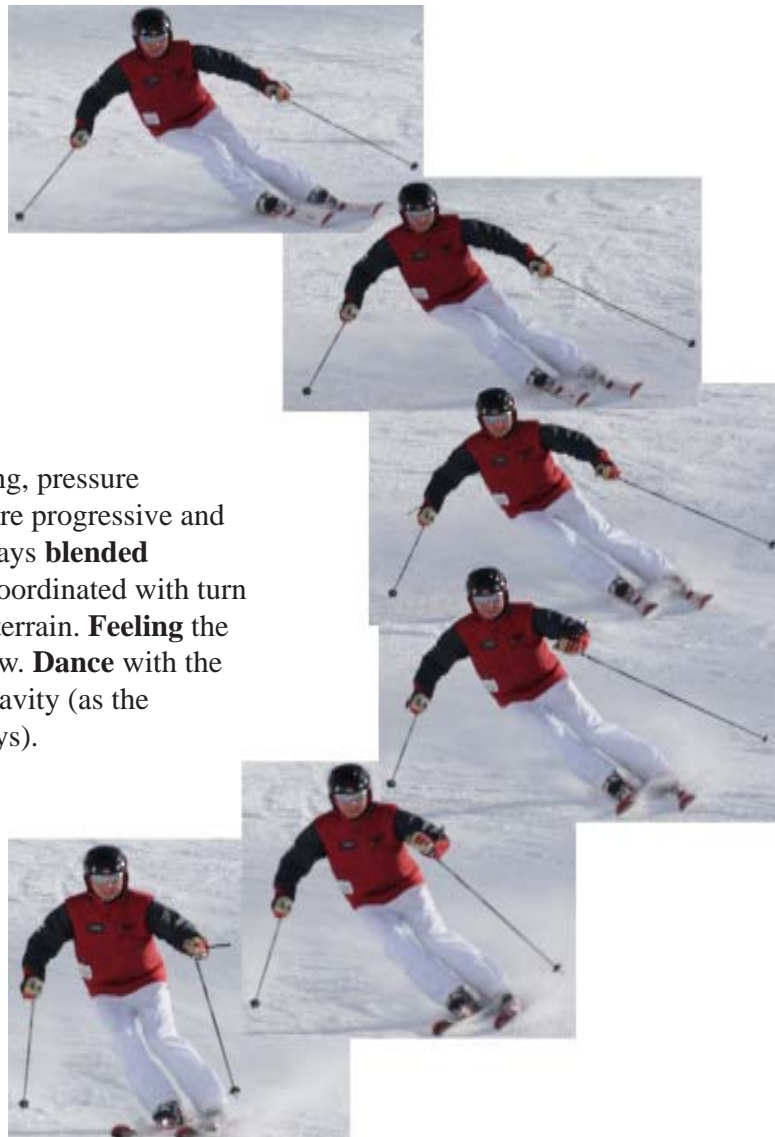


Edging - active shins, aligned up with thighs, hips

8. Edging results from **active shins**. Rolling of the feet in the boots starts the shin movement, steering the skis onto the edges. The thighs and hips are aligned and coordinated with balancing upper body over the feet, the base of support. (Feel the arch of outside foot and the knee/thigh of the inside leg as you tip your skis.)



Steering, edging, pressure management progressive and blended



9. Steering, edging, pressure management are progressive and continual, always **blended** together and coordinated with turn shape, speed, terrain. **Feeling** the skis in the snow. **Dance** with the forces. Surf gravity (as the Frenchman says).



Point 1

Tall, stacked, moving with skis



Point 2 Apex - turn pressure, edge angles increasing.



Point 3 Shin drive, higher edge angles, begin to gradually pressure a bit more "new" outside foot.



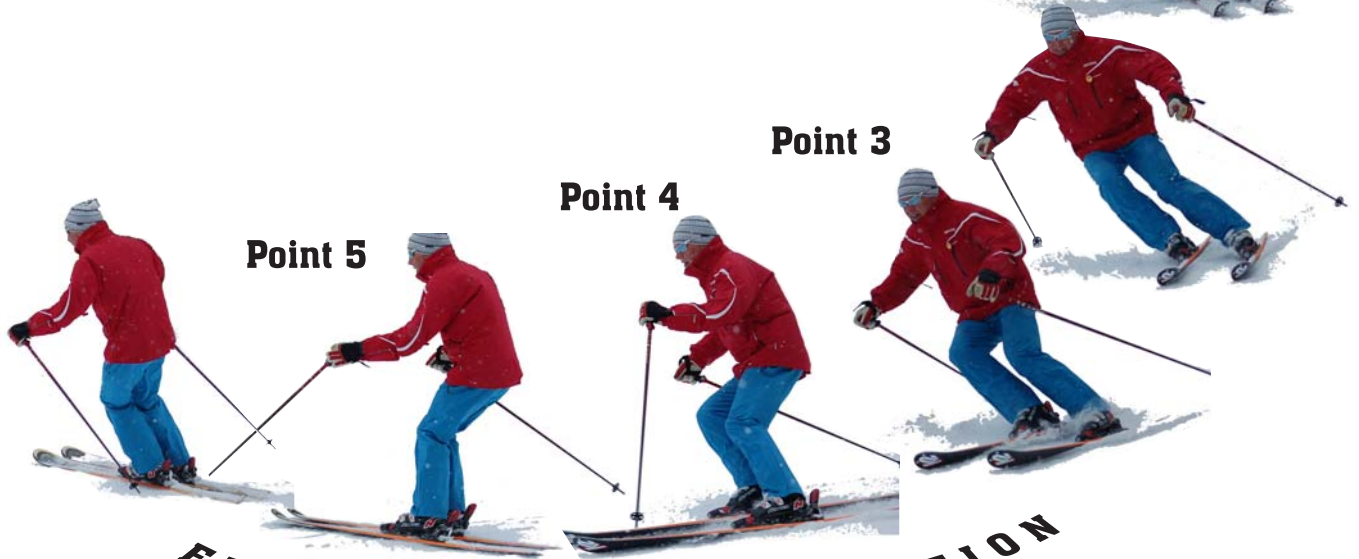
Point 4

Point 5 50/50, edge change, pole touch. (Flat ski for 1 millisecond.)

Point 1

Point 2

FINISHIATION/TRANSITION
Begin to swing pole and begin to move thigh over fore/agonally.



Point 3

Point 4

Point 5

FINISHIATION/TRANSITION