

Figure Skating Sit Spins

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Flying Sit Spin

Preparation:

- During the preparation, the athlete can enter the flying sit spin by means of two separate methods. Method one is starting on a backwards inside edge and then stepping onto a forwards outside edge. Method two is doing an inside three turn and then stepping onto a forwards outside edge. The key component is having the athlete move into the entry by starting on the forwards outside edge.



Figure 1: A. Athlete prepares for the jump by being on the backwards inside edge. B. Athlete steps onto opposite foot. C. Athlete enters the forwards outside edge. D. Athlete is preparing for the jump by leaning into the center and being on the outside edge of the skate.

Entry

- During the entry, the athlete will increase the knee flexion of the support skate to 60-70 degrees which will allow her to be in a better position to initiate the jump.
- As the athlete begins to increase their knee flexion, the shoulders and free leg will be in a position of maximum hyperextension. The shoulders and hips will be hyperextended to 55-65 degrees from the trunk (resulting in both segments being parallel to each other) (see Figure 2)

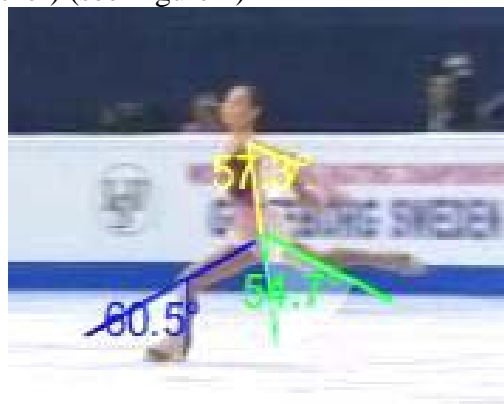


Figure 2: Position of athlete prior to the forward motion of the free limbs with shoulders and free hip in maximum hyperextension.

- Next, the athlete will swing their free leg upwards and across the body and both arms forward, upward and across the front of the body. The free leg and same side arm will be swung forward in a wide semicircular pathway, while the support skate side arm will swing forward and upward to a position in front of the trunk.
- It is important for the athlete to have the free skate leg and arm in full extension in order to position the limb mass further from their axis of rotation and increase angular momentum which can be generated during the takeoff (see Figure 3-A)
- As the free leg approaches the forward position, the jump action of the support skate is initiated (see Figure 3-B). The athlete will elevate into the air by extending at the knee and hip of the support leg producing upward velocity at takeoff
- The jump action of the support skate leg consists of moving from a position of 60 degrees of knee flexion and 50 degrees of hip flexion to a fully extended position at takeoff
- While the takeoff leg is strongly extending the free leg and both arms have completed their upwards movements from a position well behind the body to a position with the arms at shoulder level and the free leg at waist level

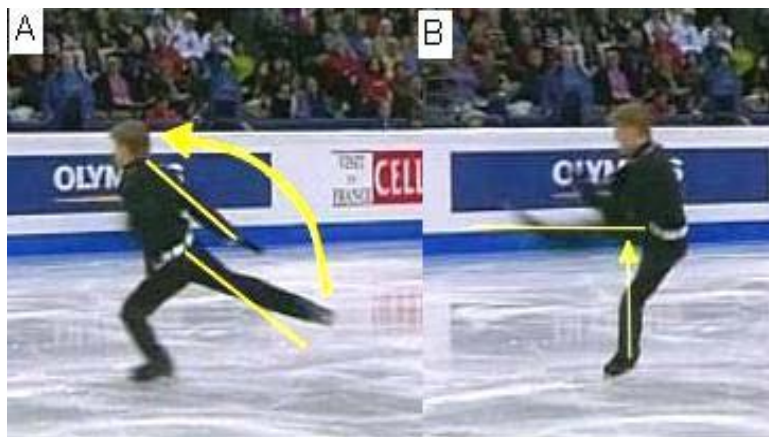


Figure 3: A. Athlete moves the free leg and arm forwards in a semicircular motion. B. At this point in the skill the athlete initiates the jump from the ice.

Airborne Phase:

- As the athlete enters the airborne phase, they must enter the sit spin position prior to landing on the ground (see sit spin position below) (see Figure 4)
- The sit spin position consists of a fully extended free leg held in a hip flexed position in front of the body with the whole leg parallel to the ice
- The takeoff leg is flexed underneath the athlete with the thigh parallel to the ice and the lower leg extended down towards the ice.
- While airborne, the athlete's free leg will be slightly out to the side in the sit spin position as it is left behind the body after takeoff. Once the athlete lands on the

ice, the leg will move back directly in front of the skater to the ideal sit spin position.

- During the sit spin the arms are held out to the sides of the body in an extended and abducted position with the shoulders in 90 degrees of abduction
- As the airborne phase ends, the athlete extends the hip and knee of the takeoff leg and plantarflexes the support ankle for landing



Figure 4: Athlete has entered the sit spin position, but during the spin there is a tendency for the leg to lag behind the rest of the body leaving it out to the side.

Landing

- The athlete wants to land with the support skate on the ice with slight knee flexion and then increase the knee flexion as they prepare to enter the on-ice sit spin.
- After skate touchdown, the athlete should be in the sit spin position almost immediately.
- The sit spin position consists of full flexion of the support knee and hip, hip flexion and knee extension of the free leg, trunk flexion into a full pike, and the arms extended along the free leg.

On-ice Sit Spin Technique:

- Athlete needs to emphasize greater than 90 degrees of knee flexion in the support skate knee, suggesting that a lower position is better.
- The free leg should remain in a straight position with the thigh parallel to the ice surface and minimal (to no) flexion at the knee. Athlete should also emphasize squeezing the thighs together to ensure a tight spin.
- Athletes' arms should be flexed at the shoulder joint and in front of the body. No specific position requirements, but parallel to the support skate thigh could be recommended. It is important that the arms do NOT rest on the skater's legs as this exhibits poor balance.
- Athlete should have their back in a straight alignment and flexed approximately 30 degrees from the horizontal.
- Head should be in an erect position (see Figure 5).

- The spin should occur on the forward edge of the skate blade and result in a consistent spinning point whereby the athlete does not experience any drift. Drift is associated with an off balance or wobbling spin.



Figure 5: Athlete demonstrates a good sit spin with a high degree of knee flexion in the support leg, close to parallel thigh of the free leg, and a straight trunk with an erect head.

Common Errors:

- Skater releases the free leg too early on the takeoff edge which results in the leg reaching peak height before the skater leaves the ground. As a result, the skater's leg begins to move down, while the skater is continuing to move up and the skater is unable to enter the sit spin position while in the air. To correct this, the skater needs to hold the free arm and leg back for a greater length of time and then release them on the jumping action. A good airborne position is achieved if the athlete is able to have the free leg close to parallel with the ice at the peak height.
- Another common error occurs when the athlete is unable to reach the true sit spin position in the air. This may be related to lack of hamstring flexibility in the free leg or lack of strength in the hip flexors to hold the leg in this extreme position.
- A common error during the spin itself occurs when the athlete does not reach a low posture. This occurs when the athlete is unable to position the thighs parallel to the ice surface and may be a result of weak abdominals and quads; or to lack of flexibility in the lower back, hamstrings or hip extensors.