

Power and Acceleration Workout

Objective: Develop acceleration from stationary position at the start of your program.

Training time: All year round.

Suitable for: All levels of skaters

Every skater should spend time performing drills at a low level of intensity before increasing the speed. If you are new to a specific type of training, it is very important to realistically estimate what you feel you can achieve before rushing into completing all the sets and repetitions a more experienced athlete would be expected to accomplish.

The key to success is to allow a full recovery period between sets and reps in order to allow for a correct technical drill performance. Fatigue impairs technique and can lead to the learning of incorrect movement patterns.

Prepare by Warming-up. Never start any on ice drill until you have performed a set of off ice warm-up and stretching exercises.

The purpose of a warm-up is to raise body temperature and viscosity of muscles in preparation for progressively dynamic activity, especially when the activity will occur in a cold environment like an ice skating rink.

Warming up is important at any hour of the day, especially if the practice session is at the end of a long day at school or work. It is equally important that a skater not roll out of bed in the morning and dash to the rink without allowing for time to properly warm-up before setting foot on the ice. Make time. Set your alarm and don't depend on others. Your alarm should be manual or battery powered in case of a power interruption.

Off ice exercises:
Jogging for 3-5 minutes
Warm-up drills

Dynamic warm-up exercises need to be specifically designed to prepare muscles (and mind) for high-intensity linear and multi-direction speed training.

Acceleration drills

Exercise 1: Wall leg drives

Purpose: To learn the (pushing from the hip) leg movement required for dynamic acceleration.

Description: Stand facing a wall. Place the palms of your hands flat against it, around shoulder height. Angle your body so that there is approximately a 45-degree angle through your ankles, knees, hips and head. Lift one leg so that the thigh is parallel to the ground and support your

weight on the toes of your other foot. Drive the elevated leg back toward the ground so that its toes contact the ground and then immediately pull the leg back to the start position. Complete the designated number of repetitions and swap legs.

Technique tips: The acceleration movement is initiated from the muscles at the top of your thigh – the hip flexors – so focus on using these muscles when performing the drill. Gradually increase your speed until you are performing the drill as fast as you can.

Do: 4 x 10 with each leg.

Exercise 2: Alternate leg, wall-drive combination

Purpose: To further develop the pushing acceleration leg movement – this time working both legs.

Description: Assume the same starting position as for exercise 1. Drive one leg down and as soon as it contacts the ground, pull the other to a 'thigh parallel to the ground' position and then drive it back to the floor, while bringing the other leg to a thigh parallel to the ground position.

Technique tips: Maintain the integrity of the torso throughout – hold the 45-degree angle. The pumping alternate 'one, two, three' action of the legs will transmit a large amount of force that will need to be controlled by the torso – you will need to be braced and ready. Gradually increase your speed until you can perform the drill with optimum technique.

Do: 4 x 6 (1 rep = 'left, right, left' or 'right, left, right'. Alternate this pattern with 'right, left, right' combinations).

Exercise 3: Falling starts

Purpose: To further learn the acceleration leg action, this time with forward movement and working on an inclined torso position throughout, and a dynamic arm drive while moving.

Description: Stand with your feet shoulder-width apart and lean your entire body forward – basically you should allow yourself to fall forward. When your body reaches an approximately 45-degree angle to the ground, 'snap' one leg forward to around a 45-degree angle to your body and then dynamically drive it back against the ground (as per exercises 1 and 2). Your other leg should be pulled forward to a similar 45-degree angle to the body, ready to drive back to continue your acceleration. This will control your fall and accelerate your body forward. Your arms should be vigorously pumped backwards and forwards in unison with your legs to increase accelerative power. Continue to accelerate with legs and arms pumping –

while maintaining the forward lean – for 15m.

Technique tip: Spend time gaining the confidence required to allow your body to fall to 45 degrees to the ground before performing the drill flat out. It is crucial for optimum acceleration that the whole body is angled forwards – not just the torso – throughout the accelerative phase (where practical). The legs need to work behind the body – ensuring that this happens will optimise the power output of your posterior chain muscles (calf muscles, hamstrings and glutes) and optimise your acceleration.

Do: 10

Exercise 4: ‘Sticky’ strides

Purpose: To learn the accelerative running action, with emphasis on foot contact.

Description: Using a lean start (see exercise 3), begin to accelerate. While maintaining the optimum 45-degree body angle and ‘pushing’ the body forward by driving the legs backwards from the hips, emphasize each foot-contact as you accelerate. Pump your arms as per the previous drill.

Technique tip: ‘Feel’ your foot strike the ground, and its ankle and then leg extend to push you forwards on each stride. Increase the speed of the drill as you begin to develop a feel for the foot contact in combination with the rest of the drill’s technical requirements.

Do: 6 x 15m

Exercise 5: Prone-position start and acceleration

Purpose: Develop quick reactive acceleration.

Description: Assume a prone position with hands by hips, palms face down and chin on floor. Either to an external command or when ready, dynamically push your body up and accelerate away. Employ all the aspects of accelerative technique as described in the previous drills.

Technique tips: To react as quickly as possible, pull your stronger leg into your chest dynamically in the prone position and then thrust it back against the ground to achieve a dynamic getaway. Field and racquet sports players in particular should alternate the leg with which they push themselves up and away from the start line. Doing this will develop more symmetrical strength and reflects game conditions, where players will need to accelerate off either leg. Sprinters should perform this drill driving up and away with the leg they put forward in the starting blocks.

Do: 4 x 20m

Exercise 6: Sitting, facing against the direction of acceleration

Purpose: To develop dynamic rotational ‘get up and go’ acceleration. This is a great drill for recov-

ering from a fall and getting up as quickly as possible and resuming the program.

Description: Sit with your back to the direction of acceleration, having previously checked that there are no obstacles behind you. Keep your legs straight and flat against the ground, and your hands by your hips, and head looking forward. Either to an external command or when ready, push yourself up, turn and accelerate away – using all the optimizing acceleration techniques featured in the other drills.

Technique tip: Pull one leg back underneath your body while pushing against the ground with your hands, meanwhile rotating your body from your ankle to turn into the direction of the acceleration, to dynamically get away from the sitting position. Do not stand straight up, as this will compromise your ability to optimally use your legs, as they will be unable to optimally push and use the power of the posterior chain muscles. Move your arms backwards and forwards as dynamically as possible to drive yourself forwards.

Do: 4 x 20m (2 to the left and 2 to the right)