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ANATOMY OF A WORKOUT

Balance and Speed Drills From an NHL Strength Guru

Paul Goodman of hockey's Chicago Blackhawks shares these six exercises that are just as helpful off the ice

By Jen Murphy | Photographs by Lucy Hewett for The Wall Street Journal

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Ice hockey players need a combination of balance and speed to fly up the ice and withstand body checks. But even nonathletes can benefit from incorporating land-based hockey drills into their day-to-day routines, says Paul Goodman. The head strength and conditioning coach for the NHL's Chicago Blackhawks, Mr. Goodman has also worked with the U.S. women's hockey team and the New York Rangers. This summer, he hosted weekly workouts on YouTube for Blackhawks fans looking for motivation during the coronavirus pandemic.

The workout below incorporates exercises that improve balance and drills that build speed and agility. By challenging our balance, we develop better body awareness. The simple act of walking requires single-leg balance, he says.

"As we age, we have a tendency to want to keep our legs stiff and not absorb movement," says Mr. Goodman. "The risk of tripping and falling decreases when you have better body awareness and balance." The small muscles and stabilizers we strengthen with balance work are then recruited to create more efficient movement in speed, he says.

The Workout

Single-Leg Balance Ball Toss

Why: It's easier to balance when you focus on a single point, because it acts as a centering factor, Mr. Goodman says. Hockey players must be stable on one leg while tracking a constantly moving puck. "When the eyes and head have to follow a moving object, balance becomes more difficult," he says.

How: Toss a tennis ball (or ball of similar size) between hands while balancing on one foot. Gradually throw the ball higher and wider and track it by looking upward and turning the head. Begin with 20 seconds per leg and work up to one minute. Repeat three to four sets.

Options: Challenge your balance even more by standing on a pillow or Airex pad. Or toss two balls and have them cross in the air.



Mr. Goodman performs a single-leg ball toss while balancing on a foam pad.

Standing Single-Leg Hip Flexion and Internal Rotation

Why: Mr. Goodman has players work on internal hip rotation to encourage hip stability. Nonathletes also tend to walk, run and jump with their hips externally rotated, he says. This causes their toes to flare out between 30 to 45 degrees away from the midline when they move. External rotation can occur when the glute muscles and piriformis (a small muscle located behind the glute maximus) are overactive and tense. This can lead to low-back pain and overuse injuries, he says.

How: Stand on your right leg. Lift your left thigh parallel to the floor while bending the knee to 90 degrees. Bring your arms straight out in front of you with palms facing one another. Slowly rotate the bent knee across the body to the right. The head, shoulders and arms should travel in line with the leg. Slowly rotate back to the starting position. Perform two to three sets of 10 to 15 reps on each leg.

Options: Balance the standing foot on a pillow or unstable surface. Place a resistance band around the wrists and pull apart with straight arms while rotating.



Mr. Goodman demonstrates the standing single-leg hip flexion and internal rotation.

Single-Leg Heiden Speed Squat

Why: The skating stride requires players to have good extension at the hips and knees while maintaining a tilted posture with a flat back, Mr. Goodman says. “It’s hard to maintain both this low, powerful position and speed when fatigue sets in,” he says. This drill, named for U.S. Olympic speed skater Eric Heiden, increases the legs’ tolerance for high levels of lactic acid (post-workout waste that causes our muscles to burn) while strengthening the muscles needed to correctly bend at the hips, knees and ankles.

How: Start in a parallel stance with feet shoulder width apart. Lower the chest down so it’s parallel with the ground; maintain a flat back. Clasp your hands behind your low back. Shift your body weight to your right leg and take the left foot off the ground and slightly behind you. Squat down on the right leg as low as possible, then rise up to stand. Keep the back flat the entire time. “The premise is to perform a squat every second to second and a half,” Mr. Goodman says. Start with three to five sets of 15 reps on each leg and rest as needed.

Options: If you have trouble balancing on one leg, start with a double leg squat. If you feel low-back pain, raise the chest up. Hold a weight behind the back for an added challenge.



Mr. Goodman performs a single-leg Heiden speed squat.

Isometric Split Squat with Partner

Why: “In hockey, the ability to balance and move while being hit on the body or the stick is crucial,” Mr. Goodman says. Rarely when we move, whether in a sports or elsewhere, do we have two feet in parallel, he says. This drill develops the ability to balance in a split-stance position by engaging all of the lower-body muscles, particularly the glutes and quads. Having a partner apply force to your hands as you balance will engage the oblique muscles and deltoids. “These muscles contribute to stabilizing the upper body so you don’t get knocked off balance,” he says.

How: Come into a kneeling lunge position, stance shoulder-width apart. The toes of the back foot should be pressed into the ground, heel raised. Hover the back knee a few inches above the floor and hold that position, keeping the back straight and shoulders above hips. Hold the arms straight out at shoulder height with hands clasped together. Have a partner stand in front of you and apply pressure on the outside, top and bottom of your hands while you try to keep your arms straight and maintain your balance. Start with 20 seconds per leg and work up to 60 seconds. Repeat two to three sets per side.

Option: If you don’t have a partner, attach a band to a secured surface and pull it in various directions. Make the drill easier by bending the arms at 90 degrees so the elbows are tight to

the body and the forearms are parallel to the floor. Make the drill harder by narrowing your stance or closing one or both eyes.



Mr. Goodman does an isometric split squat using a band instead of a partner to engage his oblique muscles and deltoids.

Push-Up Position With Knee Drive

Why: “In running and skating sports, improving stride frequency helps gain speed,” Mr. Goodman says. Because athletes rarely reach top speed before having to change direction or even stop, developing a quick, powerful first step is important, he says. This drill works the entire body while recruiting the fast-twitch muscle fibers needed to create force and speed.

How: Assume a push-up position with feet slightly narrower than shoulder width. Drive off the right foot and bring the right knee up toward the chest, then shoot the right foot back behind to straight. Alternate knees as quickly as possible five times per leg. Make sure the entire body other than the legs remains still and try to keep the hips level. Repeat three to five sets with 30 seconds of rest in between.

Options: If you feel wrist pain or cannot maintain level hips, start upright, leaning your hands against a wall as you drive your knees to your chest.

Lateral High-Knee Drills

Why: “Performing drills that involve high rates of force and change of direction will recruit

stabilizing muscles that connect speed and balance,” he says. “This leads to better agility and the ability to accelerate rapidly.”

How: Stand with your feet hip-width apart. Lift up your left knee to your chest. Quickly switch to lift your right knee to your chest. Continue the movement, alternating legs as you move sideways in one direction for about 10 feet. Bound off the outside foot back toward your starting position. Repeat four to six sets, alternating directions, for round one. For round two, perform high-knee skips in one direction and return to starting position by doing a crossover step. Repeat four to six sets, alternating in each direction. Perform at maximal effort with minimal rest between sets.

Options: Start by marching with high knees and progress to a faster pace.

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