

# How Low Should - Can You Go?

**BEND YOUR KNEES! GET LOWER!** These are common cues by coaches and parents to prompt individual hockey players into a deeper or lower hockey stance. As coaches we are giving the right direction but is this always achievable for all players?

The Good Hockey Stance (GHS) is hockey's version of an athletic stance, and like any other sport's athletic stance, it has its foundation in a squat.

It is the fundamental posture that enables a player to fully utilize the strength in her/his legs whether to start, stride, stop, shoot, pass or battle for the puck.

A good hockey stance is where a player simultaneously flexes (bends) at the hips, knees and ankles while maintaining a straight back/torso.



*Bad Hockey Stance*



*Good Hockey Stance*

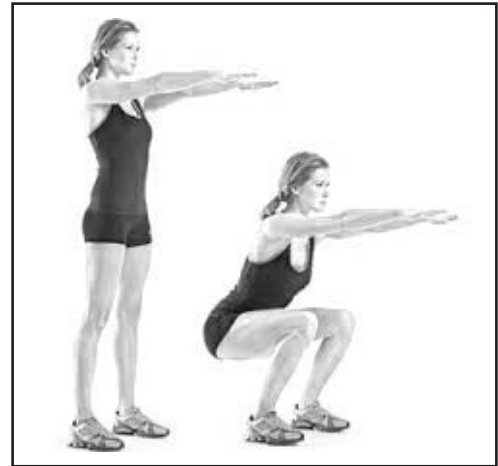
of structural and/or physical characteristics that limit a player's ability to flex as needed, which until identified and addressed will continue to impair a player's ability to execute and maintain a GHS.

When executed properly, the hips, knees and ankles are all flexed and the torso is straight with a slight tilt forward. But when some players attempt a GHS, their leg joints (ankles, knees and hips) won't flex enough and they either remain rigidly upright or bend at the waist and lean forward thinking they are getting lower.

There could be any number

of structural and/or physical characteristics that limit a player's ability to do a squat and maintain a GHS?

So what is a good squat? From a standing position, feet shoulder width apart; the athlete sits, pushing his/her hips back while flexing the knees and ankles. The spine remains neutral (back stays straight), but to compensate for the hips moving back the torso tilts forward slightly and the chest moves towards the knees. The athlete remains balanced with their weight evenly distributed along the length of their feet; they are not on the heels or on the toes.



So what limits a player's ability to do a squat and maintain a GHS?

**Ankle mobility.** This is the easiest problem to spot, and if it is the only issue the easiest to correct. In order for the knees to travel forward to compensate for the flex at the hips, the athlete needs to be able to flex (dorsi flex) his/her ankles. The reason for ankle inflexibility could be as simple as a

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## **David Mahoney's Bio:**

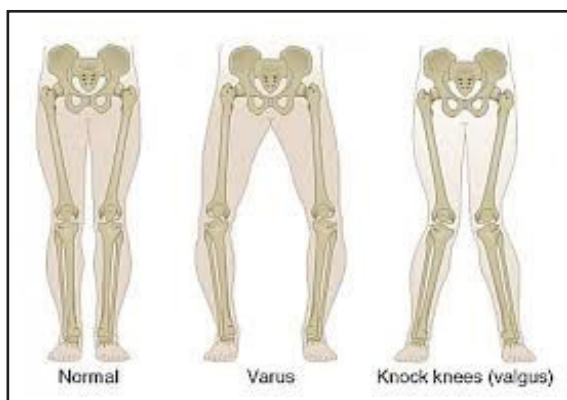
- Tucker Hockey - On Ice Instructor Last 13+ Years
- Tucker Hockey - Hockey & Fitness Consultant
- Mahoney Fitness Calgary
- Mount Royal University Graduate - Canadian Society for Exercise Physiology (CSEP)
- Certified Fitness Trainer (CFT)
- Personal Fitness Trainer (PFT)
- NCCP Certified



## How Low? (Cont'd from 6)

skater having his/her skates tied too tightly at the ankles, having laces wrapped around the ankles or bound too tightly with tape. Players often bind their ankles in an effort to create more stability but in doing so it restricts the ability to flex at the ankle and inhibits the ability to squat. Improving ankle flexibility can be as simple as loosening the laces at the top of the skate and/or eliminating the use of tape. There are also stretching and ankle mobility exercises that can improve ankle flexibility.

**Valgus knee and hip alignment:** There are three recognized

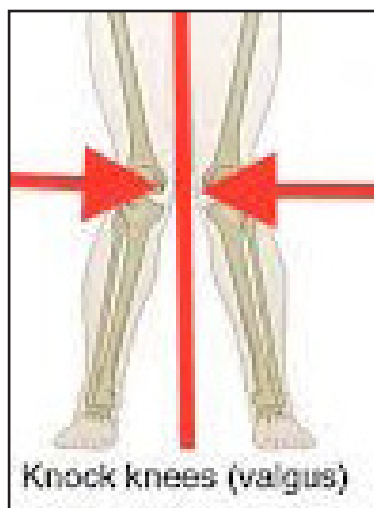


knee/hip alignment structures, normal/neutral, valgus (knock kneed), and varus (bow legged) knees.

For athletes with normal or varus (bow legged) knee alignment, the knees freely track forward or laterally with a full range of movement allowing for a deeper squat.

But valgus knees act as an impediment to achieving a deeper GHS stance.

When an athlete begins to flex the hips and knees for a squat/GHS, the knees track inward toward the midline, and eventually the knees can even meet at the midline. The result is the athlete cannot flex their knees any further, inhibiting the knees' range of motion and limiting the depth of their squat. The inward tracking can



also put abnormal stress on knee ligaments inhibiting the knee's range of motion, limiting its flexion and increasing the risk of knee injuries.

Athletes with valgus knees tend to also have weaker gluteus minimus and gluteus medius muscles. These muscles are located on the lateral sides of the legs, and their primary function is leg abduction, the lateral side movement of a skating stride. Strengthening these muscles is important, as stronger lateral muscles will allow the athlete to push harder in a stride and to push his/her knees laterally away from the midline improving the knee's range of motion. It should be noted that some athletes, who appear to be valgus at a younger age do grow out of it as they develop.

**Leg length:** Athletes with longer legs will have a longer femur (thigh bone). Longer femurs require a greater degree of flexion (bend) at the knee and ankle than a shorter femur to achieve the same depth in a GHS. That greater degree of flexion might be past the knee's comfortable range of motion increasing the stress on the joint. Mobility exercises and flexibility stretches can increase the range of motion and increase the depth of their squat but not significantly. An athlete with longer legs, most of the time, will be limited in the depth of their GHS. An example of such a case is Calgary Flame's Joe Colborne who at 6 foot 3 inches has a very shallow hockey stance.

**Leg strength:** Lastly, some skaters, more often younger players just learning to skate, might simply lack leg (buttocks, hamstrings, thighs) and core strength and the confidence to get into a GHS. For younger players 6 to 9 years, play activities like running, tumbling, or jumping promotes muscle development. For older children, ages 8 to 13, activities like soccer, basketball, judo, gymnastics, track and field, dance or wrestling help build strength and confidence.

When teaching a Good Hockey Stance, each athlete's physical and structural characteristics need to be first understood and assessed so training can be modified to meet the needs of the individual's abilities.

“BEND YOUR KNEES! GET LOWER!” maybe the correct cue to give, but at face value might not be attainable for every player.