

Movement Competency Screen

MCS

**HOW ATHLETES PRODUCE POWER IS MORE
IMPORTANT THAN THE POWER THEY
PRODUCE**

Developed by Matt Kritz



Movement competency is described as the ability to move free of dysfunction or pain. Movement dysfunction has been expressed as movement strategies that contribute more to injury than performance. An athlete's movement competency is influenced by several variables. The responsibility of the strength and conditioning professional is to insure that the training prescribed enhances performance and does not contribute to injury. The best way to improve movement, is to move. However, movement under a load greater than what the athlete's movement competency can support will force the athlete to compensate and over time compensation will negatively affect health and performance. The objective of the movement competency screen (MCS) is to identify which fundamental movement patterns can be aggressively loaded and which require developmental attention.

The fundamental movement patterns that are evident in activities of daily living and strength training programs to varying degrees are; the squat pattern, lunge pattern, upper body push pattern, upper body pull pattern, bend pattern, twist pattern, and single leg squat pattern.

The MCS is made up of five movements that provide the athlete with an opportunity to demonstrate their movement competency within each fundamental pattern. The MCS movements are performed with a body weight load and are the squat, lunge-and-twist, bend-and-pull, push up, and single leg squat.

To use the MCS to screen your athlete's movement competency, video record or watch an athlete perform three repetitions of each of the MCS movements from the front and side. Refer to the MCS criteria to identify which areas do not match the screening criteria. Use the MCS screening sheet to document the primary and secondary areas you believe are problematic based on the screening criteria. Add up the primary and secondary marks to determine the load level for each pattern.

The load levels are variable resistance that challenge the pattern in a progressive manner. The load levels are level 1) assisted, 2) body weight and 3) external mass. The objective of progressing a pattern with an accommodating load is to challenge the pattern with a resistance that facilitates good mechanics. In other words use a load level that allows the athlete to perform the fundamental pattern correctly. Level 1 assists the pattern by attenuating the body weight force. Level 2 challenges the pattern with the body weight force. Level 3 introduces modalities to body weight that provide further external resistance such as free weights.

The MCS is a simple tool that will provide valuable information about an athlete's movement ability and offer the strength and conditioning professional programming solutions to ensure the athlete's movement competency can accommodate the desired training.

Here is what to instruct the athlete to do for each MCS movement.



BODY WEIGHT SQUAT

Perform a body weight squat with your fingertips on the side of your head. Squat as low as you comfortably can.



LUNGE & TWIST

Cross your arms and place your hands on your shoulders with your elbows pointing straight ahead. Perform a forward lunge then rotate toward the forward knee. Just rotate toward the knee then return to center and return to the standing position. Alternate legs with each rep.



PUSH UP

Perform a standard push up



Bend & Pull

Start with your arms stretched overhead. Bend forward allowing your arms to drop under your trunk. Pull your hands into your body as if you were holding onto a bar and performing a barbell rowing exercise. Return to the start position with your arms stretched overhead.



SINGLE LEG SQUAT

Perform a single leg body weight squat with your fingertips on the side of your head and the non-stance leg positioned behind the body. Squat as low as you comfortable can.

PATTERN	SCREENING CRITERIA
<p style="text-align: center;">SQUAT</p>	<p>HEAD - Centered SHOULDERS - Held down away from the ears. Elbows held behind the ears throughout the squat. LUMBAR - Neutral throughout the squat HIPS - Movement starts here, aligned and extension is obvious KNEES - Stable, aligned with the hips and feet ANKLES / FEET - Aligned with the knees and hips. In contact with the ground especially the heels at the bottom of the squat and feet appear stable DEPTH - Thighs parallel with the ground BALANCE - Maintained</p>
<p style="text-align: center;">LUNGE & TWIST</p>	<p>HEAD - Centered SHOULDERS - held down and away from ears, rotation occurs in the thoracic region of the spine LUMBAR - Neutral position, does not hyper extend during lunge, does not flex laterally during the twist, appears to be stable during rotation HIPS - Horizontally aligned, accommodates stance width with obvious mobility KNEES - Aligned with the shoulder, hip, and foot. Front and back leg in a 90 degree position ANKLES - Directly under the front knee and aligned with the back knee FOOT - Heel of lead leg in contact with the floor, trail foot flexed and balanced on forefoot DEPTH - Lead thigh parallel with the ground BALANCE - Maintained for each leg</p>
<p style="text-align: center;">PUSH UP</p>	<p>HEAD - Centered SHOULDERS - Held down and away from the ears, hands positioned directly underneath shoulders, scapulae in a good position at the start, moving in a rhythmic motion throughout the movement LUMBAR - Neutral, does not extend or flex during the movement HIPS - Aligned with trunk and held stable KNEES - Held stable ANKLES - Aligned FEET - Aligned DEPTH - Chest touches the floor BALANCE - Maintained</p>
<p style="text-align: center;">BEND & PULL</p>	<p>HEAD - Centered and moves with trunk SHOULDERS - Held down and away from the ears when arms are extended overhead. Scapulae remain in a good start position as the hands drop below the torso to begin the pull. Scapulae moving in a balanced and rhythmic motion during pull with obvious protraction and retraction LUMBAR - Neutral spine maintained during bend. No flexion during bend or hyper extension during standing with arms overhead HIPS - Bend is initiated here with no shifting left or right with pelvis position maintained during the movement KNEES - Aligned and not hyper extended ANKLES - Aligned FEET - Aligned DEPTH - Trunk parallel with the ground BALANCED - Maintained</p>
<p style="text-align: center;">SINGLE LEG SQUAT</p>	<p>HEAD - Centered SHOULDERS - Held down away from the ears. Elbows held behind the ears throughout the squat. LUMBAR - Neutral throughout the squat HIPS - Movement starts here, aligned and extension is obvious KNEES - Stable, aligned with the hip and foot ANKLES - Aligned with the knee and hip FEET - In contact with the ground especially the heel at the bottom of the squat and appears stable DEPTH - Thigh parallel with the ground BALANCE - Maintained for each leg</p>



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Athlete **Sport** **Date** **MCS Score**

SCREENING INSTRUCTIONS: Based on the MCS criteria mark the PRIMARY or SECONDARY area that is of concern when observing the athlete perform the MCS movement patterns.

PATTERN	PRIMARY	SECONDARY	LOAD LEVEL	COMMENTS
SQUAT	<input type="checkbox"/> SHOULDERS	<input type="checkbox"/> HEAD	1	
	<input type="checkbox"/> LUMBAR	<input type="checkbox"/> KNEES	2	
	<input type="checkbox"/> HIPS	<input type="checkbox"/> DEPTH	3	
	<input type="checkbox"/> ANKLES/FEET	<input type="checkbox"/> BALANCE		
LUNGE & TWIST (The Lunge)	<input type="checkbox"/> BALANCE	<input type="checkbox"/> HEAD	1	
	<input type="checkbox"/> LUMBAR	<input type="checkbox"/> KNEES	2	
	<input type="checkbox"/> HIPS	<input type="checkbox"/> DEPTH	3	
	<input type="checkbox"/> ANKLES/FEET			
LUNGE & TWIST (The Twist)	<input type="checkbox"/> SHOULDERS	<input type="checkbox"/> HEAD	1	
	<input type="checkbox"/> LUMBAR	<input type="checkbox"/> KNEES	2	
	<input type="checkbox"/> HIPS	<input type="checkbox"/> DEPTH	3	
	<input type="checkbox"/> ANKLES/FEET	<input type="checkbox"/> BALANCE		
BEND & PULL (The Bend)	<input type="checkbox"/> SHOULDERS	<input type="checkbox"/> HEAD	1	
	<input type="checkbox"/> LUMBAR	<input type="checkbox"/> KNEES	2	
	<input type="checkbox"/> HIPS	<input type="checkbox"/> ANKLES/FEET	3	
	<input type="checkbox"/> DEPTH	<input type="checkbox"/> BALANCE		
BEND & PULL (The Pull)	<input type="checkbox"/> SHOULDERS	<input type="checkbox"/> HEAD	1	
	<input type="checkbox"/> LUMBAR	<input type="checkbox"/> KNEES	2	
	<input type="checkbox"/> HIPS	<input type="checkbox"/> ANKLES/FEET	3	
	<input type="checkbox"/> DEPTH	<input type="checkbox"/> BALANCE		
PUSH UP	<input type="checkbox"/> HEAD	<input type="checkbox"/> HIPS	1	
	<input type="checkbox"/> SHOULDERS	<input type="checkbox"/> KNEES	2	
	<input type="checkbox"/> LUMBAR	<input type="checkbox"/> ANKLES / FEET	3	
	<input type="checkbox"/> DEPTH	<input type="checkbox"/> BALANCE		
SINGLE LEG SQUAT	<input type="checkbox"/> DEPTH	<input type="checkbox"/> HEAD	1	
	<input type="checkbox"/> LUMBAR	<input type="checkbox"/> SHOULDERS	2	
	<input type="checkbox"/> HIPS	<input type="checkbox"/> KNEES	3	
	<input type="checkbox"/> ANKLES / FEET	<input type="checkbox"/> BALANCE		

SCORING INSTRUCTIONS			
Load Level	PRIMARY	SECONDARY	Considerations
1	2+ and / or	4	The numbers in the PRIMARY and SECONDARY columns depict the number of areas that were marked during the screen. Select the 1, 2 or 3 in the Load Level column after adding up the checked areas for each pattern.
2	1 and / or	0-3	
3	0 and / or	0-2	
SCORING			
GOOD	MODERATE		POOR
17 - 21	11 - 16		7 - 10



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Athlete **Sloppy Joe** Sport **Hockey** Date **March 2009** MCS Score **9**

SCREENING INSTRUCTIONS: Based on the MCS criteria mark the PRIMARY or SECONDARY area that is of concern when observing the athlete perform the MCS movement patterns.

PATTERN	PRIMARY	SECONDARY	LOAD LEVEL	COMMENTS
SQUAT	★ SHOULDERS ★ LUMBAR ★ HIPS ○ ANKLES/FEET	○ HEAD ★ KNEES ○ DEPTH ○ BALANCE	1 2 3	Can't keep elbows behind ears during squat. Flexes lumbar during squat. Squats with knee first strategy.
LUNGE & TWIST (The Lunge)	★ BALANCE ★ LUMBAR ○ HIPS ○ ANKLES/FEET	○ HEAD ○ KNEES ○ DEPTH	1 2 3	Balance an issue when left leg leads, arches through the lumbar to achieve lunge distance
LUNGE & TWIST (The Twist)	★ SHOULDERS ★ LUMBAR ○ HIPS ○ ANKLES/FEET	○ HEAD ○ KNEES ○ DEPTH ○ BALANCE	1 2 3	Does not initiate rotation with thoracic spine appears to rotate through lumbar region.
BEND & PULL (The Bend)	○ SHOULDERS ★ LUMBAR ★ HIPS ○ DEPTH	○ HEAD ○ KNEES ○ ANKLES/FEET ○ BALANCE	1 2 3	Bends through the lumbar. Does not initiate bend through the hips.
BEND & PULL (The Pull)	★ SHOULDERS ○ LUMBAR ○ HIPS ○ DEPTH	○ HEAD ○ KNEES ○ ANKLES/FEET ○ BALANCE	1 2 3	Does not retract scapulae when pulling.
PUSH UP	○ HEAD ○ SHOULDERS ★ LUMBAR ○ DEPTH	★ HIPS ○ KNEES ○ ANKLES / FEET ○ BALANCE	1 2 3	Hips positioned low, lumbar too extended.
SINGLE LEG SQUAT	★ DEPTH ○ LUMBAR ★ HIPS ○ ANKLES / FEET	○ HEAD ○ SHOULDERS ★ KNEES ★ BALANCE	1 2 3	Squat initiated with the knees not hips. ¼ depth and balance an issue on both legs.

SCORING INSTRUCTIONS			
Load Level	PRIMARY	SECONDARY	Considerations
1	2+ and / or	4	The numbers in the PRIMARY and SECONDARY columns depict the number of areas that were marked during the screen. Select the 1, 2 or 3 in the Load Level column after adding up the checked areas for each pattern.
2	1 and / or	0-3	
3	0 and / or	0-2	
SCORING			
GOOD	MODERATE		POOR
17 - 21	11 - 16		7 - 10