


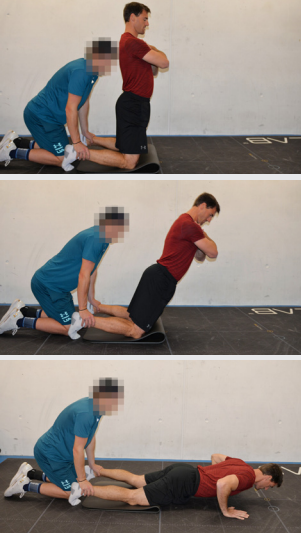

**Balgrist**





University Hospital



**SWISSKI**

# ISPA Prevention Programme

Dynamic Bridging | Nordic Hamstring Exercise | Single Leg Squat  
Dynamic Planking | Deadbug Bridging

	Static/ Dynamic	Exercise	Instruction	Sets
<b>Hamstrings 1</b>	Dynamic	<p><b>Dynamic Bridging</b></p> 	<p><b>Starting position:</b></p> <ul style="list-style-type: none"> <li>• Supine position; head resting on the ground; barefoot</li> <li>• Arms extended 45° with both palms facing down</li> <li>• Knees flexed and hip width apart</li> <li>• Heels placed on a sliding pad (towel, carpet, slide, ...)</li> <li>• Pelvis is raised to the extent where shoulder, hip and knee form a straight line (from a lateral point of view)</li> <li>• Flexed knees (90°)</li> <li>• Core muscles are contracted to maintain the natural position of the lumbar spine (lordosis) at all times</li> </ul> <p><b>Exercise execution:</b></p> <ul style="list-style-type: none"> <li>• Feet flexed; heels are pushed away from body out of the starting position (2 sec)</li> <li>• When body is fully extended, the position is held (1 sec)</li> <li>• Retract legs until starting position is regained (2 sec)</li> <li>• When starting position is regained, immediately start next repetition</li> </ul> <p><b>Focus:</b></p> <p>Throughout the entire exercise:</p> <ul style="list-style-type: none"> <li>• Shoulder, hip and knee (from a lateral point of view) form a straight line</li> <li>• The pelvis is elevated throughout the entire exercise</li> </ul>	<p>Repetitions per Set: 8-12</p> <p>Sets: 2</p> <p>Rest between Sets: 1 Min</p> <p>Timing: see exercise execution</p>
<b>Hamstrings 2</b>	Dynamic	<p><b>Nordic Hamstring Exercise</b></p> 	<p><b>Starting position:</b></p> <ul style="list-style-type: none"> <li>• In kneeling positioning with propped up feet (progression: additional underlay, e.g. black roll under both ankles), barefoot</li> <li>• Legs held in place at the ankles by a partner</li> <li>• Shoulder, hip and knee form a straight line (from a lateral point of view)</li> <li>• Arms crossed over the chest</li> </ul> <p><b>Exercise execution:</b></p> <ul style="list-style-type: none"> <li>• Continuously lean forward from the starting position (3 sec)</li> <li>• Both legs try to maximally resist the forward movement</li> <li>• Execute movement until position can no longer be held. Absorb a fall with both arms and return to starting position (Ideally under maintained hip extension)</li> </ul> <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>• Shoulder, hip and knee form a straight line (from a lateral point of view) throughout the entire exercise</li> </ul>	<p>Repetitions per Set: 3-6</p> <p>Sets: 2</p> <p>Rest between Sets: 1 Min</p> <p>Timing: see exercise execution</p> 

	Static/ Dynamic	Exercise	Instruction	Sets
<b>Leg axis 1</b>	Dynamic	<p><b>Single Leg Squat (right)</b></p> 	<p><b>Starting position:</b></p> <ul style="list-style-type: none"> <li>• Right sided one-leg stand on a box (progression: one-leg stand on ground), barefoot</li> <li>• Arms extended to the front at shoulder height parallel to ground</li> <li>• Left leg extended forward</li> </ul> <p><b>Exercise execution:</b></p> <ul style="list-style-type: none"> <li>• The pivot leg is bent until thigh is parallel to the ground (2 sec)</li> <li>• Position is held (1 sec)</li> <li>• Pivot leg is dynamically extended until starting position is regained</li> </ul> <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>• Buttock muscles are <b>consciously</b> contracted</li> <li>• Hip and leg axis are kept stable throughout the entire exercise</li> </ul>	<p>Repetitions per Set: 6–8 Sets: 2 Rest between Sets: 1 Min Timing: see exercise execution</p> 
<b>Leg axis 2</b>	Dynamic	<p><b>Single Leg Squat (left)</b></p> 	<p><b>Starting position:</b></p> <ul style="list-style-type: none"> <li>• Left sided one-leg stand on a box (progression: one-leg stand on ground), barefoot</li> <li>• Arms extended to the front at shoulder height parallel to ground</li> <li>• Right leg extended forward</li> </ul> <p><b>Exercise execution:</b></p> <ul style="list-style-type: none"> <li>• The pivot leg is bent until thigh is parallel to ground. (2 sec)</li> <li>• Position is held (1 sec)</li> <li>• Pivot leg is dynamically extended until starting position is regained</li> </ul> <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>• Buttock muscles are <b>consciously</b> contracted</li> <li>• Hip and leg axis are kept stable throughout the entire exercise</li> </ul>	<p>Repetitions per Set: 6–8 Sets: 2 Rest between Sets: 1 Min Timing: see exercise execution</p> 

	Static/ Dynamic	Exercise	Instruction	Sets
<b>Core 1</b>	Static	<p><b>Dynamic Planking</b></p> 	<p><b>Starting position:</b></p> <ul style="list-style-type: none"> <li>• Prone Planking position (weight on lower arms and tiptoes), barefoot</li> <li>• Elbow directly placed under shoulder, lower arms parallel to the body's longitudinal axis</li> <li>• Head, shoulder, hip and knee form a straight line (from a lateral point of view)</li> <li>• Core and buttock muscles contracted, slight tension in the shoulder blade area</li> </ul> <p><b>Exercise execution:</b></p> <ul style="list-style-type: none"> <li>• Simultaneous elevation of arm and leg opposite each other</li> <li>• Hold position (2 sec)</li> </ul> <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>• Core and hips are kept stable (head, shoulder, hip and knee form a straight line) throughout the entire exercise</li> <li>• Natural positioning of lumbar spine (lordosis) is maintained throughout the entire exercise</li> </ul>	<p>Repetitions per Set: 20-30 Sets: 2 Rest between Sets: 1 Min Timing: see exercise execution</p>
<b>Core 2</b>	Static	<p><b>Deadbug Bridging</b></p> 	<p><b>Starting position:</b></p> <ul style="list-style-type: none"> <li>• Supine; arms 90° extended, palms facing up; barefoot</li> <li>• Legs extended (heels and elbows with same distance from midline of body), tip of toes are hyperextended</li> <li>• Metaphor: Pull belly button towards chin</li> <li>• Tensions is generated in core muscles</li> </ul> <p><b>Exercise execution:</b></p> <ul style="list-style-type: none"> <li>• Pelvis is slightly elevated (5-10 cm) and maintained in this position for the whole exercise</li> <li>• The knees are alternately pulled toward the chest until the thigh is vertical to the ground (2 sec)</li> <li>• Hold position (3 sec)</li> <li>• The leg is slowly lowered to a complete foot rest</li> </ul> <p><b>Focus:</b></p> <ul style="list-style-type: none"> <li>• Core and hip muscle are kept stable throughout the entire exercise</li> <li>• Maintain the starting position in the spine («pull belly button towards chin») throughout the entire exercise</li> </ul>	<p>Repetitions per Set: 4-6 Sets: 2 Rest between Sets: 30 sec Timing: see exercise execution</p> 