



# Össur Mobility Clinic

2020

Running Drills Presented by Coach  
Brett Jones



# Drills

- Aid in the warm up process by assisting us to prepare for the activity that follows.
  - Serve to build strength
  - Improve activity specific mobility
  - Strengthen muscles and movement patterns
  - Support the development and strengthening of sport specific postures
  - Allow us to practice the skills of running in a more closed or compartmentalised way
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- A woman in a blue t-shirt, black cap, and black leggings is running on a green artificial turf field. She is wearing a white knee brace on her right knee and a blue wristband on her left wrist. In the background, several other people are standing and watching. A man on the right is taking a photo with his phone. A yellow cone is visible in the bottom left corner. The scene is outdoors on a sunny day with shadows cast on the ground.

# Walking Drills

- Tip Toe
- Heel Toe
- Backwards A
- Crabs
- Scoops
- Lunges
- Straight leg
- Walking A
- Walking SL Cones- emphasis on down push



# Tip toe walking

- Raising up onto tip toes brings COM higher and pelvis forward
- Shoulders back and stacks our spine on top of the ball of foot
- Replicates posture of running
- Strengthens the lower limb and foot
- Promotes Isometric strength





# Heel toe walking



- Heel toes: helps us build lower limb strength
- Heel strike under hips, then roll on foot up onto toes (AK amputees focus on being tall and open up through front of amp side hip)
- Improve SL balance
- Highlights L->R side strength deficits
- Can help increase awareness of foot strike under hips and straight leg on contact
- Promotes concentric strength
- Who doesn't love a backyard chicken

# Backwards

- Sports that have higher volumes of running backwards have lower incidences of hamstring injuries
- Toe down, heel down encourages eccentric lower limb strength (could aid in tendon and MSK health)
- Promotes SL stance and balance
- Keep chest high and flex the knee to carry the foot under the hips. It's a "high" step backwards as if you are trying to step over the grounded knee.
- Challenges posture and posterior muscle groups





# Crab Walks



- Maintain hips and shoulders parallel throughout the crab crawl
- Try to push sideways and glide to the side, think ice skate not lunge or step.
- Promotes glutes (glute med) and quad strength.

# Scoops/stalks/drinking birds



- A dynamic hamstring mobility exercise
- Also strengthens the posterior chain of muscles.
- Peter here is rushing the movement and is off balance, which highlights a lack of strength, flexibility, control and coordination



# Lunges



- Promotes: Strength, balance, coordination, ROM (range of movement), Core and postural control.
- Can be done with or without the twist, but a twist just challenges the balance, and trunk mobility further.
- Aim to keep the front shin vertical

# Straight leg



- Key to this exercise is to maintain forward trunk lean and hip height.
- With eyes up and looking forward this helps to learn where the foot falls under hips for posture whilst running.
- If you lean back the foot will fall in front of your hips. Which we don't want



# Walking A

- The A Drill can be done walking, skipping or running. It is a drill that promotes the shape of sprinting mechanics. This drill can be dialled up to full sprint shapes or dialled back to jogging amplitudes.
- It has everything: posture, balance, strength, mobility, coordination.
- You must hold posture and the shapes of running
- Try to add a downward emphasis of foot contact. Foot on the ground.



# Walking Step Down Drill

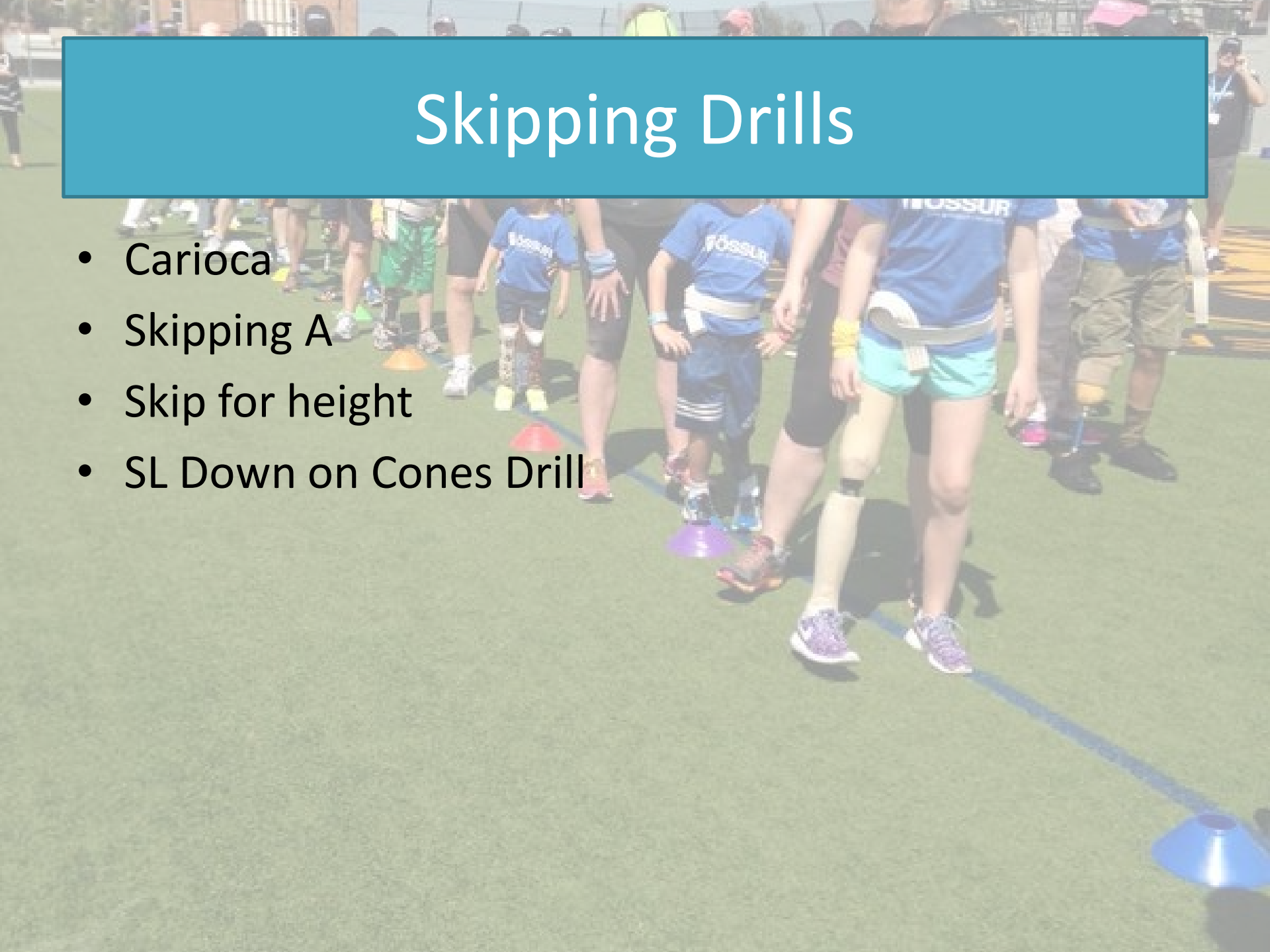
- SL step down beside cones (2-2.5ft apart)
- Single leg at a time, step next to each cone, the opposite leg just walks along landing in between the cones.
- Emphasise the step down
- Key highlights here are:  
When you place an emphasis on a foot contact with downwards force production 2 things immediately happen. Posture aligns and the opposite knee bounces up (action/reaction relationship).





# Skipping Drills

- Carioca
- Skipping A
- Skip for height
- SL Down on Cones Drill



# Carioca

- While this may not be technically a skipping drill. I don't think it is either walking or running.
- You can emphasise any of the following:
  - Balance, mobility, rotation, counter rotation, foot strike and postural awareness.
- Multi planar movement patterns are good for our coordination.





# Skipping A



- Skipping A Drill:
- Promotes bounce and elastic energy
- Assists to identify ball of foot contact
- Encourages posture and down foot strike
- Helps to improve arm swing to balance the lower limbs

# Skipping A for Height



- Focus is the generation of vertical forces
- Push on the ground
- Prepare your foot for ground contact
- Bounce
- Balance arm swing to match legs
- Strong through core
- Use your prosthesis to bounce
- Be strong with using glutes on prosthetic side



# Skipping SL Step Down on cones



- Focus is single leg step down
- Opposite leg remains passive and relatively straight
- Great way to focus on one leg pushing down at a time
- Arms and feet working together for balance

# Running Drills

- Ankling
- Running Straight Leg
- Running A
- Step on lily pads
- Run over cones
- Small, Med, Large Drill





# Ankling



- Focus is on ball of foot running
- Keep it small and bouncy
- Try to step/run over the opposite ankle
- Attempt to apply forces down into the ground

# Running straight leg

- Promote slight forward trunk lean
- Helps identify foot strike under hips
- Helps encourage maintenance of running height
- Highlights need for trunk strength to balance the rotation forces developed
- Great to encourage the amputee runner to push on the ground and use their posterior chain of muscles.





# Running A

- Running A is a drill that I love.
- It needs to have the shape of full speed running, but the drill is performed with higher cadence, shorter strides and lower speed.
- It is basically the practicing of sprinting technique without the speed.
- A great way to transition all of the learning from the slower drills to the running action.



# Step On Lilly Pads



- Focus here is to practice stepping down with both feet whilst having a target to emphasize the foot contact on.
- Keep your posture and trunk lean
- Arms balance legs

# Run Over Cones

- Place the cones 2.5 feet apart
- With a couple of steps walk in, run over the top of the cones
- The difficulty here is still stepping down between the cones.
- When we have an obstacle to “step over” our tendency is to lift our knees up and not to push down on the ground.
- Push on the ground to achieve the height to clear the cones.





# Small Med Large

- Set 3 zones 10-20m apart
- Zone 1 is ankling or small amplitude running (run over the ankle)
- Zone 2 is medium amplitude running (run over mid shin)
- Zone 3 is full amplitude running (run over knee)
- Hold your running shapes and keep your trunk lean
- Always push down on the ground



# Drills: Warm Up or Work Out

## As a warm up

1-2sets x 10-20m each drill

Walk or jog back recovery

2-3 run throughs over 60-100m

incremental intensity  
(eg.60/80/90%) until you reach  
the speed you wish to train at.

## As a workout

- 3-5 sets x 20-30m each drill
- Jog back recovery
- 3-5 run throughs over 80-100m, building in intensity 70/80/90/95%.

# Brett Jones

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- The Össur Team
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w. [therunproject.com.au](http://therunproject.com.au)

e. [brett@therunproject.com.au](mailto:brett@therunproject.com.au)

t. [@therunprojectau](https://www.instagram.com/therunprojectau)

