

# NETBALL STRENGTH PROGRAM



*feelfit*

**PHYSIOTHERAPY**

Treatment | Prevention | Performance | Enhancement

# WHO AM I?



My name is Erin Joyce and I am a physiotherapist at Feelfit Physiotherapy, Kedron. My experience as a physiotherapist has shown me the importance of early strength training for children.

As a netball player myself I have seen the benefits of strength training firsthand; not only in my sport, but also in confidence and self-esteem. I have created a tool to help get started and build the foundations of strength training.



# Does Strength Training in Children Work?



## Up to 50% stronger in 8-12 weeks

A well-designed strength program can improve a child's strength by 30-50% [2].



## Builds a Resilient Body

Reduces injury risk, improves bone mineral density and boosts self-esteem and mental discipline [2].

## Is Strength Training in Children Safe?

Previously, there was concern that kids' growing bones would be damaged with strength training. However, research has shown that a well-designed resistance training program has no negative effect on growth plate health and linear growth [3].

A properly supervised resistance-training program will:



Improve sport performance



Reduce injury potential



Enhance health

# THE WHY

## Strength Training and Plyometrics for netballers

As a netball player, jumping and landing is common. Altered landing patterns can load the wrong structures and instil incorrect movement patterns from an early age, leading to long term consequences.

This manual provides your child with the opportunity to build their confidence in a gym environment. There are many benefits that come with starting strength training from a young age, these include [2]:



Enhanced Sporting Performance



Improved Muscular Fitness



Reduced Risk of Injury



Improved Bone Mineral Density



Improvements in Self-Esteem and Mental Discipline.

# STRUCTURE

Follow the arrows and use the following pages to pick exercises.

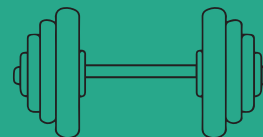
Warm Up



2 x Plyometric Exercises



4-6 x Strength Exercises



Cool Down



# WARM UP



## Jog

Go for an easy jog outside for ~3-5 minutes, other options include:  
5 minute bike ride  
3 minutes of skipping



# WARM UP



## Inchworms

Walk your hands out until you come into a high plank position. Add in a push up at the bottom and walk your hands back up.  
Repetitions: 10

## Foward Lunge + Twist

Step forward dropping your back knee to the ground and twist through your trunk.  
Repetitions: 10

## Sumo Squat

Push your hips back and drive up through your heels to come back up into standing.  
Repetitions: 10

# WARM UP



## Inchworms



## Lunge + Twist



## Sumo Squat





## Skips for Distance

Moving forward by alternating legs, driving one knee up while pushing powerfully off the opposite foot to travel as far as possible with each skip.

Repetitions: 10–15m

## Skips for Height

Skipping forward while driving one knee up strongly and jumping as high as possible on each skip.

Repetitions: 10–15m

# WARM UP



Skips for Height

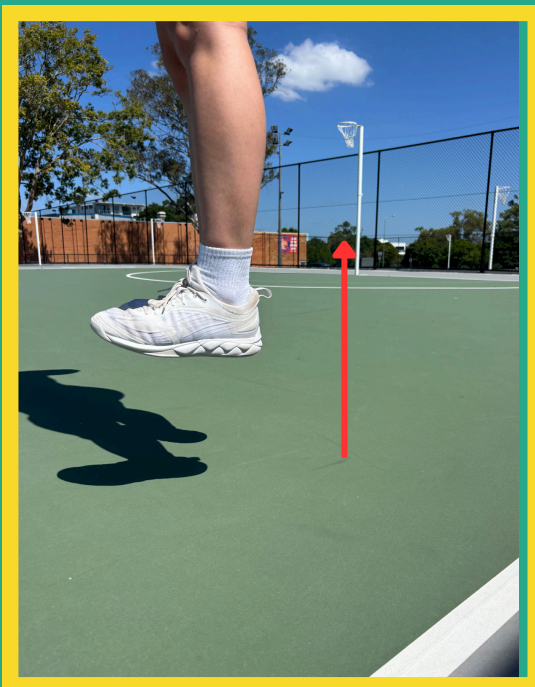


Skips for Distance

# PLYOMETRICS



The goal of plyometric exercises is to improve running and jumping performance, two very important skills in netball. Current evidence suggests that a twice a week program for 8-10 weeks beginning at 50-60 jumps per session with increasing exercise load weekly, has the best results [2]. Evidence also suggests plyometric training has a large effect on improving balance and agility.





## Squat Jump

Place your feet just outside your shoulders, sit back into a squat and drive up and out of the squat trying to jump as high as you can. Make sure when you land you sit back into your heels and land softly.

Cues:

- Don't let your knees drop in as you land – can do in front of a mirror to monitor this.
- Make sure every rep has the intention of jumping as high as you can.

Sets: 3

Reps: 6





## Lunge Jump

Set your feet up on train tracks, drop your back knee down to the ground and as you jump up switch legs.

Cues:

- Don't let your knees drop in as you land – can do in front of a mirror to monitor this.
- Jump as high as you can
- Land softly.

Sets: 3

Reps: 5 each side





## Pogo Jumps

On the balls of your feet with a soft bend in your knee, jump as high as you can with quick contact time on the ground.

Cues:

- The movement is coming from your ankles, so quick contact time and keep toes up.
- Soft bend in your knees.

Sets: 3

Reps: 10





## Jump From Seated

Start sitting on a chair, lean forward, and drive up through your legs to jump as high as you can. Land softly, making sure to keep knees over toes.

### Cues:

- Focus on jumping as high as you can and landing softly, don't let your knees drop in.
- Hold this position for 3 seconds.

Sets: 3

Reps: 6





## Double Leg Drop Jump and Stick

Step off a box, landing feet shoulder width apart, sitting back into heels, landing softly.

Cues:

- Chest tall, sit back into heels
- Don't let knees drop in
- Do in front of a mirror to monitor technique

Progression:

- Single Leg

Sets: 3

Reps: 6





## Zig Zag Hop and Stick

Alternating legs hopping on a 45-degree angle, stick the landing, sitting back into heels, hold this position for 3 seconds.

Cues:

- Maintain the 45-degree angle on the hops
- Sit back into your heel on landing
- Soft, quiet landing
- Don't let knees drop in.

Sets: 3

Reps: 6 each side





## Single Leg Lateral Hops

Start with one leg on either side of a line on the ground, perform rebounding hops side to side.

Cues:

- Have a line as the objective to jump forwards and backwards over.
- Eyes forward, like you're watching the ball carrier.

Sets: 3

Reps: 30 seconds each side





## Single Leg Forward Hops

Start with one leg on either side of a line on the ground, perform rebounding hops forward and back.

Cues:

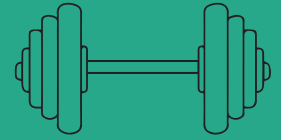
- Have a line as the objective to jump forwards and backwards over.
- Eyes forward, like you're watching the ball carrier.

Sets: 3

Reps: 30 seconds each side

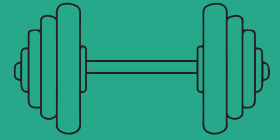


# STRENGTH



Level 1	6-9yrs of age	bodyweight exercises, light resistance, high repetitions (15+)
Level 2	9-12 yrs of age	10-15 RM (max loading 60% of maximum lift)
Level 3	12-15yrs of age	8-15 RM (max loading approx. 70% of maximum lift) using progressively more free weight exercises but avoid complex lifts eg cleans, deadlifts, snatches and squats etc.
Level 4	15-18yrs of age	6-15 RM (max loading approx. 80% of maximum) with a progressive goal of moving towards an advanced adult program involving split routines where appropriate and complex multi-joint movements, provided sound technique has been developed under competent coaching.

[1]



## Squat to Chair

Push hips back to sit in chair, quick touch at the bottom of the movement and then drive up through the heels.

### Helpful Cues

- Mirror in front to monitor knees – make sure they don't drop in.
- Hips back
- Bench to sit back to
- Band around knees to encourage glute activation

### Progression:

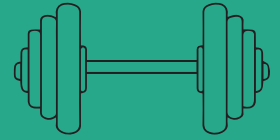
- Single Leg Squat to Chair – it is important that all netball players are able to perform this exercise.

Target Muscles: Quads, Glutes

Sets: 3

Reps: 30 seconds each side





## Step Ups

Using a step at home, place your whole foot on the surface and drive up until your knee is straight. Slowly lower your leg down ~3 seconds before it hits the ground.

Cues:

- You can add weights eg a full water bottle to make it more difficult
- Focus on not letting the knee drop in and maintaining a stable base.

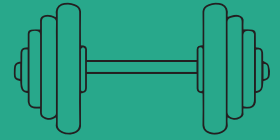
Target Muscles: Quads, Glutes

Sets: 3

Reps: Refer to ASCA

Recommendations based on age.





## Push Ups

Hands set up just outside of shoulders dropping chest to ground. Make sure to lower slow and controlled and then push up and away from the ground.

Regression: on knees instead of toes

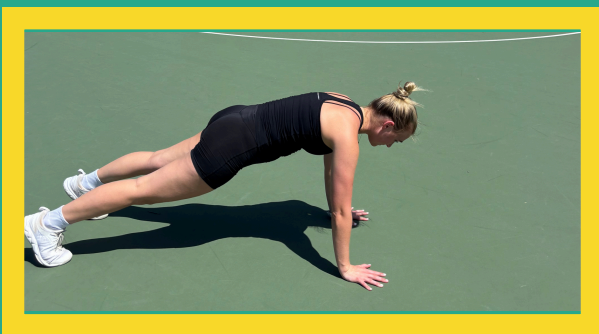
Cue

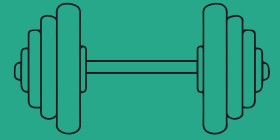
- Hips level, activate core to avoid losing shape.

Target Muscles: Chest (pecs), Shoulders (deltoids), Triceps, core

Sets: 3

Reps: Refer to ASCA Recommendations based on age.





## Glute activation against wall

Stand with one knee turned out to the wall, trunk slightly forward, push knee into wall and hold for 5 seconds.

Relax and repeat.

### Progression

- Pillow or swiss ball between wall and knee
- Add a hip hinge, maintaining a straight trunk.

Target Muscles: Gluteus

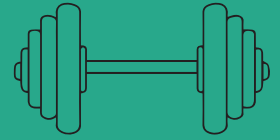
Medius

Sets: 3

Reps: Refer to ASCA

Recommendations based on age.





## Calf Raise

Stand facing a wall and using hands supported against the wall, lift onto toes making sure to put weight through big toe and don't let heels drop out.

Cue:

- Ball between heels

Progression:

- Calf raise off a step
- Single leg

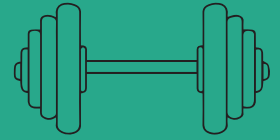
Target Muscles: Calves

Sets: 3

Reps: Refer to ASCA

Recommendations based on age.





## Hip Bridge

Put your heels under your knees, drive up through your heels to lift your hips. Take 3 seconds to lower down to the ground. Keep your hips level the whole way through the movement.

Progression:

- Offset feet
- Single Leg

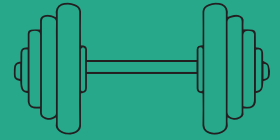
Muscles Targeting: Glutes

Sets: 3

Reps: Refer to ASCA

Recommendations based on age.





## Lunges + Knee Drive

Set your feet up on train tracks, drop your back knee straight down while maintaining a tall posture. As you come to stand drive your back leg forward, so your hips and knees are at 90 degrees.

Progression:

- off a step

Cues:

- Make sure hips remain square.
- Slow and controlled focus for the lunge
- Focus on stability for the knee drive

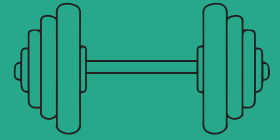
Muscles targeting: Quads, Glutes

Sets: 3

Reps: Refer to ASCA

Recommendations based on age.





## Bicep Curl

Tuck your elbows into your side, lift your wrists into the crease of your shoulder blade, slowly lower back down.

### Cues:

- Avoid swinging into the movement to gain momentum
- Chest up, tall posture

### Progressions:

- you can use bands or dumbbells to add resistance.

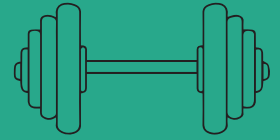
Target muscles: biceps

Sets: 3

Reps: Refer to ASCA

Recommendations based on age.





## Farmers Carry

Maintaining a tall posture hold onto dumbbells in each arm, walk and back ~10-20m for 30 seconds.

Cues:

- Don't round shoulders
- Stay up tall

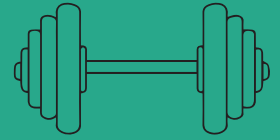
Target Muscles: Shoulder blade stabilisers

Sets: 3

Reps: Refer to ASCA

Recommendations based on age.





## Palloff Press

Using a dumbbell or a band tied to a stable pole, create tension and hold the band at chest height. Press the dumbbell/band straight out in front and maintain an upright posture. Hold for 3 seconds before bringing the weight back into your chest.

### Cues:

- Don't let the resistance of the band pull you in.
- Keep shoulders square

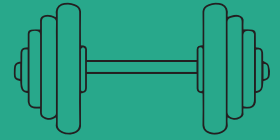
Target Muscles: Core

Sets: 3

Reps: Refer to ASCA

Recommendations based on age.





## Nordics

With a partner, have one partner holding the feet stable, the working partner slowly lowers their trunk as close to the ground as they can with their arms across their chest.

### Cues:

- Avoid bending through hips.
- Make sure feet are being held close to the ground.

Target Muscles: Hamstrings

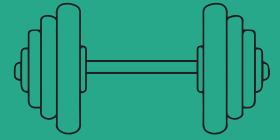
Sets: 3

Reps: Refer to ASCA

Recommendations based on age.



# STRENGTH



## BALANCE

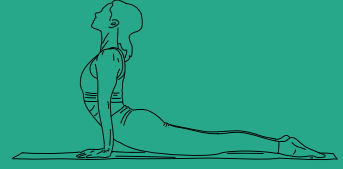
### Improving balance helps to:

- Build strength and control
- Improve coordination
- Enhance posture
- Develop spatial awareness

### How to make balance exercises more difficult:

- Close your Eyes
- Stand on an unsteady surface eg foam
- Add in a throwing and catching component





## Quadricep Stretch



## Hamstring Scoops



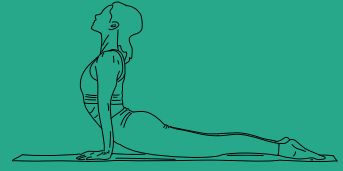
## Calf Stretch



## Hip Flexor Stretch

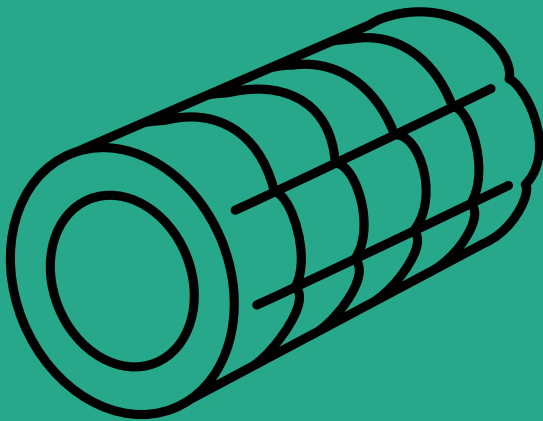


# COOL DOWN

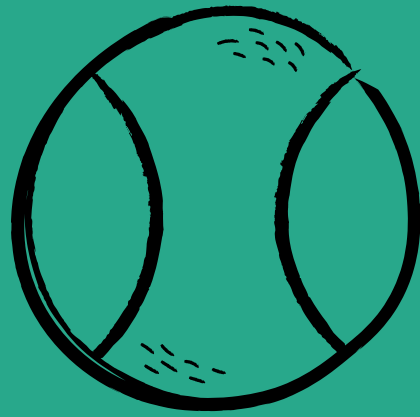


Other tools you can use to cool down include:

Foam roller



Tennis ball/Trigger ball



Hot/Cold therapy



Compression boots



# REFLECTION



## Rate of Percieved Exertion (RPE)

Pick a number between 1-10 to determine how challenging the session was with 10 being very hard and 1 being very easy.

Monitor this throughout each week to see how you improve!

## HOW DO YOU RATE THE SESSION?

WEEK	1	2	3	4	5	6	7	8
RPE /10								

# REFLECTION



## EXERCISE STRUCTURE

### PLYOMETRICS

Weight used OR reps completed (total)								
Week	1	2	3	4	5	6	7	8
Exercise 1: _____ _____								
Exercise 2: _____ _____								

# REFLECTION



## EXERCISE STRUCTURE

### STRENGTH

Weight used OR reps completed (total)								
Week	1	2	3	4	5	6	7	8
Exercise 1: _____ _____								
Exercise 2: _____ _____								

# REFLECTION



## EXERCISE STRUCTURE

### STRENGTH

Weight used OR reps completed (total)								
Week	1	2	3	4	5	6	7	8
Exercise 3: _____ _____								
Exercise 4: _____ _____								

# REFLECTION



## EXERCISE STRUCTURE

### STRENGTH

Weight used OR reps completed (total)								
Week	1	2	3	4	5	6	7	8
Exercise 5: _____ _____								
Exercise 6: _____ _____								

## READ MORE HERE



[1] Australian Strength and Conditioning Association. (2017). Resistance training for children and youth: A position stand from the Australian Strength and Conditioning Association. <https://static1.squarespace.com/static/5f0a85a92f73d10e7ca438dc/t/686763b24ad9bf52f7f782ee/1751606249494/resistance-training-for-children-and-youth-asca-position-stand.pdf>

[2] Johnson, B. A., Salzberg, C. L., & Stevenson, D. A. (2011). A systematic review: Plyometric training programs for young children. *Journal of Strength and Conditioning Research*, 25(9), 2623-2633.

[3] Stanford Medicine Children's Health. (n.d.). Strength training: No longer off-limits to kids. Stanford Medicine Children's Health.

<https://www.stanfordchildrens.org/en/topic/default?id=strength-training-no-longer-off-limits-to-kids-1-1187>

# WHERE TO FIND ME

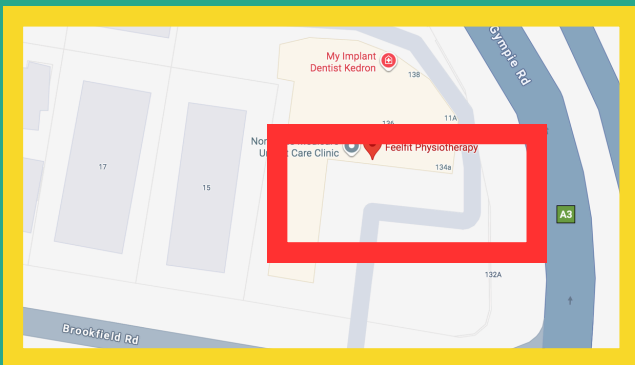
Feelfit Physiotherapy, Kedron

Address: 136 Gympie Rd, Kedron

Ph: 3357 1803



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