



**HIGH PERFORMANCE
SPORT NEW ZEALAND**

Mobilise Activate Stimulate

Maximising your Warm Ups

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Warming up isn't new

The warmup drives physiological and neuromuscular systems to create compliance between the mind and muscles.

- General Warm
 - elevate core temp
 - establish ROM,
 - psychologically prepare,
 - activate muscles
 - Coordination
- Specific Warm up
 - Exercise / activity specific
 - A crescendo of intensity to 100%



The Opportunity

*... “short concentrated warm up drills that are well designed,
coached, and focused on movement quality can improve
movement ability
alongside improvements in performance
and reduce injury risk...”*

Dr Ian McKeown

(Power development & movement ability in Junior athletes)

40% increase movement ability (AAA) 19% improvement in power (CMJ,DJ)

39% reduction in injury risk

Increases in CMJ & DJ, foundation movement ability occur relatively quickly... <3wks

With just 2 x 15min warm ups a week! Nothing else

The need to actually be warm

Muscle temperature

- Range from 30-39°C
- 4-6% / 1°C (power, sprint, jump)
- 2% max isometric strength / 1°C
- Increased O₂ delivery
- Improved CNS function & nerve transmission
- Improved elasticity CT
- Increased metabolism



Stay Dressed!!

Mobilise – Activate – Stimulate

mobilise the area to enhance movement capacity

*activate the supporting musculature
& movement patterns*

*stimulate the neural system
maximise the session ahead*

COACH IT!!



Mobility

What is Mobility?

- Ability to move fluidly through a range of movement without physical hindrance

What it ain't?

- Laying on a foam roller...

Start with ze glutes / hips / back

Slow to fast

Isolated to complex

Exploration & play

Teach them 'to feel'....

The importance of Posture



The stability – mobility continuum

Foot - stability

Ankle - mobility

Knee - stability

Hips - mobility

Lumbar - stability

Thoracic - mobility

Scapula - stability

Shoulder - mobility

Elbow - stability

Wrist - mobility

Cervical - mobility



Activation

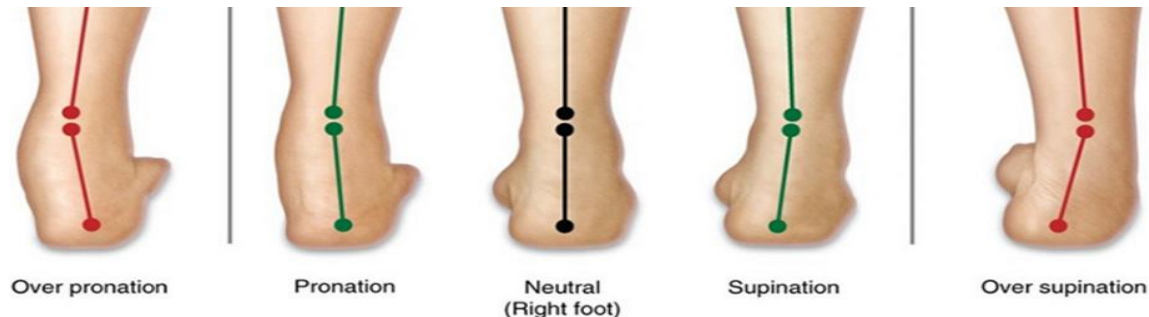
The communication between brain and muscle units

Muscles

- Foot intrinsics
- Glutes
- Posterior Shoulder
- Trunk

Movement patterns

- Lunging
- Squatting
- Push / pull
- Jump / land / hop
- running



Stimulate

This can make **all** the difference between starting well and starting 'slow'

Integrate the equipment from the sport/session

SPECIFICITY

Decision making & reaction

Communication & teamwork

Challenge, fun, competition



Time to play!

BAREFOOT

- Bow & Arrow & Arcs
- 4pt kneeling T Rotations
- 4pt reach roll & lifts + scapula push ups (knees, toes, SL)
- Downward dog to yoga push ups to chllds pose
- Partner resisted hip abduction laying, side hold leg raises,
- partner fire hydrants, rear delt sit ups
- Kneeling Leg through (hips, overhead)
- walking (toes, heels, inside, outside, dancemoves)
- SL Stance partner push – shoulder / hip touch game, band tug of war
- Spidermans + T rotations, Squat – Squat to stand w rotation
- Hug knee arabesque lunge sequence, Band Woodpeckers, mini aeroplanes
- Partner Band TKE, Partner Band 3 way kicks, partner no-money
- Partner Push Up hold (chaos) + Band assisted Dynamic Push Ups, T rolls

SHOES ON

- Partner band lunges (together outside leg) (together Pallof) (walking w chaos – hips)
- Bounce fwd, lat, rotate
- Jump & land, DL, SL – ready to do anything
- Partner Jump & land
 - Jump, bump, DL SL,
 - Band – resisted & assisted lateral, fwds DL, 1>2 2> 1
- Ankling, low high knee, medium high knee, high high knee, 3rd leg, – fwds, back, side
- Skipping – rope / drills (low>high,

Pulling it all together

Start the session then at key times throughout the session

Eg – to maximise bench press – rear delt sit up + bench press + thoracic extension

Eg – to maximise lunge – band crab walks + seated 90/90 + Squats!

Applying the training principles to this element of the session

- Specificity of it to the session / goals / task?

- Individualisation?

- Progressive overload?

- Variety?

The fancy stuff

The 'new' Potentiation

Occlusion cuff

- PAP through increased calcium responsiveness... *we think...*

Stochastic resonance

- *A random process added to a subthreshold stimulus can enhance sensory information processing and perception*

*Para-athletes (CP, ataxia)

Immediate effect on balance, proprioception, gait, speech – acute & potential long term changes



The last word

What do you currently deliver?

What can you improve?

What other opportunities do you have within the week to make a difference?

Coach the %&*# out of them!

Thank you