



樂施毅行者2020
物理治療師的建議
Oxfam Trailwalker 2020
Advice from Physiotherapist

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HONG KONG PHYSIOTHERAPY THERAPY

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內容 CONTENT



毅行常見的肌肉骨骼傷患

Commonly Seen Musculoskeletal Problems in OTW

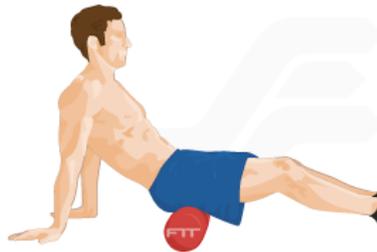
預防及訓練方案

Prevention and Training Protocols

行山鞋的選擇

How to Choose Trail Walking Shoes

內容 CONTENT



功能性鍛煉運動
Functional Training

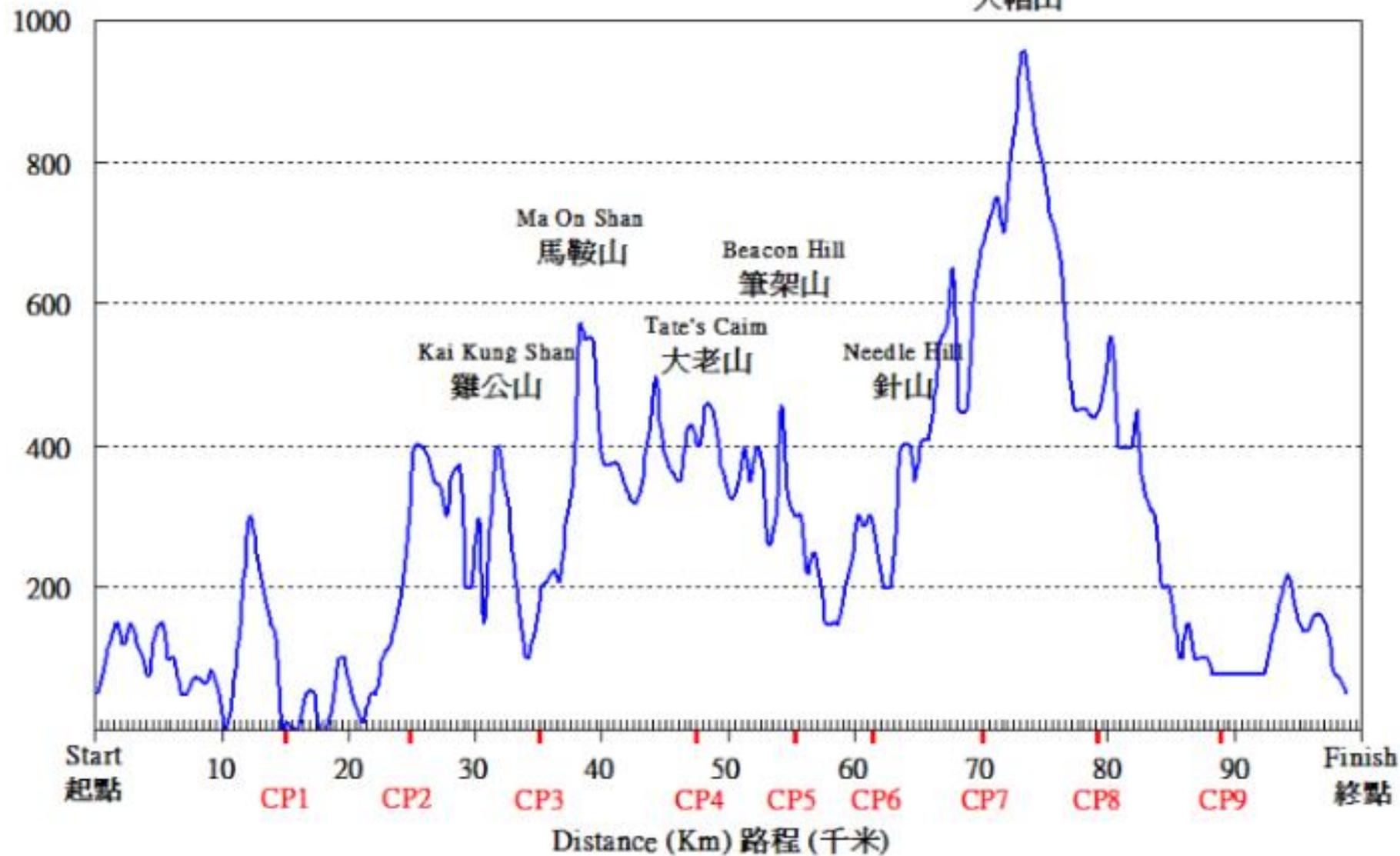
伸展運動
Stretching Exercise

泡綿滾筒運動
Foam Roller Exercise

練習時段
Practical Session

Height (m) 高度 (米)

Tai Mo Shan
大帽山



毅行常見的肌肉骨骼傷患

Commonly Seen Musculoskeletal Problems in TW

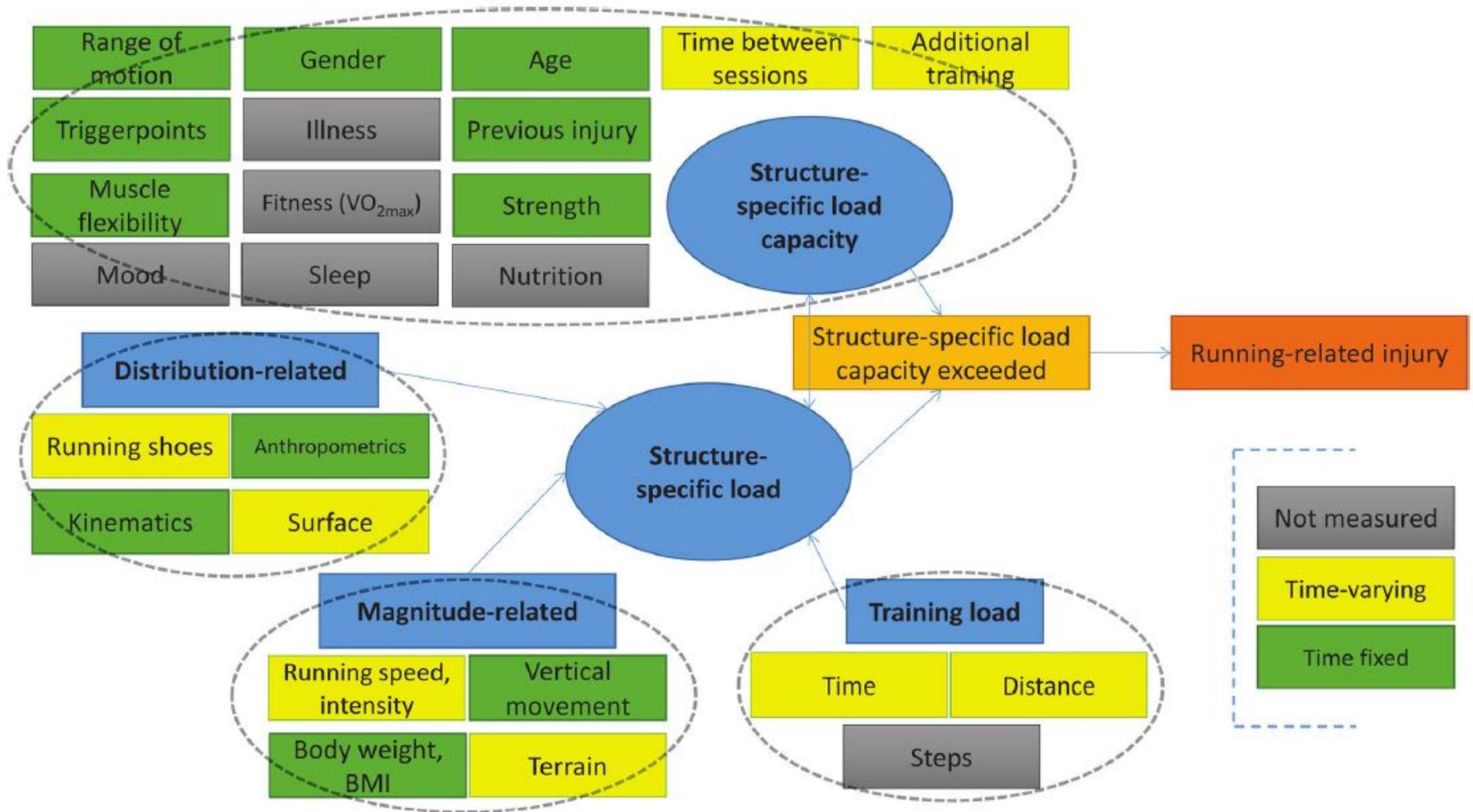
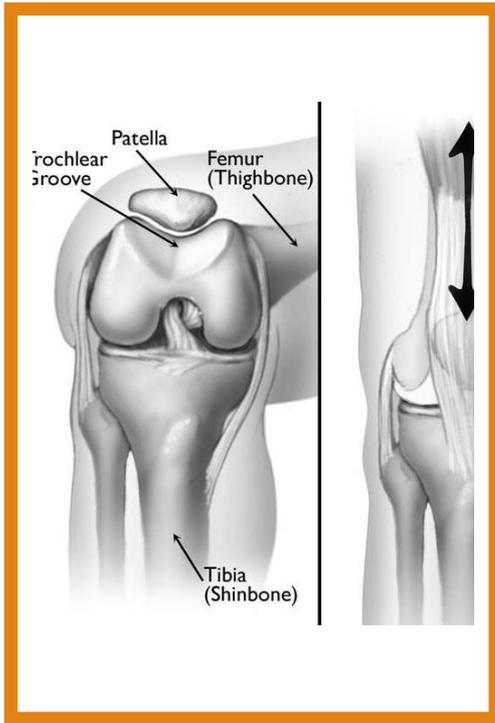


Figure 2 A directed acyclic graph-inspired approach to visualise the relationship between structure-specific load and structure-specific load capacity and running-related injury. Modified by a version from Bertelsen *et al.*²² BMI, body mass index.

(Jungmalm J, et al 2018)



毅行常見的肌肉骨骼傷患

70-80%為下肢傷患

70-80% lower limb problems

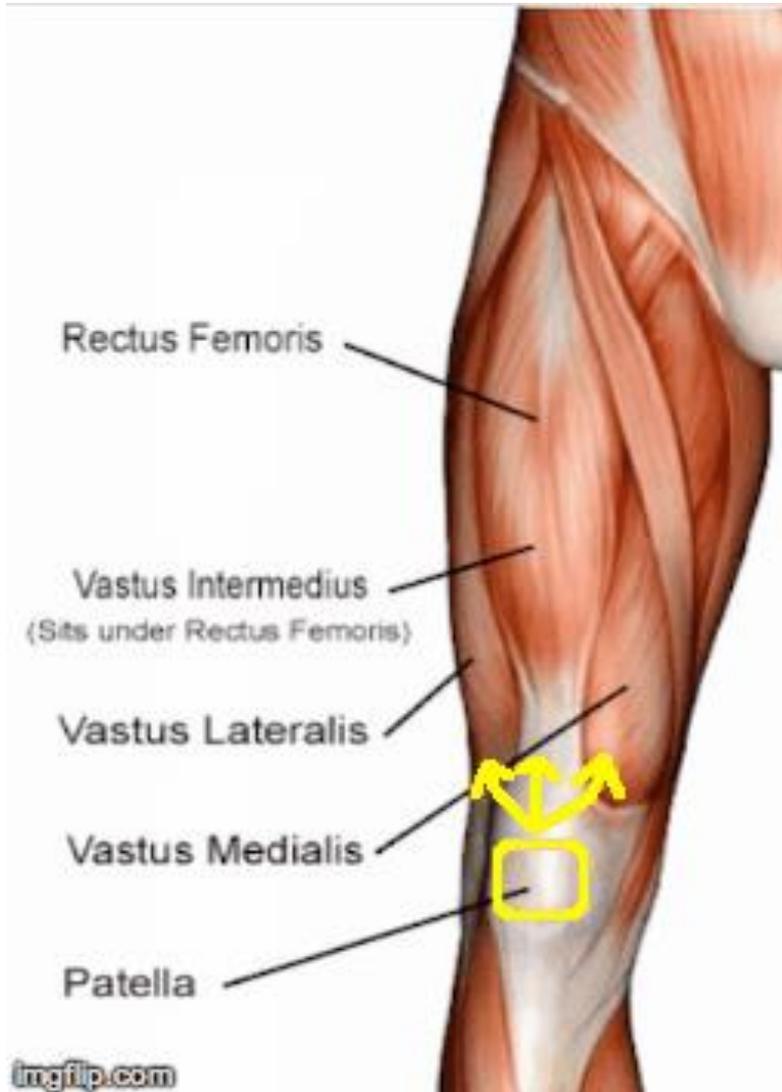
當中膝關節傷患佔70%

in which 70% knee problems

前膝痛症及髂脛束綜合症為最常見的肌肉骨骼傷患

Anterior Knee Pain and Iliotibial Band Syndrome most common





前膝痛症最常見的成因 Common Cause of anterior knee pain

下肢運動力學連鎖反應

Poor Lower Limb Biomechanics

生理結構異常（如膝外翻和扁平足）

Knock knee or Flat foot

運動鞋錯配

Wrong choice of shoes

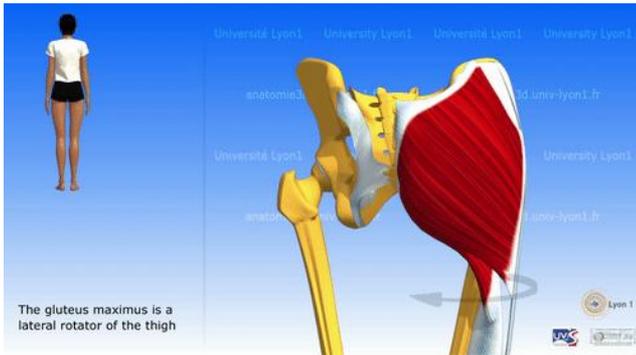
前膝痛症最常見的成因

Common Cause of anterior knee pain

超負荷 Overloading

體重、訓練強度、量度遠超過肌肉及相關軟組織所能承受

Overweight and overtraining that exceed the body can handle



預防措施

Preventive Measures

循序漸進的訓練方法

Progressive training

留意身體反應 (紅、黃、綠訊號)

Listen to your body for warning signals

有需要時應暫停訓練或調節形式、量度及強度 (例如減少落山訓練、加密步頻、收細步幅)

Take a break or adjust the type, volume or intensity of training (e.g. decrease downhill training, increase the cadence and decrease the stride length)

預防措施

Preventive Measures



冰敷 Ice pack

- 冰敷患處 5-10 分鐘 5 to 10 minutes
- 按需要一日可冰敷3-5 次 3 to 5 times a day

預防措施

Preventive Measures

功能性運動鍛煉以加強下肢肌肉耐力及關節穩定性(臀大、中肌及股內側頭)(例如平板支撐或加上轉體、蚌式運動、阻力橫向滑步、分腿蹲)

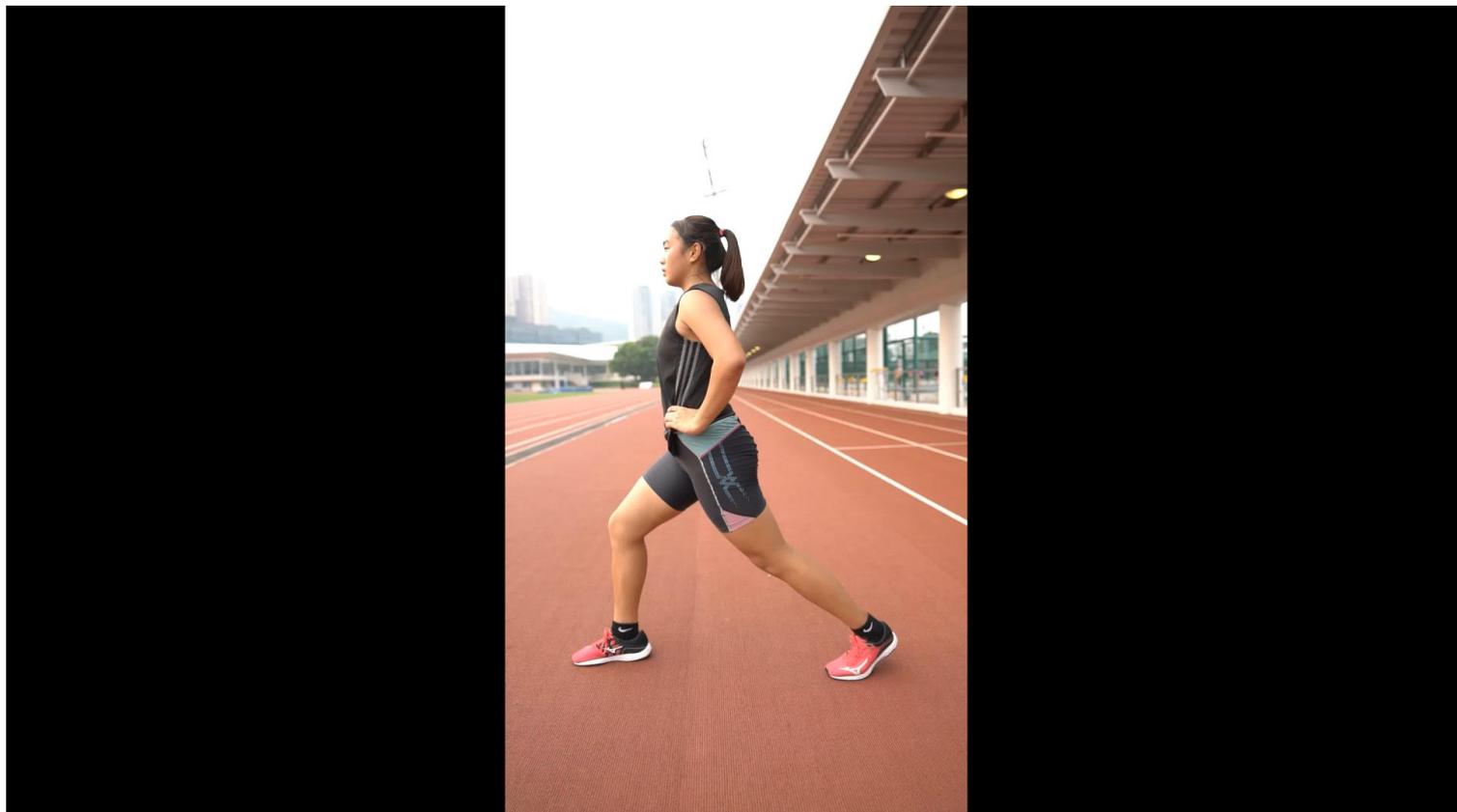
Functional training to improve the joint stability and endurance strength of lower limb muscles (e.g. gluteal max., med., and vastus med.)(with plank, clam shell ex., side steps with resistance band, split squat)



蚌式運動Clamshell Exercise



分腿蹲 Split Squat



泡綿滾筒運動

Foam Roller Exercise

利用泡綿滾筒Foam Roller放鬆下肢肌肉，特別對四頭中外側及髂脛束等軟組織

Foam rolling to release the tightness of the muscles and fascia esp. lateral side of quadriceps and IT band



泡綿滾筒運動

Foam Roller Exercise

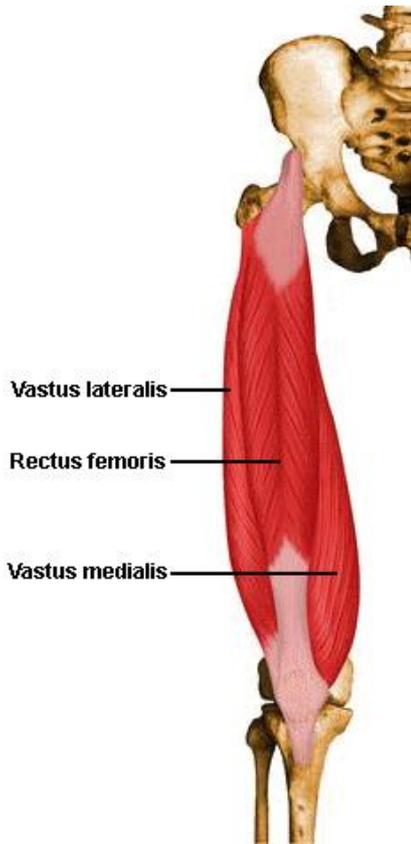
配合伸展運動，保持下肢肌肉的柔韌性

Stretching ex to improve the lower limb flexibility

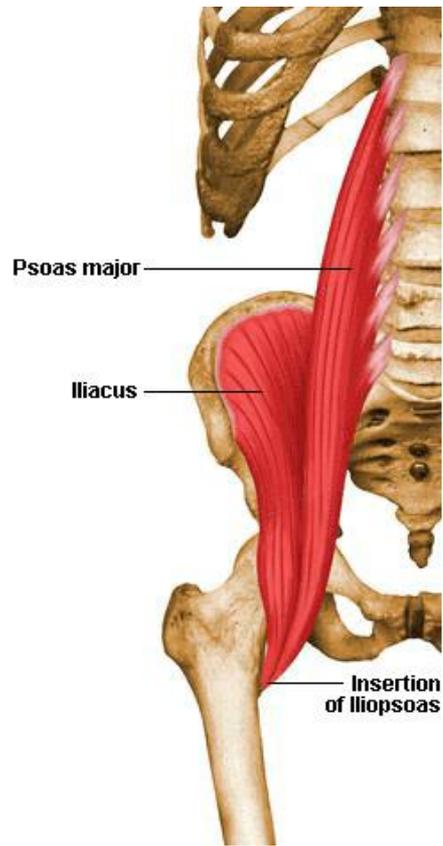
選擇合適的運動鞋

Right choice of sports shoe

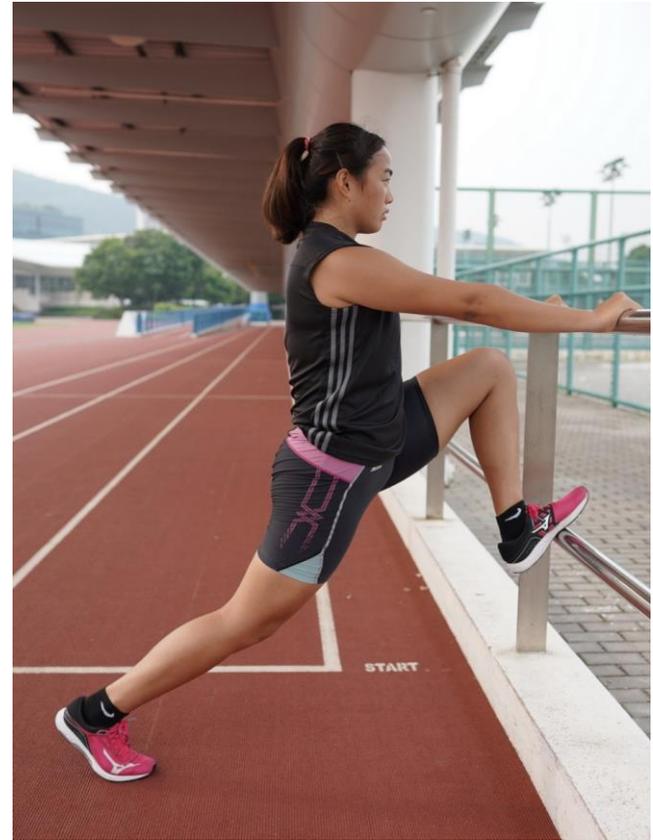
股四頭肌 Quadriceps Femoris



髂腰肌 Iliopsoas



髂腰肌 Iliopsoas



髂脛束綜合症 Iliotibial Band Syndrome

下肢運動力學連鎖反應

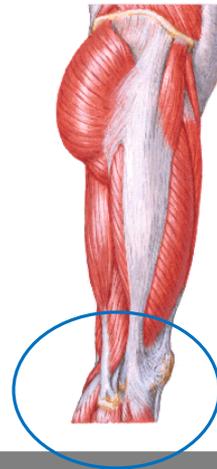
Poor Lower Limb
Biomechanics

髖部外展肌群變弱 (臀中
股、臀大股過弱)

Weak hip abductors (Weak
in Gluteal Max, Med)



Muscles of Hip and Thigh
Lateral View



成因 Causes



髋部屈曲肌(髂腰肌、闊筋膜張肌)、髋部外旋肌(梨狀肌)及髋部伸展肌(臀大肌和大腿後側肌群)過度的緊繃

Tight hip flexors (iliopsoas, tensor fascia lata), hip external rotator (piriformis) and hip extensors (gluteus max., hamstrings)

超負荷

Overloading

訓練量度(長課)遠超過肌肉及相關軟組織所能承受

Overtraining (too far too soon) that exceed the body can handle

預防措施 Preventive Measures

按部就班的訓練方法

Progressive training

留意身體反應(紅、橙、綠訊號)

Listen to your body for warning signals

有需要時應暫停訓練或調節形式、量度及強度(例如暫停長課、山路或單車訓練、加密步頻、收細步幅)

Take a break or adjust the type, volume or intensity of training (e.g. stop long run, hilly run or bicycle training, increase the cadence and decrease the stride length)



預防措施

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功能性運動鍛煉以加強下肢肌肉耐力及關節穩定性(臀大、中肌及股內側頭)(例如棒式撐體、蚌式運動、阻力橫向滑步、分腿蹲)

Functional training to improve the joint stability and endurance strength of lower limb muscles (e.g. gluteal max., med., and vastus med.)(with plank, clam shell ex., side steps with resistance band, split squat)



按壓風市穴

Acupressure at Feng Shi



臀大肌/梨狀肌 Gluteus Max./Piriformis



闊筋膜張肌 Tensor Fascia Latae



髂脛束 IT Band



預防措施 Preventive Measures

配合伸展運動，保持下肢肌肉的柔韌性

Stretching ex to improve the lower limb flexibility

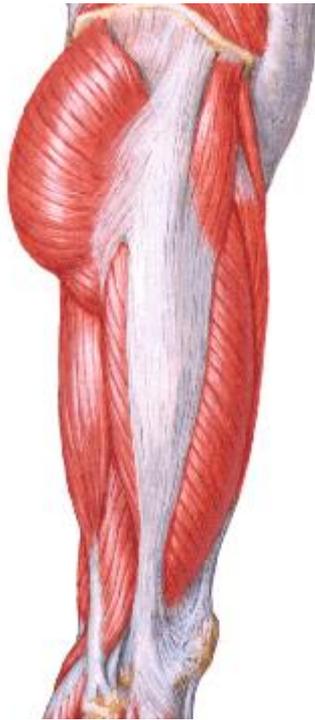
選擇合適的運動鞋

Right choice of sports shoe

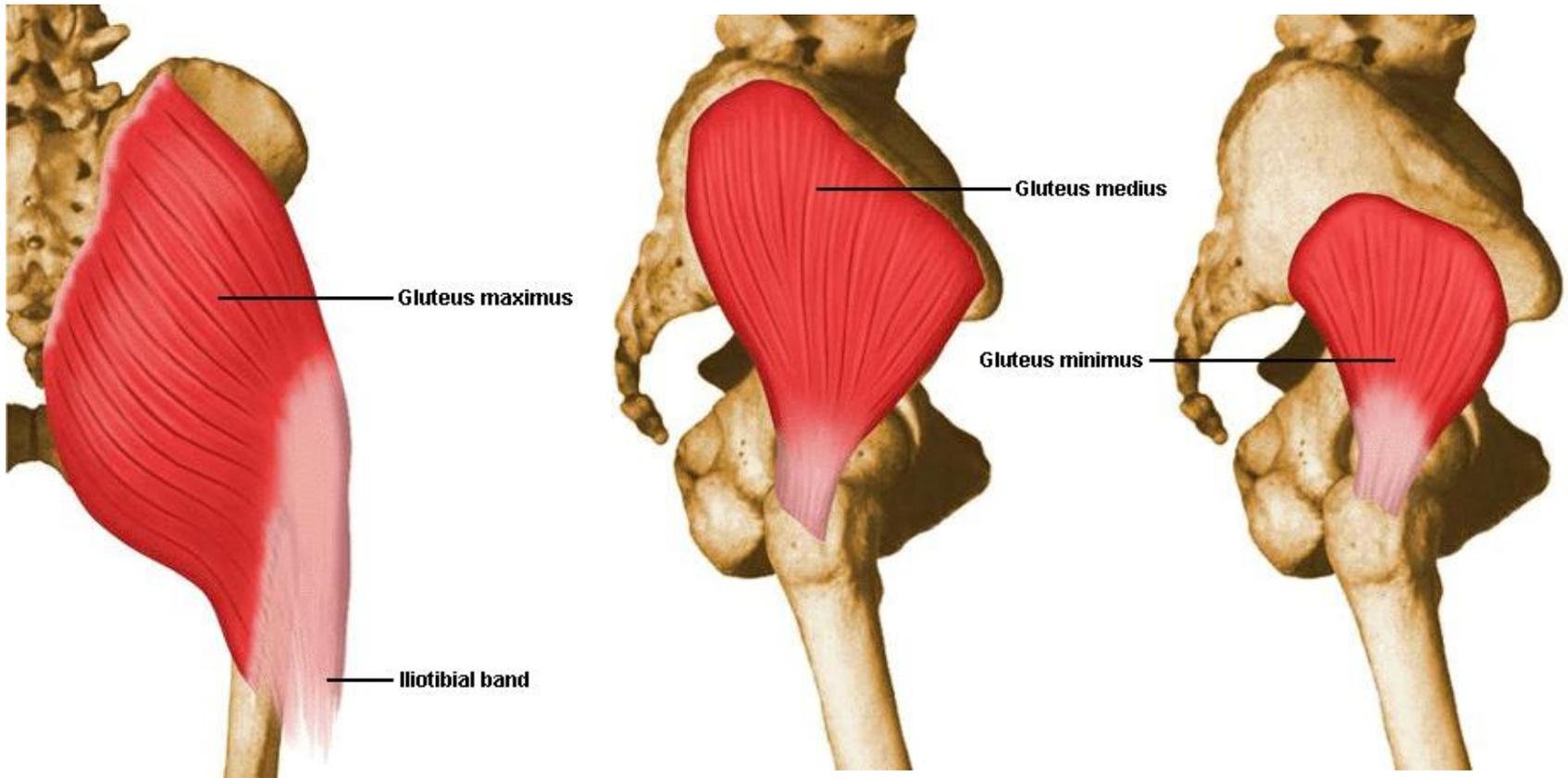
股四頭肌 Quadriceps Femoris



闊筋膜張肌 Tensor Fasciae Latae



臀大、中、小肌及梨狀肌 Gluteal muscles and Piriformis





行山鞋的選擇

Footwear Choices



行山鞋的作用

配合腳型，有效分散壓力

保持腳部平穩

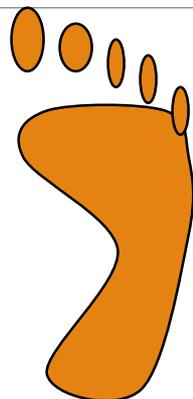
可吸震

堅固的槓杆用作前推動力



找出自己的腳型

正常的腳型

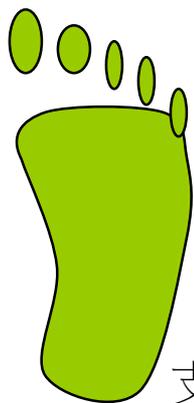


扁平足

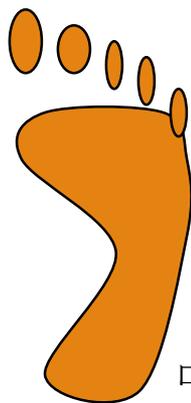


高腳弓足





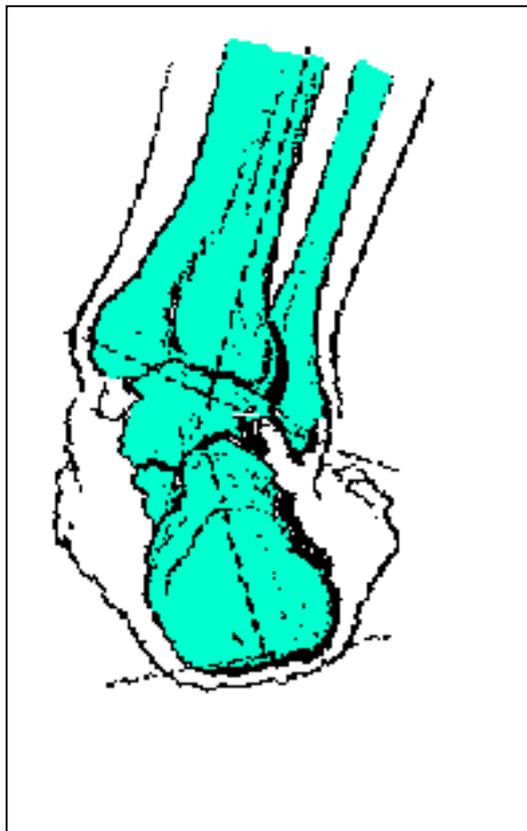
支撐型運動鞋



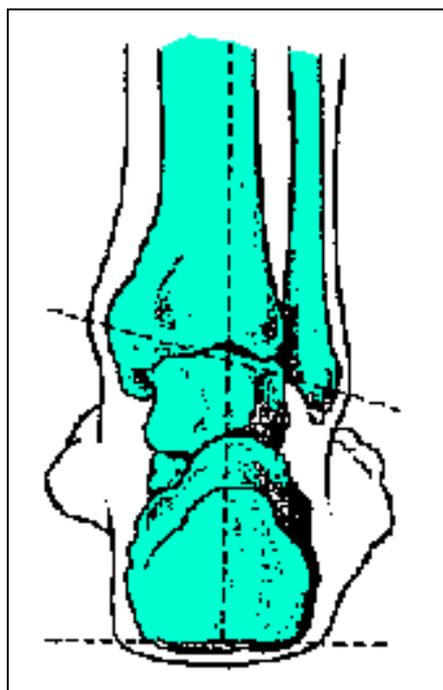
中性型運動鞋



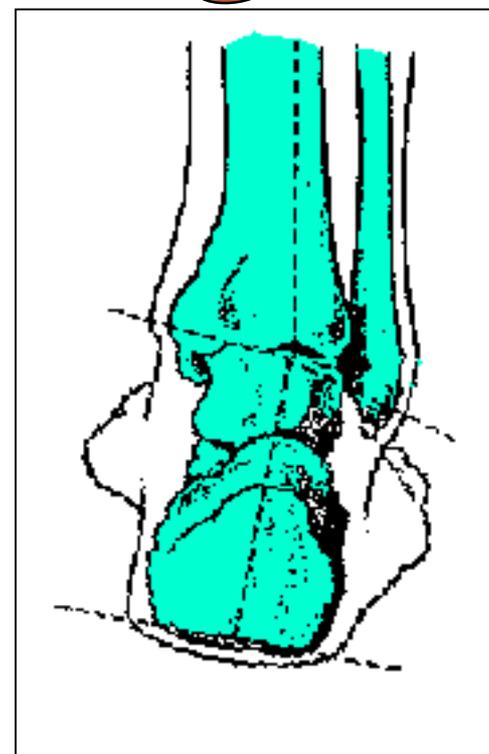
吸震型運動鞋



過度內翻



正常體位



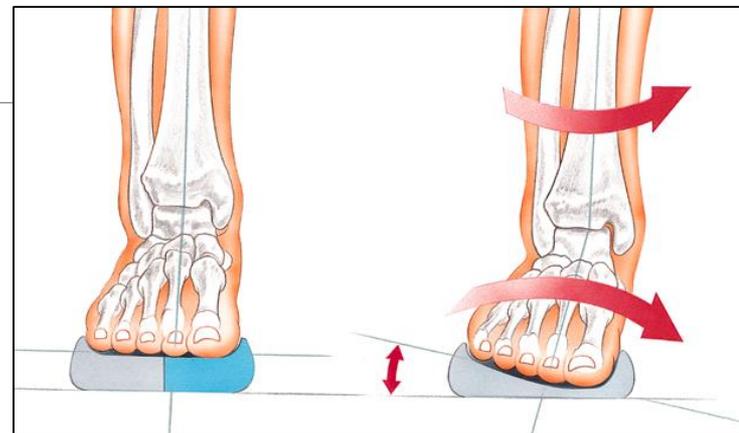
過度外翻

支撐型運動鞋

內側足弓處有較硬材質

較硬及穩固 腳撐

矯形鞋墊



如何選擇行山鞋

先了解腳型 (亞洲人腳型)

注意鞋的保護、避震、支撐及透氣等設計

傍晚之後住試鞋

自備行山襪

腳跟留一手指的空間長度

繫上鞋帶，下蹲試鞋柔軟度

試行上落斜板或單腳踭高腳試鞋
頭有冇頂趾

新鞋一般要平日「試著」一兩星期才可落場操山

行山鞋一般「壽命」400至800公里

功能性鍛煉運動

Functional Training

功能性鍛煉運動

Functional Training

目的為提升肌肉力量、增強關節穩定性及靈敏度

The main goals are to improve the muscle strength, joint stability and body proprioception

核心肌群強化訓練 Core Stability Training

平板支撐及變化式 Plank & variation

功能性鍛煉運動

Functional Training

髖關節、臀部及大腿肌肉強化訓練

Hip, Gluteal and Thigh Muscles Strengthening

蚌式運動 Clamshell Exercise

分腿蹲 Split Squat

10 elementary strengthening exercise SESG / balance / stretch work

10 elementary strengthening exercise SESG

https://www.youtube.com/watch?v=l9SuLrLp_Mk&feature=emb_logo

Balance work

https://www.youtube.com/watch?v=OQegn-KT9p4&feature=emb_logo

Stretching work

https://www.youtube.com/watch?v=lpkKw8s5zyE&feature=emb_logo

<https://hongkongpa-ssg.weebly.com/exercise-videos.html>

平板支撐及變化式 Plank & variation

手肘90度屈曲，上臂垂直支撐上身，從肩膀到腳踝維持一直線，腳掌與地面垂直，腳趾著地

Elbow at 90 degree, plant the elbow directly under the shoulders, squeeze the scap., abs and glutes to stabilise the body

保持棒式姿勢20~30秒，休息15~30秒，重複3-5次

Hold 20-30s, rest 15-30s, rep. 3-5 times



常見錯誤 Most Common Planking Mistakes

- 用手推導致身體往後
Overuse of upper limbs to push back
- 上背部肩胛骨沒收緊固定
Hanging on scapula, sagging of mid thorax
- 下背腰部下垂
Collapsing the lower back
- 臀部抬太高
Reaching the butt to the sky





平板支撐及變化式 Plank & variation

變化棒式 Variations

側棒式

side plank

手部/上半身移動

with upper limb and trunk movement

腳部/下半身旋轉移動

with lower limb and trunk rotation



蚌式運動 Clam Shell Exercise

有效強化臀大及中肌

To strengthen the hip abductors such as glutes

垂正側躺，雙腿併攏，髖屈45度，膝屈90度

Lie on side, legs together, bend hips to 45 degrees and knees at 90 degrees



蚌式運動 Clam Shell Exercise



蚌式運動 Clam Shell Exercise

收緊腰腹穩定骨盆，保持雙腳腳跟併攏，將上方的腿外旋，抬高膝蓋指向上，並維持10秒，然後將上方腿放下

Set the core muscles to stabilise the pelvic, float the upper leg upwards while keeping the feet together, hold for 10s, then bring the leg down

左右腳重複動作5-10次

Repeat 5-10 times each leg

動作全程腰部以上維持穩定，臀部在動作時，不要同腰部一起轉

Focus on not allowing the alignment of the body to be disrupted with leg movement

分腿蹲 Split Squat

有效強化四頭肌及臀大及臀中肌

To strengthen the Glutes and Quads

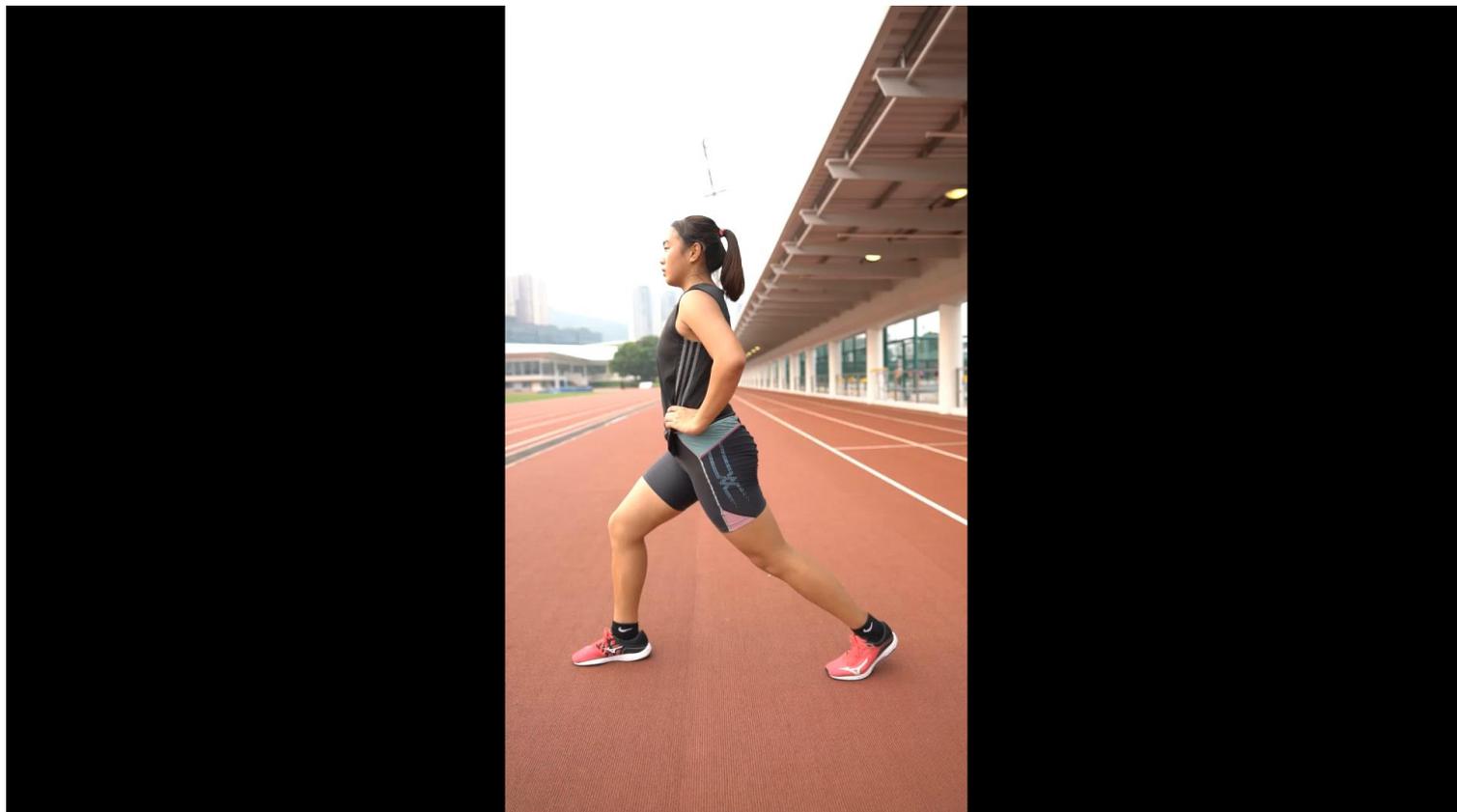
腰直，前後弓箭步站立，後腳腳跟離地

Back straight, split steps with the heel of back leg off the ground

雙腿向下蹲低，身體重心垂直向下降，前腳膝頭不屈多於90度

Bend both knees to lower the body in a sagittal plan, both knees make roughly a 90 degrees angle in the bottom

分腿蹲 Split Squat



進階 Progression

前弓步 FORWARD LUNGE



後弓步 REVERSE LUNGE



伸展運動 Stretching

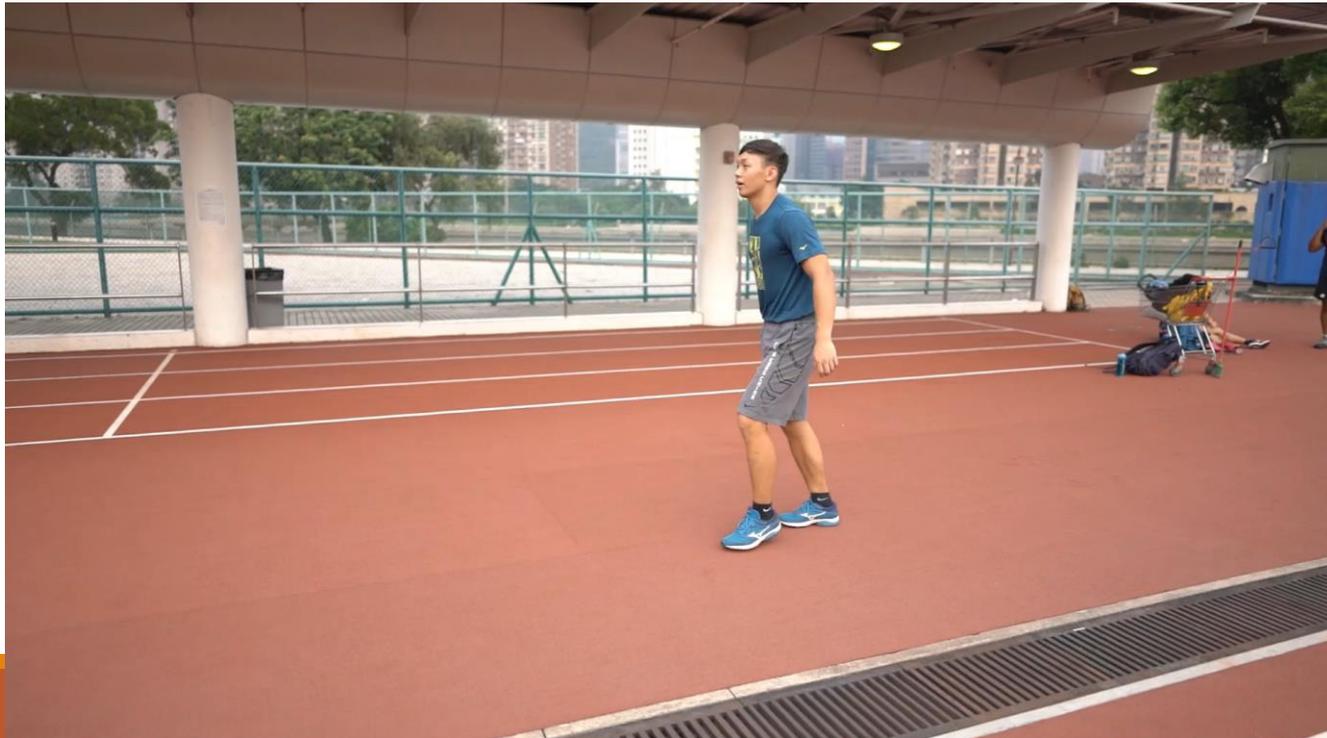
動態 vs 靜態伸展

運動前 – 動態伸展

運動後 – 靜態伸展

動態伸展 Dynamic stretching

開合跳、高抬腿抱膝、分腿蹲、
高抬腿跑、踢臀跑、前後交互腳
步側跑



靜態伸展 Static stretching

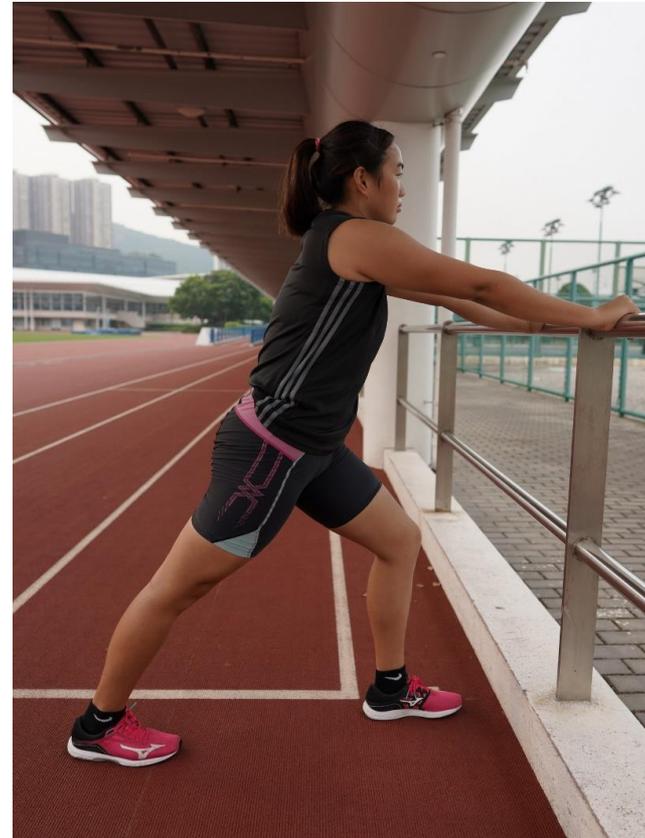
了解所需伸展肌肉群的方向及位置

確立一個穩固的姿勢

動作要慢

切忌彈動式伸展

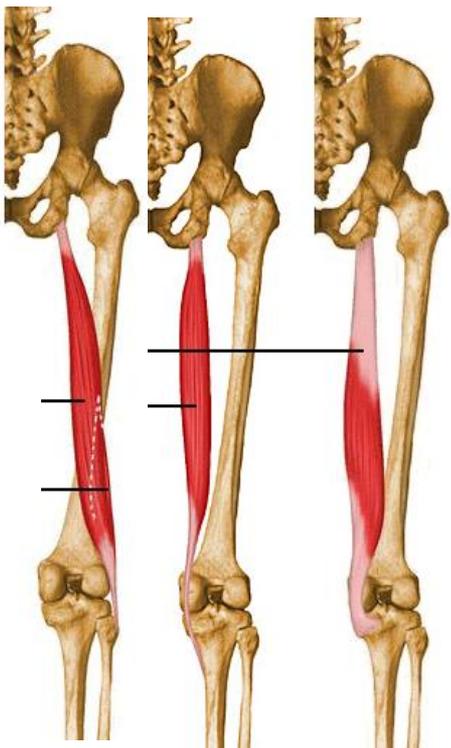
持續伸展10至15秒, 重覆2至3次



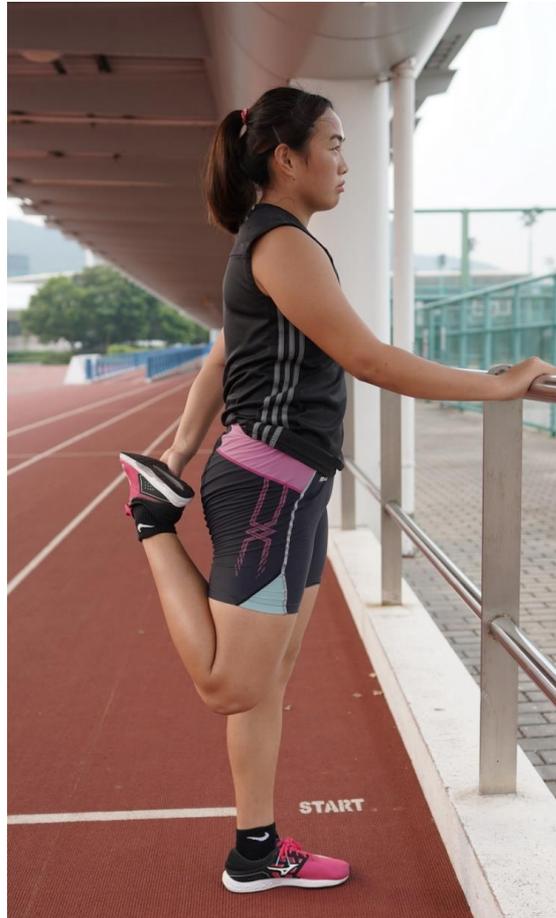
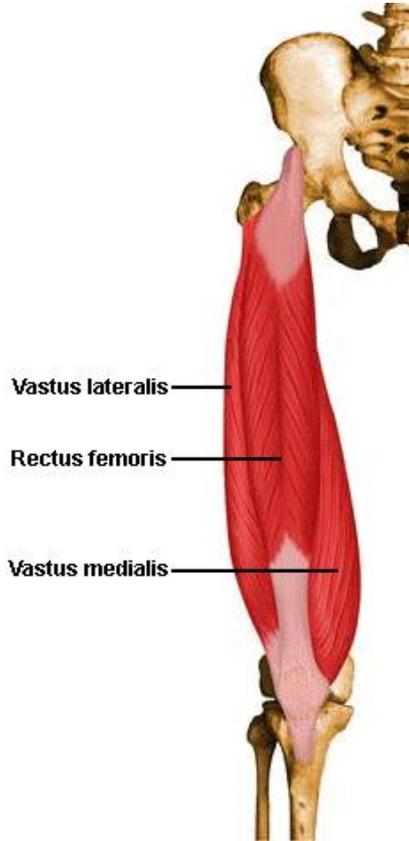
腓腸肌 Gastrocnemius



大腿屈肌群(膕繩肌) Hamstrings

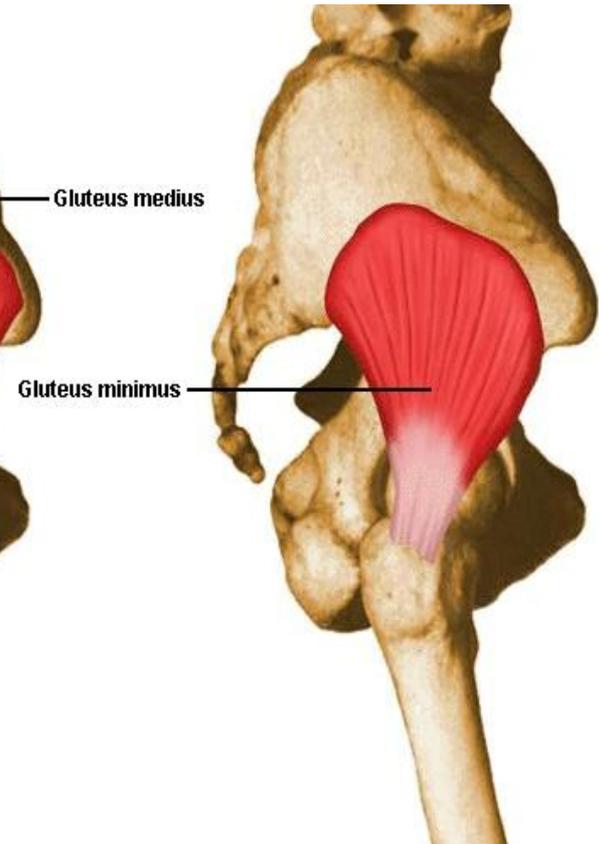
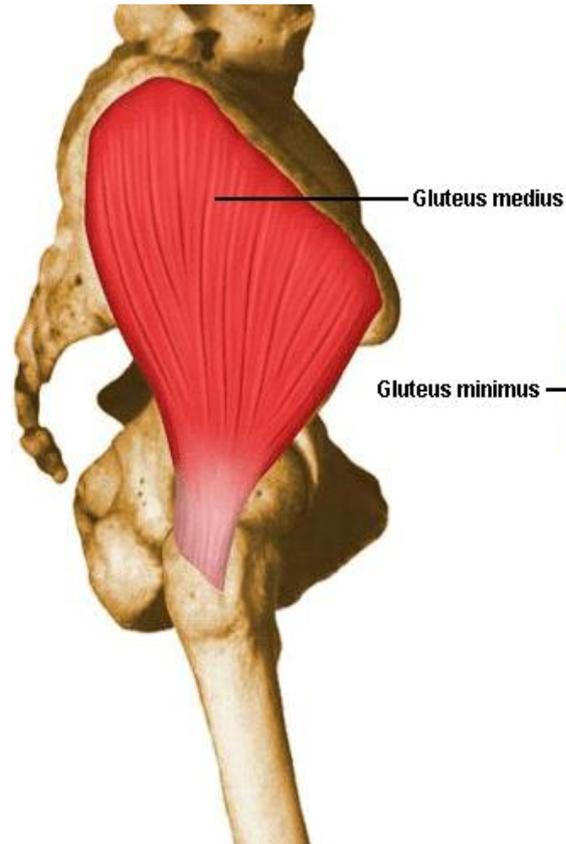
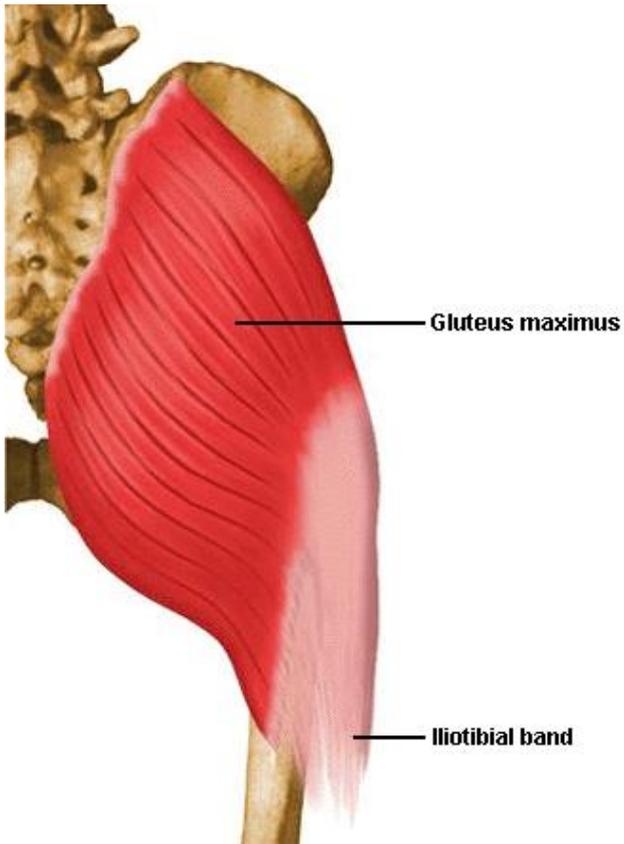


股四頭肌 Quadriceps Femoris



臀大、中、小肌及梨狀肌

Gluteal muscles and Piriformis





泡綿滾筒運動 Foam Roller Exercises

又名瑜珈棒、瑜珈滾輪或按摩滾筒

藉由滾筒於繃緊的肌筋膜上進行滾動及按壓以達至自我肌筋放鬆

A self-myofascial release technique to boost flexibility and recovery



禁忌症及需關注事項

Precautions and Containdications

骨質疏鬆症、孕婦、糖尿病兼有血液循環障礙、下肢靜脈曲張、受傷或腫脹的區域及關節位置上不可採用Foam Roller來進行自我按摩

Not to be used with conditions such as osteoporosis, pregnancy, diabetics, varicose vein or over joints, areas with soft tissues injury

*如有任何疑問，應向醫生及相關專業人士查詢

Please check with the medical professionals for further enquiry



操作方式及注意事

How to use foam roller

藉由不同的體位，將需要放鬆的身體部位置於Foam Roller上

Place the roller under the body part

利用身體四肢與地面的接觸面積，來增減按壓時肌筋膜所受的力度

Use the limbs to support the body weight to reduce the pressure on the tender spot



操作方式及注意事

How to use foam roller

透過「緩慢」的滾動，尋找痠痛點，並在痠痛點的附近，來回滾動5-10次

Roll slowly 5-10 times over the area to locate the tender spot

亦可在痠痛點停住（一般大約20秒），直到痠痛減緩及軟組織變軟

Stay at the tender spot for ~20s



操作方式及注意事

How to use foam roller

滾動或按壓時應盡量放鬆相關肌肉及保持呼吸

Need to stay relax and keep breathing

在訓練後1天內進行按壓，再搭配靜態伸展運動使能達到最好的放鬆及復原效果

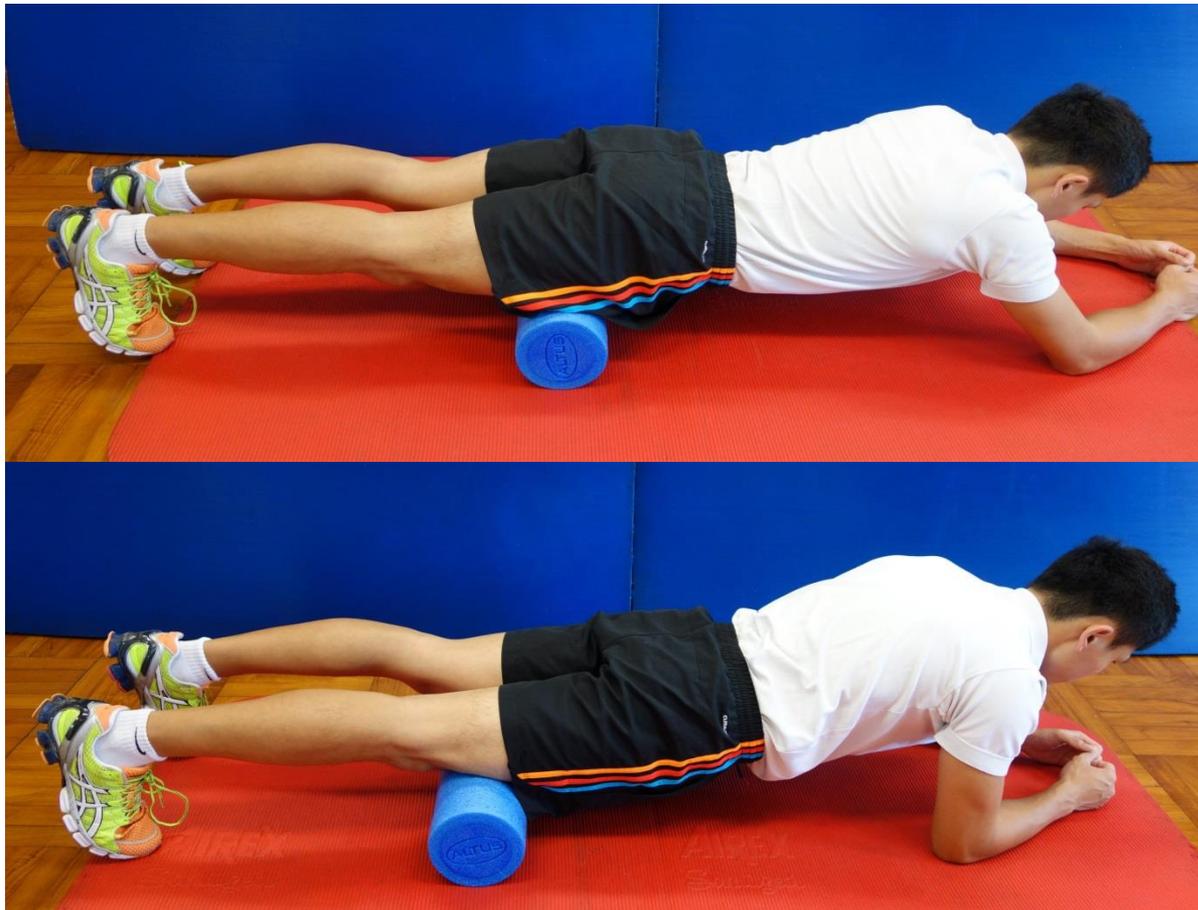
Best result with rolling and stretching within 24 hours of training

硬度/大小/長短的選擇

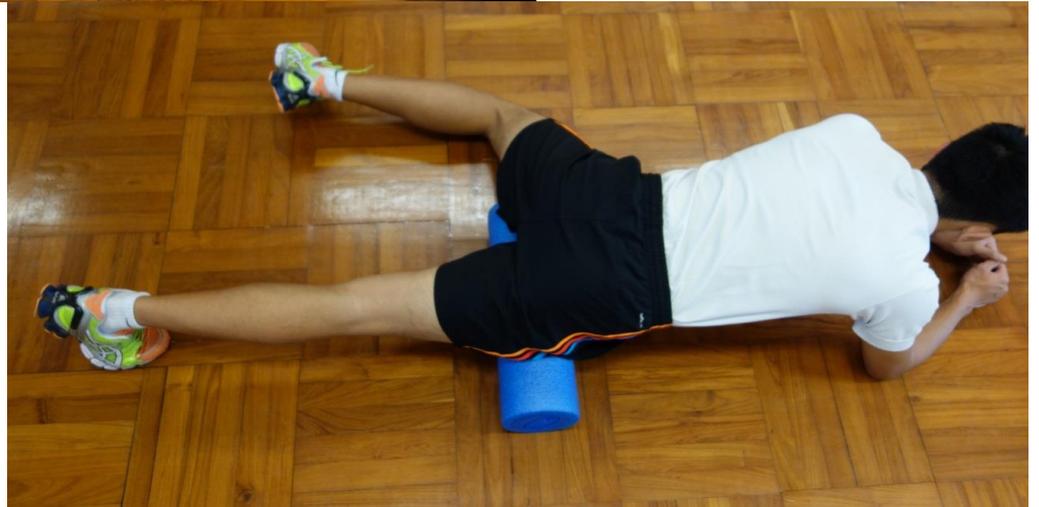
With different sizes, length and stiffness



股四頭肌 Quadriceps Femoris



闊筋膜張肌 Tensor Fascia Latae



臀大肌/梨狀肌 Gluteus Max./Piriformis



髂脛束 IT Band



比目魚肌/腓腸肌 Calf Muscles



脛骨前肌 Tibialis Anterior



Reference

Jungmalm, J., et al. (2018). Study protocol of a 52-week Prospective Running INjury study in Gothenburg (SPRING). *BMJ open sport & exercise medicine*, 4(1).

繼續·毅行

KEEP ON TRAILWALKING

華文書畫
耀

完成就是勝利!!!

