

乐施毅行者2019 物理治疗师的建议 Oxfam Trailwalker 2019 Physiotherapy Advice

熊国佳
香港物理治疗学会
运动物理治疗专研组
Frank Hung
Hong Kong Physiotherapy
Association
Sports Specialty Group





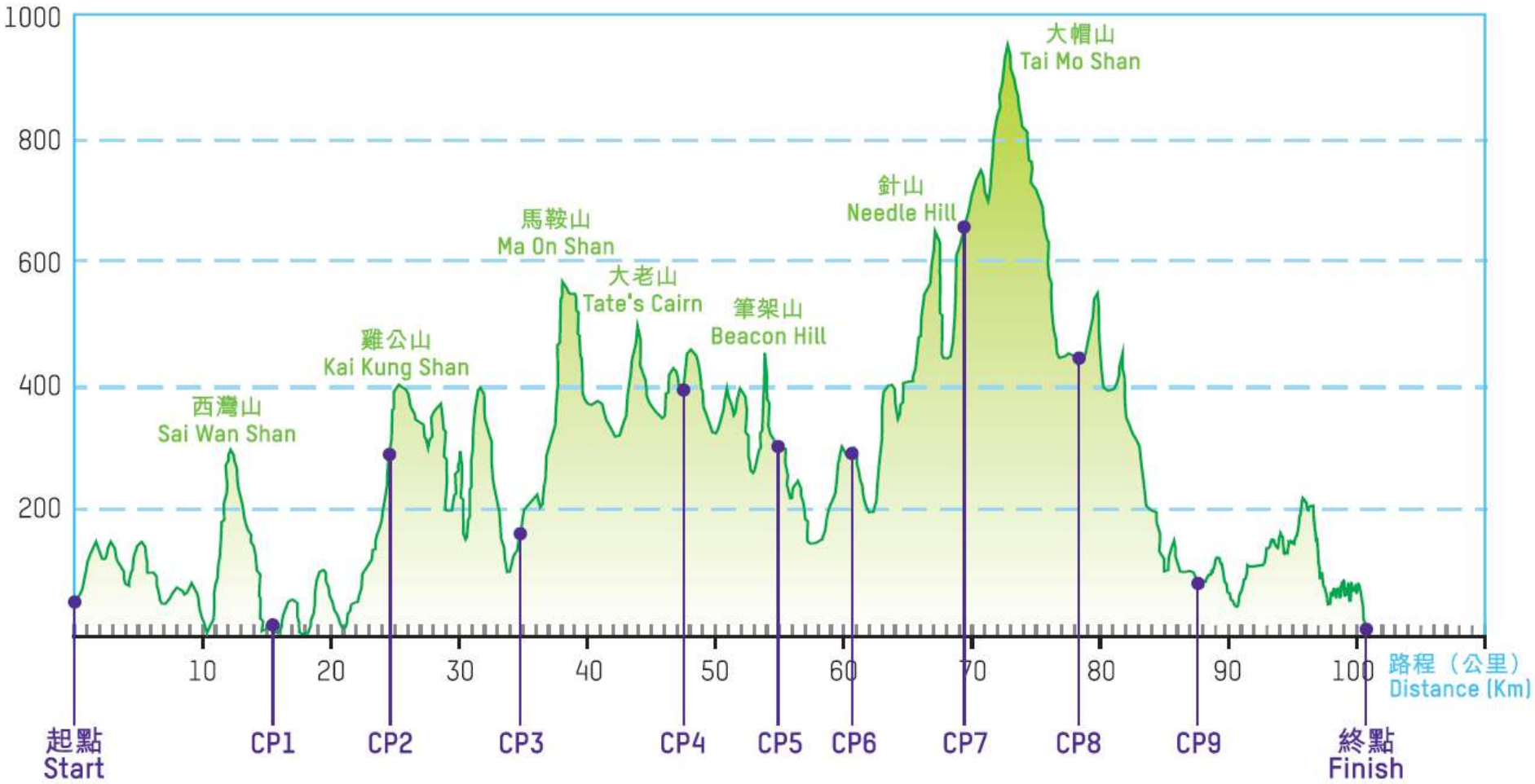
内容Content

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Commonly Seen Musculoskeletal Problems in TW
- 预防及训练方案
Prevention and Training Protocols
- 行山鞋的选择
How to Choose Trail Walking Shoes

- 
- 功能性锻炼运动
Functional Training
 - 伸展运动
Stretching Exercise
 - 泡沫滚筒运动
Foam Roller Exercise
 - 练习时段
Practical Session



高度 (米) Height (m)





毅行常见的肌肉骨骼伤员

Commonly Seen Musculoskeletal Problems in TW



- 
- 70-80%为下肢伤员
70-80% lower limb problems
 - 当中膝关节伤员占70%
in which 70% knee problems
 - 前膝痛症及髂胫束综合症为最常见的肌肉骨骼伤员
Anterior Knee Pain and Iliotibial Band Syndrome most common

前膝痛症 (髌股关节疼痛症候群)

Anterior Knee Pain (Patellofemoral Pain Syndrome)

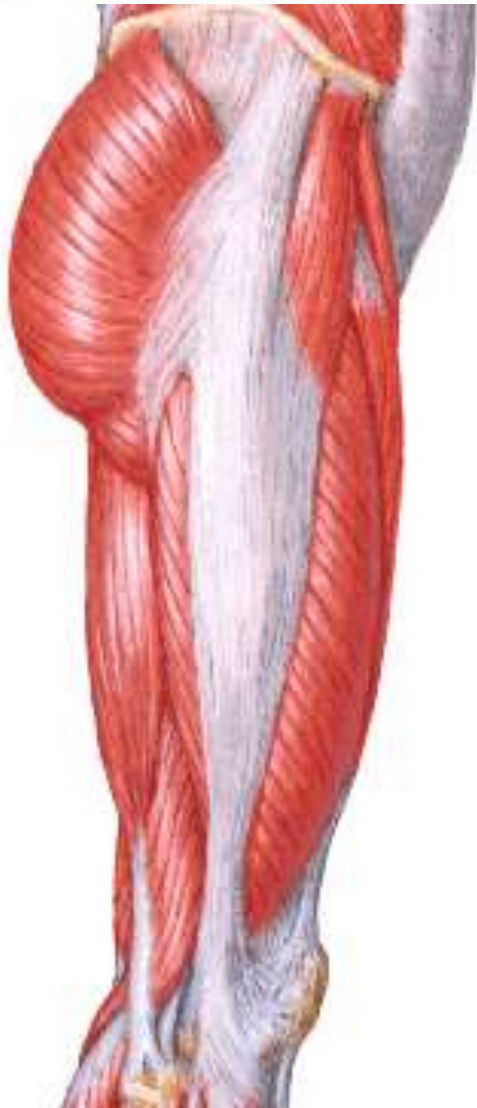


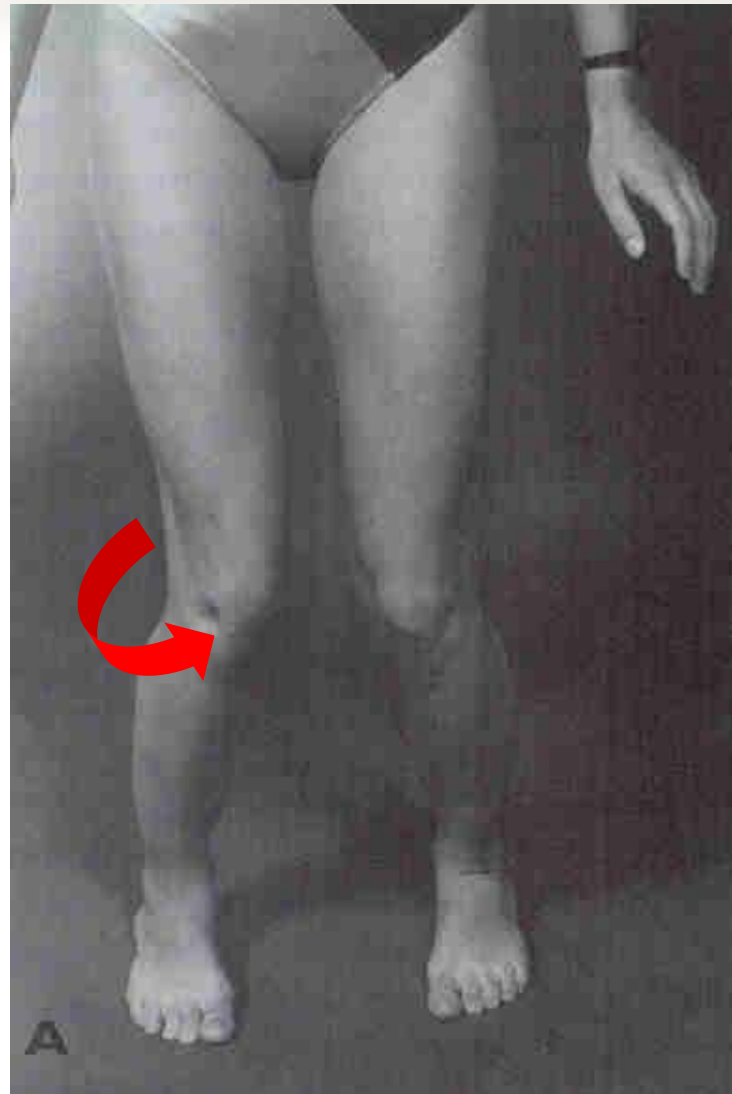




成因 Causes

- 下肢运动力学连锁反应 **Poor Lower Limb Biomechanics**
 - 肌肉不平衡 (股四头-股内侧、臀中股、臀大股过弱)
Muscle imbalance (Weak in Vastus Medialis, Gluteal Max, Med)







成因 Causes

- 下肢运动力学连锁反应 **Poor Lower Limb Biomechanics**
 - 生理结构异常（如膝外翻和扁平足）
Knock knee or Flat foot
 - 运动鞋错配
Wrong choice of shoes



成因 Causes

- 超负荷 Overloading

- 体重、训练强度、量度远超过肌肉及相关软组织所能承受

Overweight and overtraining that exceed the body can handle



预防措施 Preventive Measures:

- 按部就班的训练方法

Progressive training

- 留意身体反应(红、橙、绿讯号)

Listen to your body for warning signals

- 有需要时应暂停训练或调节形式、量度及强度(例如减少落山训练、加密步频、收细步幅)

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*)

■ 冰敷 Ice pack

- 冰敷患处10-15分钟 10 to 15 minutes
- 按需要一日可冰敷3-5次 3 to 5 times a day



- 
- 功能性运动锻炼以加强下肢肌肉耐力及关节稳定性(臀大、中肌及股内侧头)(例如棒式撑体、蚌式运动、阻力横向滑步、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)

棒式 Plank



蚌式运动Clamshell Exercise



分腿蹲 Split Squat



- 
- 利用泡沫滚筒Foam Roller放松下肢肌肉，特别对四头中外侧及髂胫束等软组织

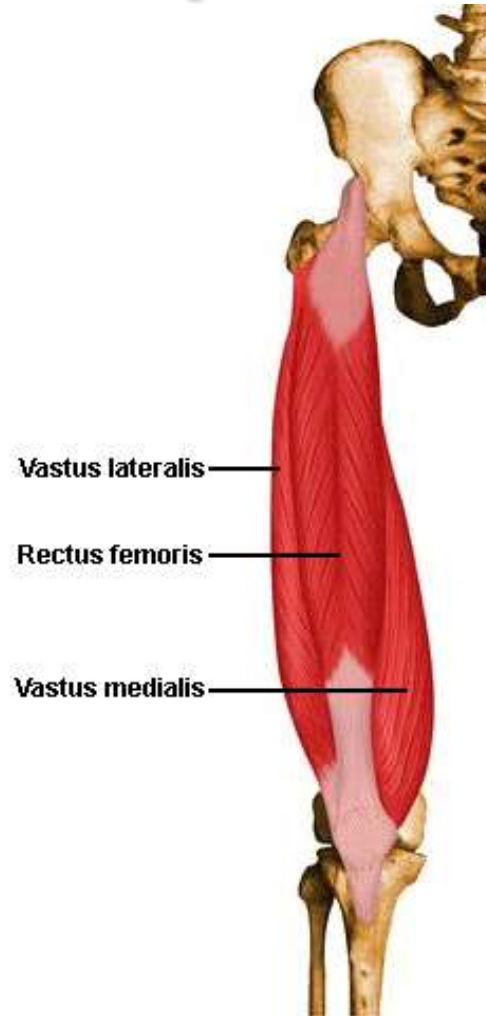
Foam rolling to release the tightness of the muscles and fascia esp. lateral side of quadriceps and IT band

泡沫滚筒运动Foam Roller Exercise



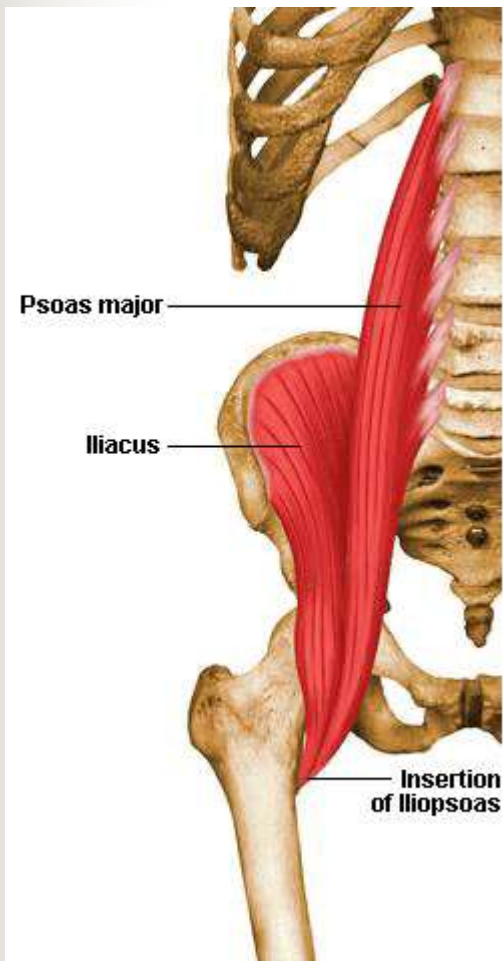
- 
- 配合伸展运动，保持下肢肌肉的柔韧性
Stretching ex to improve the lower limb flexibility
 - 选择合适的运动鞋
Right choice of sports shoe

股四头肌 Quadriceps Femoris





髂腰肌 Iliopsoas





髂胫束综合症

Iliotibial Band Syndrome

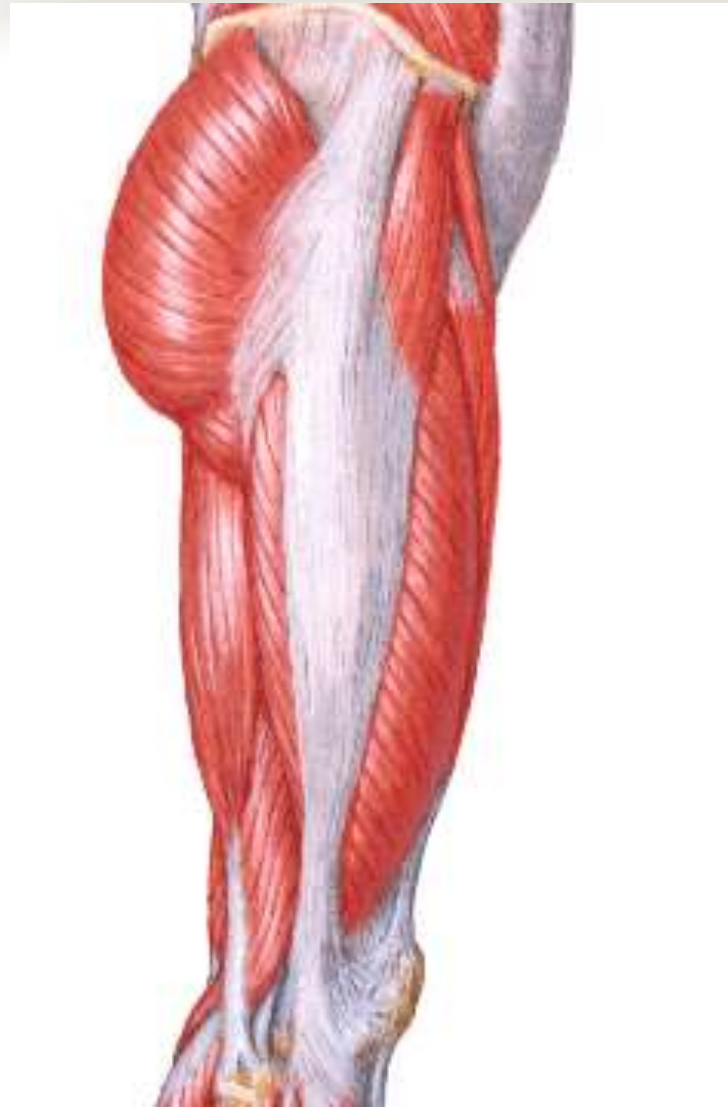






成因 Causes

- 下肢运动力学连锁反应 Poor Lower Limb Biomechanics
 - 髋部外展肌群变弱 (臀中股、臀大股过弱)
Weak hip abductors (Weak in Gluteal Max, Med)
 - 髋部屈曲肌(髂腰肌、阔筋膜张肌)、髋部外旋肌(梨状肌)及髋部伸展肌(臀大肌和大腿后侧肌群)过度的紧绷
Tight hip flexors (iliopsoas, tensor fascia lata), hip external rotator (piriformis) and hip extensors (gluteus max., hamstrings)





成因 Causes

- 超负荷 Overloading

- 训练量度(长课)远超过肌肉及相关软组织所能承受

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



预防措施 Preventive Measures :

- 按部就班的训练方法

Progressive training

- 留意身体反应(红、橙、绿讯号)

Listen to your body for warning signals

- 有需要时应暂停训练或调节形式、量度及强度(例如**暂停长课、山路或单车训练、加密步频、收细步幅**)

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*)



■ 冰敷 Ice pack

- 冰敷患处10-15分钟 10 to 15 minutes
- 按需要一日可冰敷3-5次 3 to 5 times a day

- 
- 功能性运动锻炼以加强下肢肌肉耐力及关节稳定性(臀大、中肌及股内侧头)(例如棒式撑体、蚌式运动、阻力横向滑步、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)

- 
- 利用穴位按压(风市穴)及Foam Roller放松下肢肌肉，特别针对臀大肌、梨状肌、阔筋膜张肌及髂胫束边缘(靠近股四头肌及大腿后肌外侧)

Acupressure at Feng Shi (GB31) and foam rolling to release the tightness esp. gluteus max., piriformis, tensor fascia lata and IT band



按压风市穴
Acupressure at
Feng Shi

臀大肌/梨状肌 Gluteus Max./Piriformis



阔筋膜张肌 Tensor Fascia Latae



髂胫束 IT Band

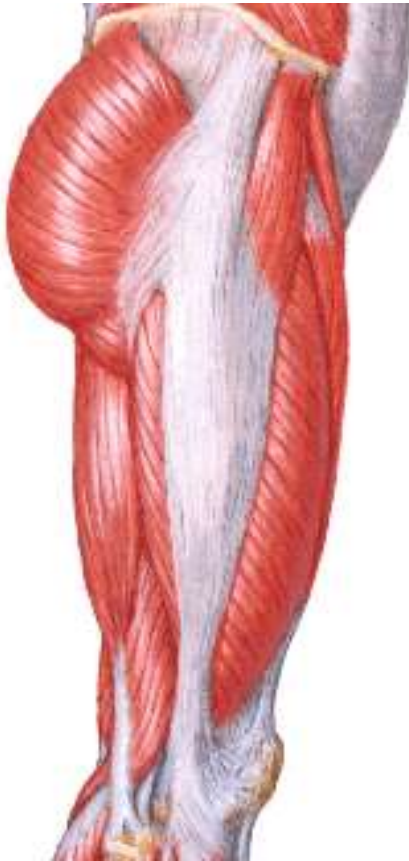


- 
- 配合伸展运动，保持下肢肌肉的柔韧性
Stretching ex to improve the lower limb flexibility
 - 选择合适的运动鞋
Right choice of sports shoe

股四头肌 Quadriceps Femoris

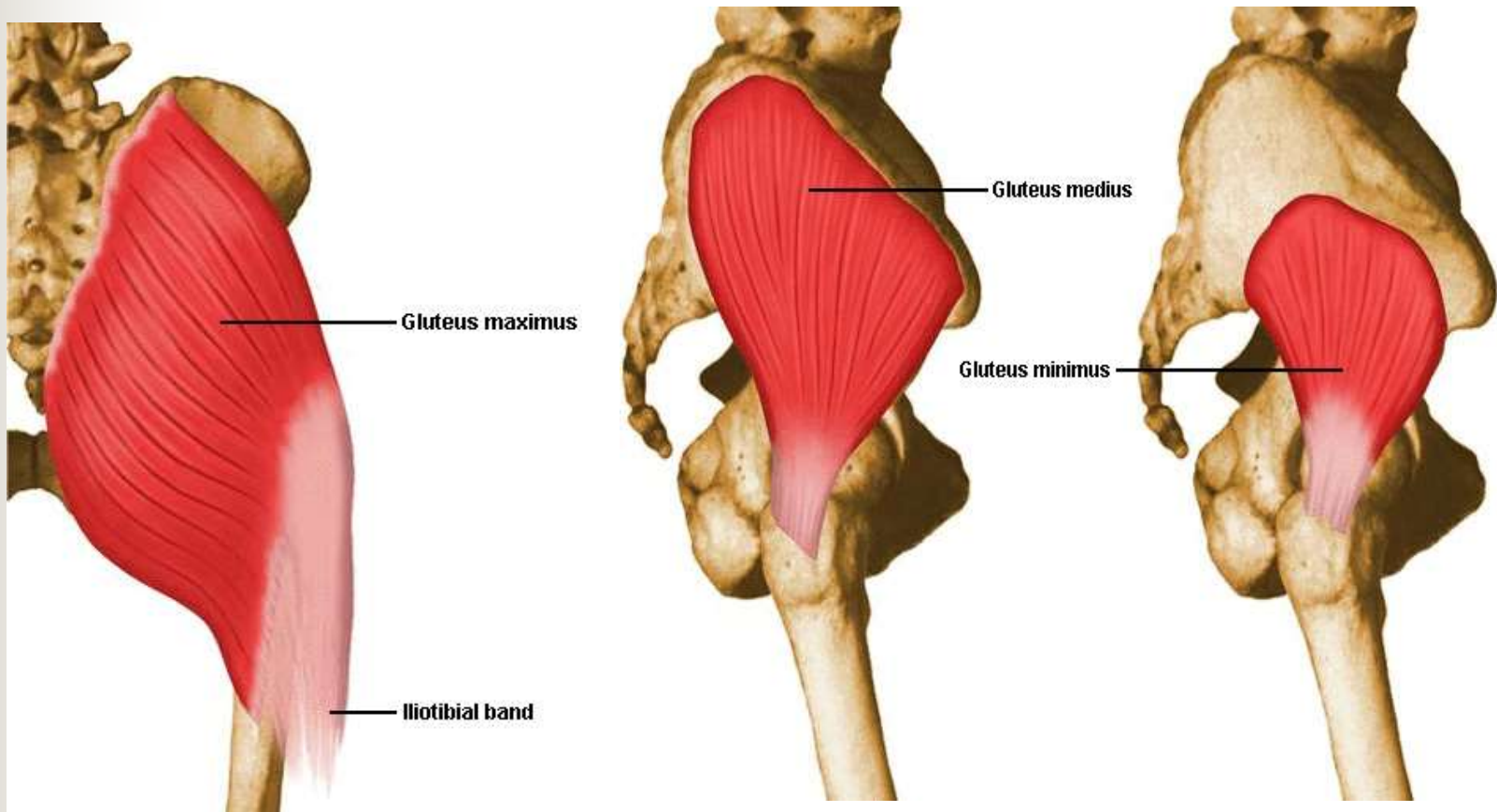


阔筋膜张肌 Tensor Fasciae Latae



臀大、中、小肌及梨状肌

Gluteal muscles and Piriformis





行山鞋的选择







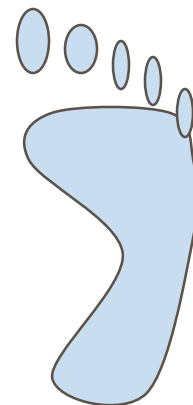


行山鞋的作用

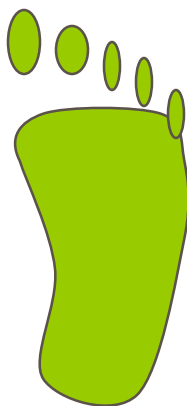
- 配合脚型，有效分散压力
- 保持脚部平稳
- 可吸震
- 坚固的杠杆用作前推动力

找出自己的脚型

- 正常的脚型



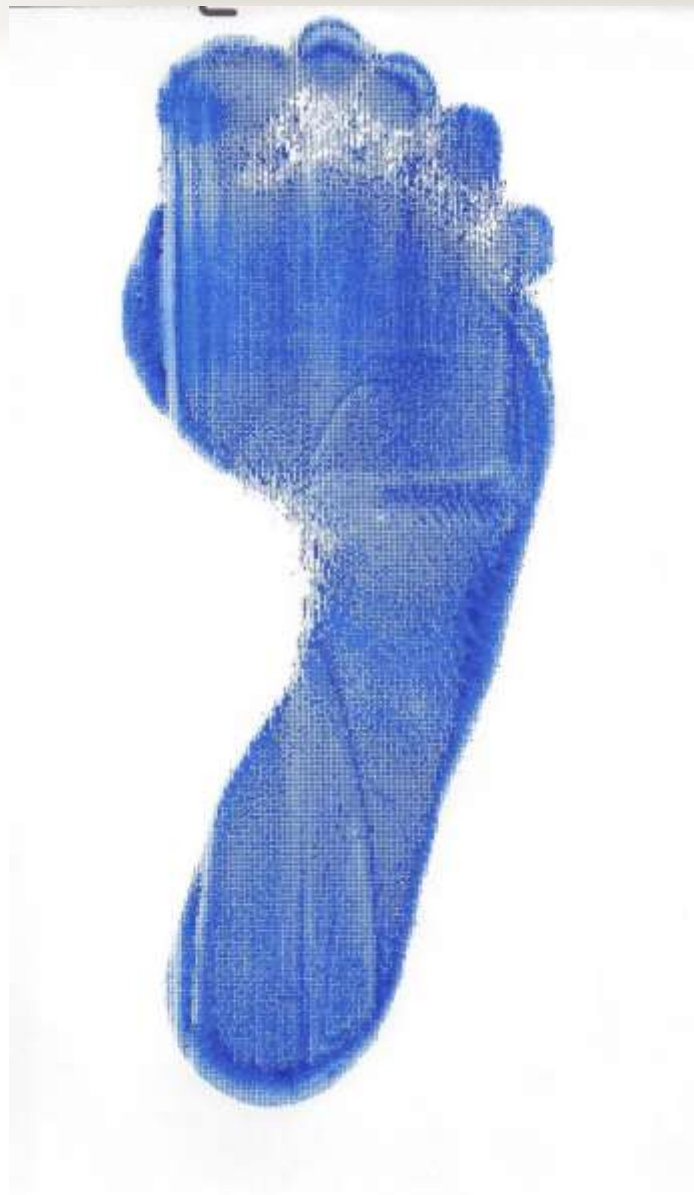
- 扁平足

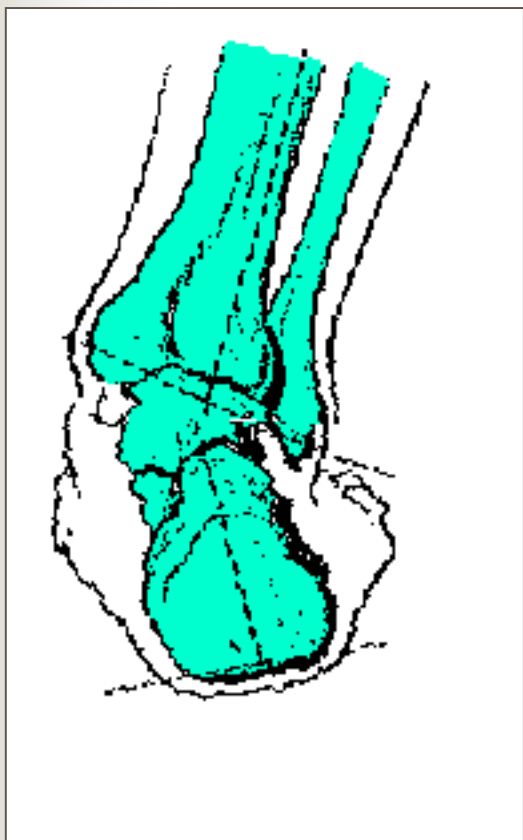


- 高脚弓足

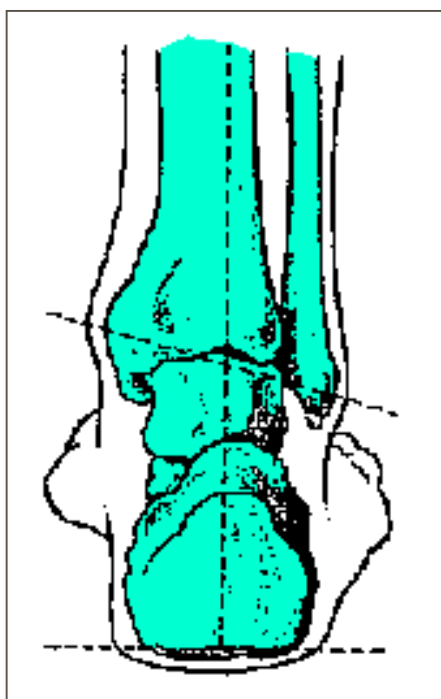




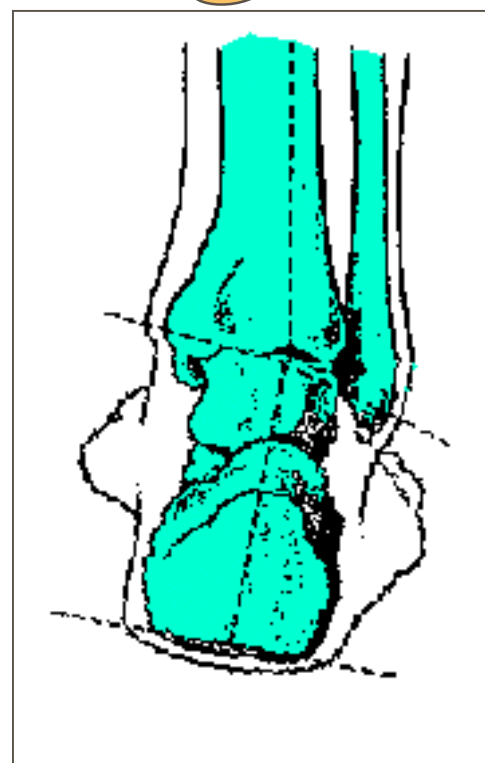




过度内翻



正常体位



过度外翻



- 扁平足

- 支撑型运动鞋

- 正常脚型

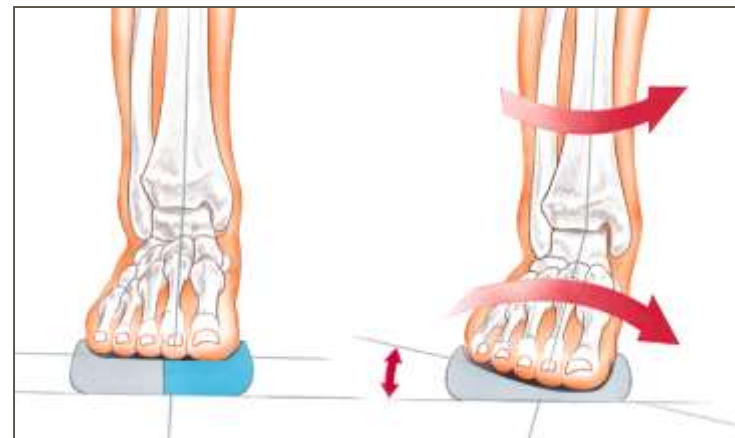
- 中性型运动鞋

- 高脚弓足

- 吸震型运动鞋

支撑型运动鞋

- 内侧足弓处有较硬材质
- 较硬及稳固脚撑
- 矫形鞋垫





如何选择行山鞋

- 先了解脚型 (亚洲人脚型)
- 注意鞋的保护、避震、支撑及透气等设计
- 傍晚之后住试鞋
- 自备行山袜
- 脚跟留一手指的空间长度
- 系上鞋带，下蹲试鞋柔软度

- 
- 试行上落斜板或单脚踭高脚试鞋头有冇顶趾
 - 新鞋一般要平日「试着」一两星期才可落场操山
 - 行山鞋一般「寿命」400至800公里

功能性锻炼运动

Functional Training





功能性锻炼运动

Functional Training

- 的目的为及性定稳节关强增、量力肉肌升提
度敏灵

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

- 核心肌群强化训练 Core Stability Training
 - 棒式 Plank

- 髋关节、臀部及大腿肌肉强化训练

Hip, Gluteal and Thigh Muscles Strengthening

- 蚌式运动 Clamshell Exercise
- 分腿蹲 Split Squat



棒式 Plank

- 手肘90度屈曲，上臂垂直支撑上身，从肩膀到脚踝维持一直线，脚掌与地面垂直，脚趾着地

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

- 保持棒式姿势20~30 秒，休息 15~30 秒，重复3-5次

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



- 
- 常见错误 Most Commom Planking Mistakes
 - 用手推导导致身体往后
Overuse of upper limbs to push back
 - 上背部肩胛骨没收紧固定
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



- 变化棒式 Variations

- 侧棒式

- side plank

- 手部/上半身移动

- with upper limb and trunk movement

- 脚部/下半身旋转移动

- with lower limb and trunk rotation





蚌式运动 Clam Shell Exercise

- 有效强化大臀及中肌

To strengthen the hip abductors such as glutes

- 垂正侧躺，双腿并拢，髋屈45度，膝屈90度

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

- 
- 收紧腰腹稳定骨盆，保持双脚脚跟并拢，将上方的腿外旋，抬高膝盖指向上，并维持10秒，然后将上方腿放下

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

- 左右脚重复动作5-10次

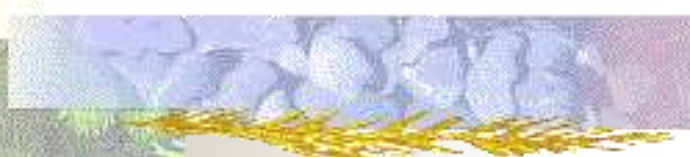
Repeat 5-10 times each leg

- 
- 动作全程腰部以上维持稳定，臀部在动作时，不要同腰部一起转

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









分腿蹲 Split Squat

- 有效强化肌头四及大臀及臀中肌

To strengthen the Glutes and Quads

- 立站步箭弓后前，直腰，后脚脚跟离地

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

- 低蹲下向腿双，心重体身垂直前，降下向于多屈不头膝脚90度

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

- 
- 蹲下与站起之过程中，后脚之膝盖不触地
Back knee should not touch the ground. From the bottom position, stands back up.
 - 复动作5-10次、前后脚交换再做
Repeat 5-10 times each leg

正确示范 Correct



错误示范 Wrong



膝关节向内旋转
Knee internal rotated



膝关节过份屈曲
Front knee too flexed





■ 进阶 Progression

- 前弓步 Forward Lunge
- 后弓步 Reverse Lunge

前弓步 Forward Lunge



后弓步 **Reverse Lunge**



伸展运动 Stretching





伸展运动Stretching Exercise:

- 动态 vs 静态伸展
 - 运动前 - 动态伸展
 - 运动后 - 静态伸展
- 动态伸展 [Dynamic stretching](#)
 - 开合跳、高抬腿抱膝、分腿蹲、高抬腿跑、踢臀跑、前后交互脚步侧跑

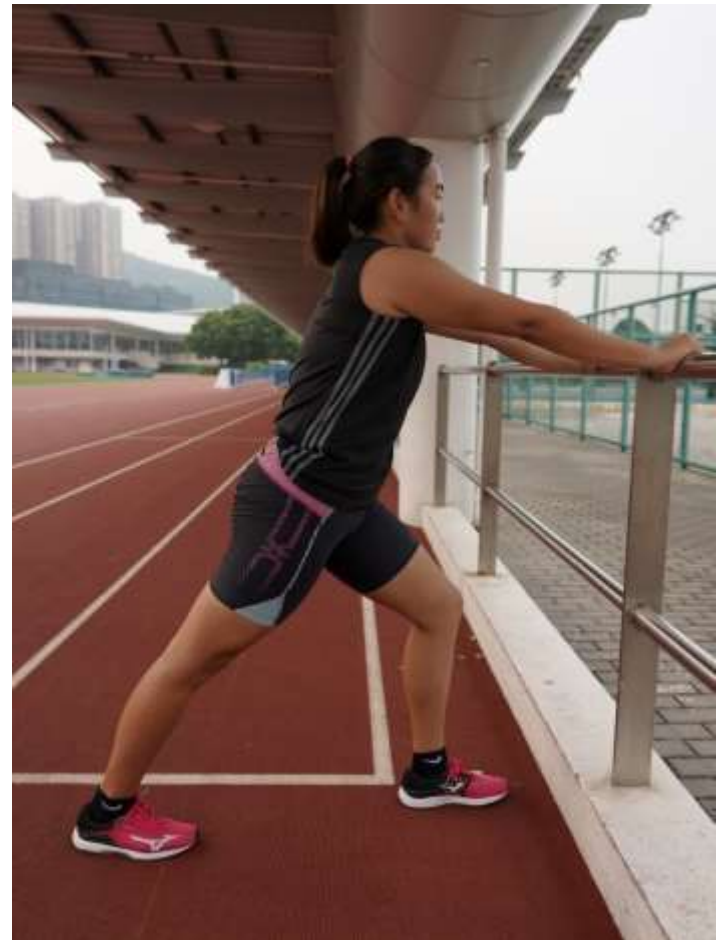
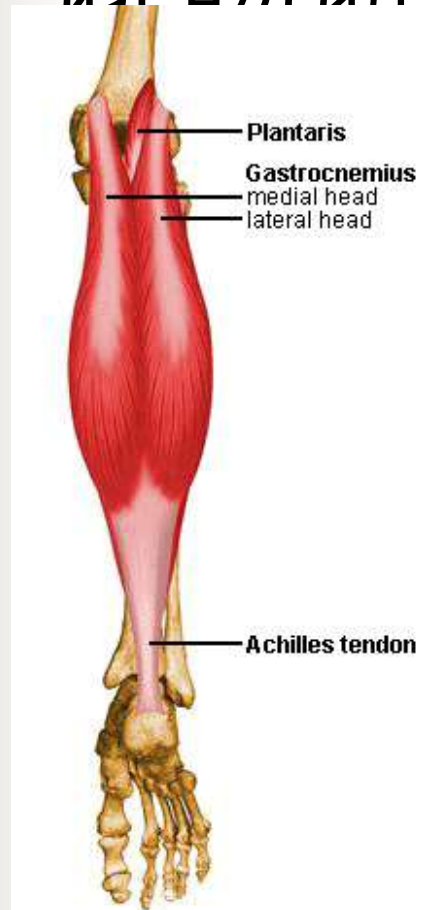
动态伸展 Dynamic stretching

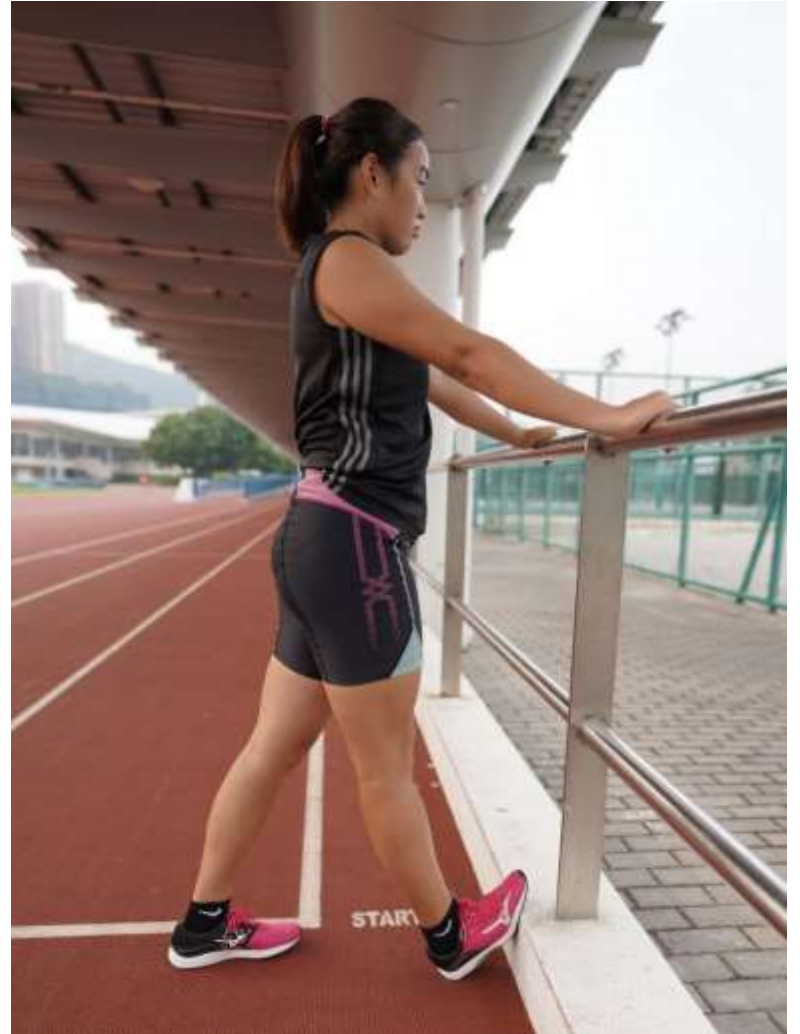


- 
- 静态伸展 Static stretching
 - 了解所需伸展肌肉群的方向及位置
 - 确立一个稳固的姿势
 - 动作要慢
 - 切忌弹动式伸展
 - 持续伸展15至30秒, 重复3至4次

腓肠肌

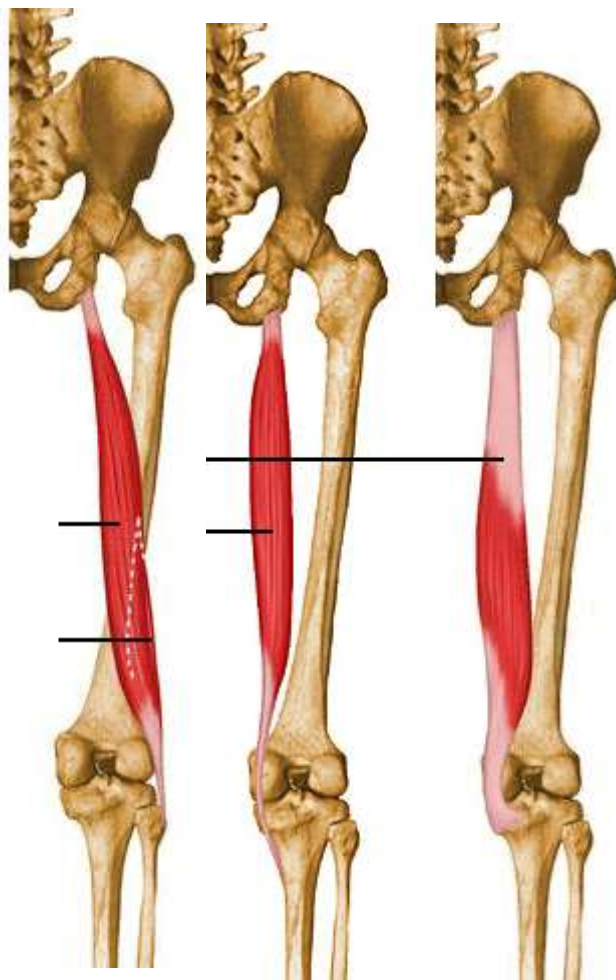
Gastrocnemius







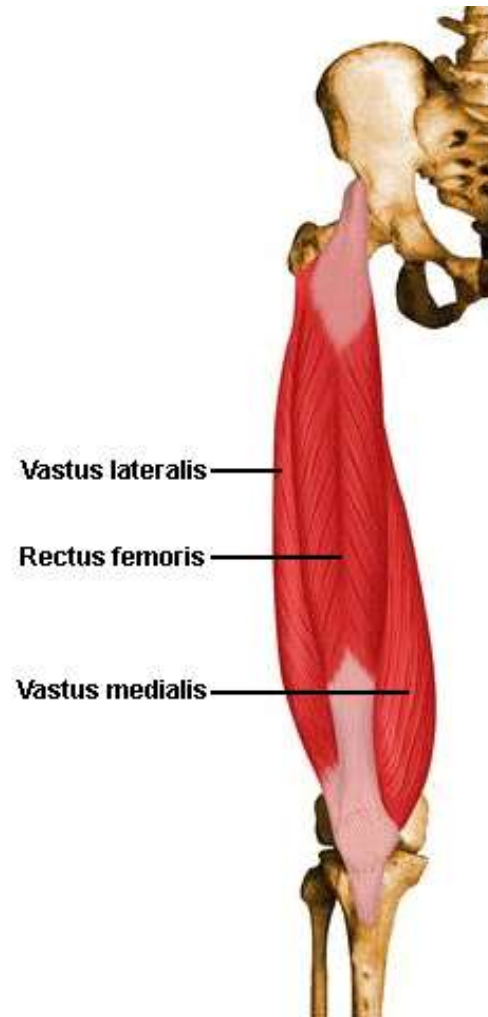
大腿屈肌群(腘绳肌) Hamstrings





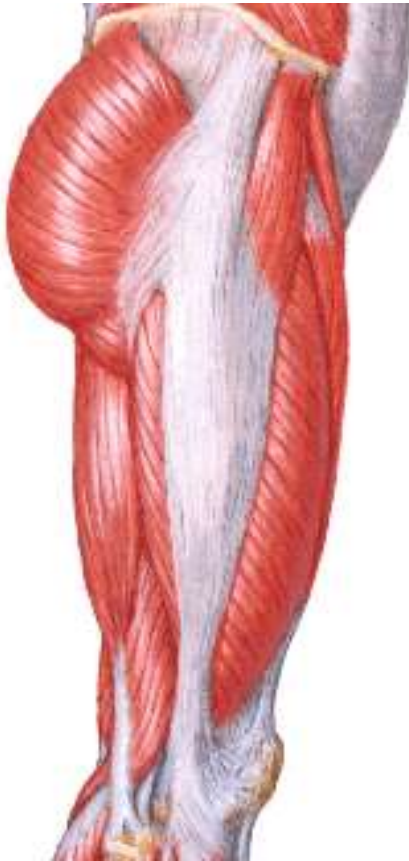


股四头肌 Quadriceps Femoris

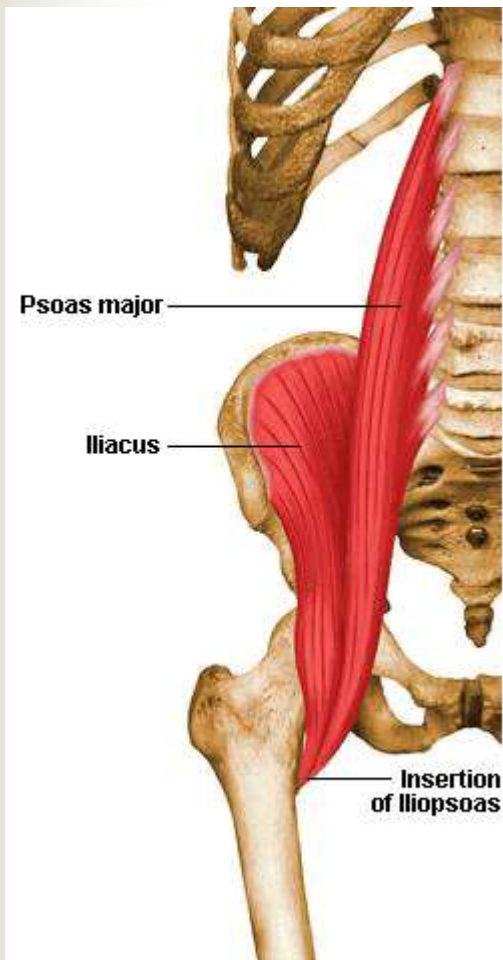




阔筋膜张肌 Tensor Fasciae Latae



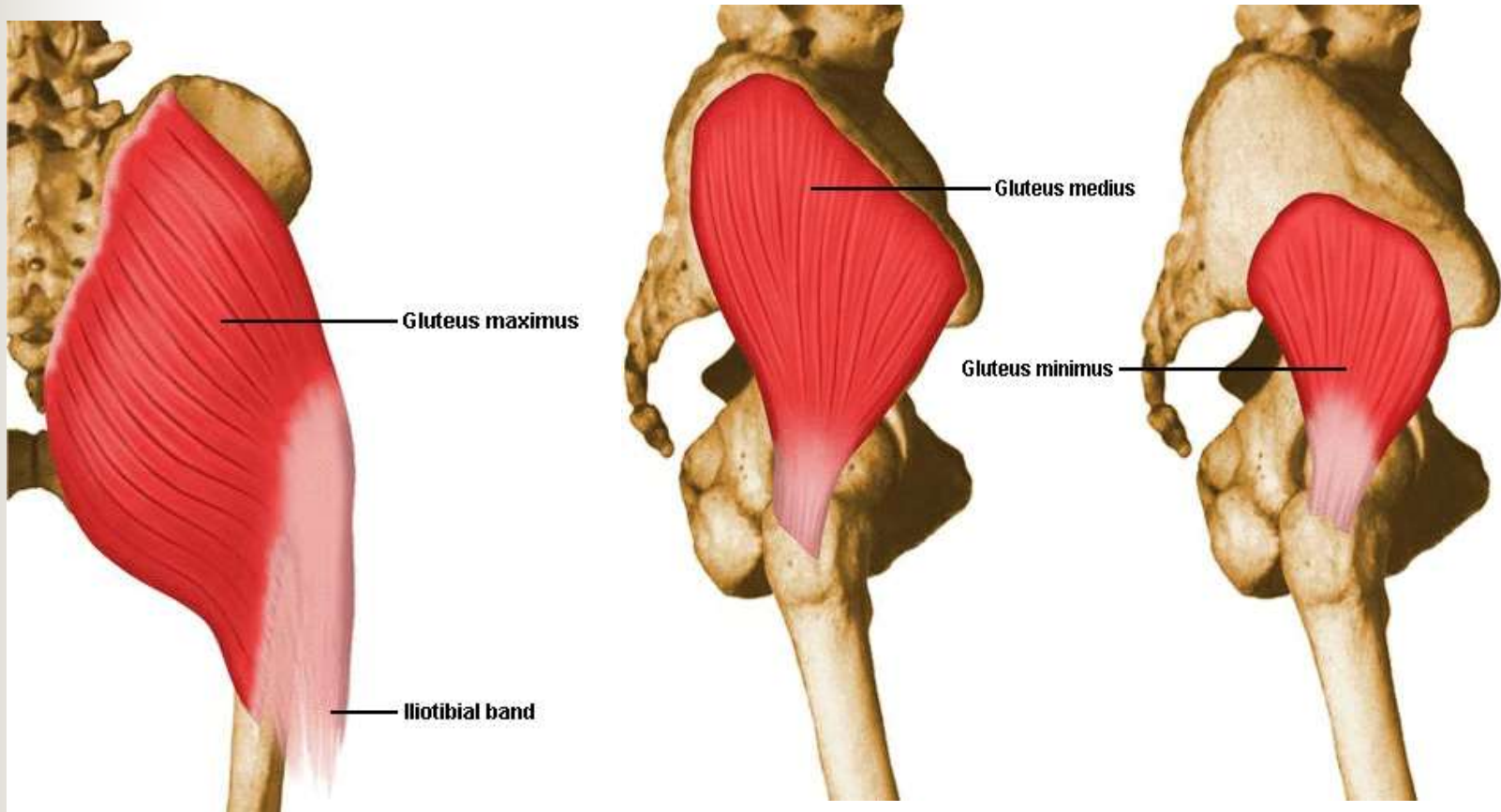
髂腰肌 Iliopsoas





臀大、中、小肌及梨状肌

Gluteal muscles and Piriformis





泡沫滚筒运动 Foam Roller Exercises



泡沫滚筒Foam Roller

- 又名瑜珈棒、瑜伽滚轮或按摩滚筒
- 藉由滚筒于绷紧的肌筋膜上进行滚动及按压以达至自我肌筋放松

A self-myofascial release technique to boost flexibility and recovery







禁忌症及需关注事项

Precautions and Containdications

- 骨质疏松症、孕妇、糖尿病兼有血液循环障碍、下肢静脉曲张、受伤或肿胀的区域及关节位置上不可采用Foam Roller来进行自我按摩

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

**如有任何疑问，应向医生及相关专业人士查询*

Please check with the medical professionals for further enquiry



操作方式及注意事

How to use foam roller

- 藉由不同的体位，将需要放松的身体部位置于Foam Roller上

Place the roller under the body part

- 利用身体四肢与地面的接触面积，来增减按压时肌筋膜所受的力度

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

- 
- 透过「缓慢」的滚动，寻找酸痛点，并在酸痛点的附近，来回滚动5-10次
Roll slowly 5-10 times over the area to locate the tender spot
 - 亦可在酸痛点停住（一般大约20秒），直到酸痛减缓及软组织变软
Stay at the tender spot for ~20s

- 
- 滚动或按压时应尽量放松相关肌肉及保持呼吸

Need to stay relax and keep breathing

- 在训练后1天内进行按压，再搭配静态伸展运动使能达到最好的放松及复原效果

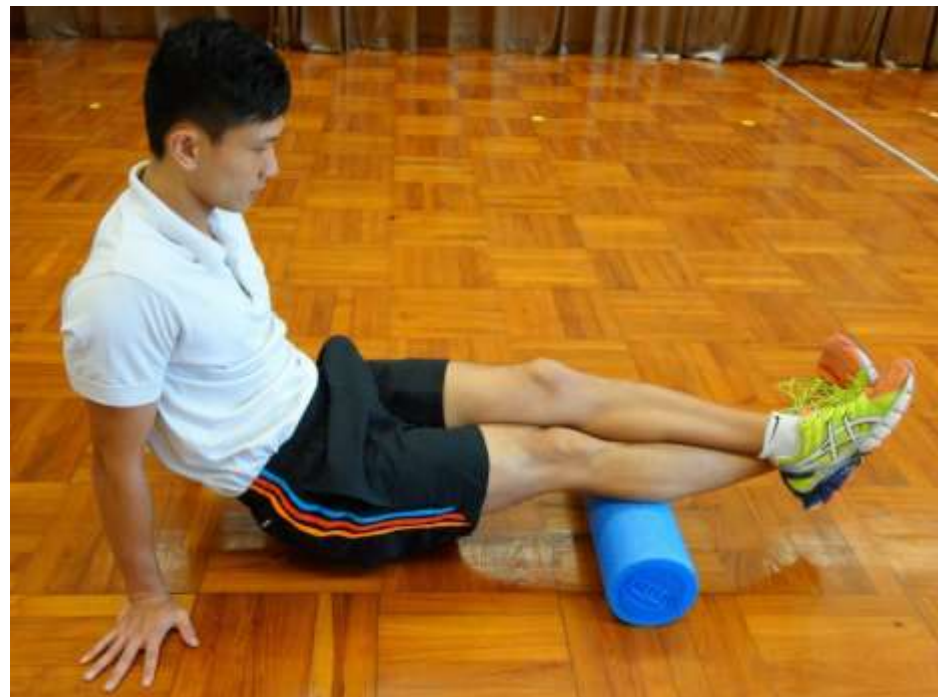
Best result with rolling and stretching within 24 hours of training

硬度/大小/长短的选择

With different sizes, length and stiffness



比目鱼肌/腓肠肌 Calf Muscles





胫骨前肌 Tibialis Anterior



股四头肌 Quadriceps Femoris



臀大肌/梨状肌 Gluteus Max./Piriformis





阔筋膜张肌 Tensor Fascia Latae



髂胫束 IT Band







Q & A

完成就是胜利!!!

