Back Care & Pilates

普拉提復康運動與護脊認知

HKBCF 12-2017





Angela Yiu 姚娜



MACAU REGIONAL Director(Australian Training for Fitness Professionals)

- -PRE & POSTNATAL PROGRAM DIRECTOR 2016
- PRE & POSTNATAL EXERCISE SPECIALIST 2016
- -CHILD FITNESS INSTRUCTOR 2016
- -SPECIALIST IN THERAPEUTIC EXERCISE 2016
- -FITNESS EXERCISE THERAPIST 2012
- -CERTIFICATE III IN FITNESS 2011
- -CERTIFICATE IV IN FITNESS 2011
- -PILATES REFORMER INSTRUCTOR2010
- -STRETCHING EXERCISE INSTRUCTOR 2010
- -KICK BOXERCISE TRAINER 2010
- -PERSONAL TRAINER 2010
- -PILATES EXERCISE INSTRUCTOR 2004
- -HATHA YOGA INSTRUCTOR 2004

- -產前後運動課程總監
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- -運動矯治專科工程教練
- -幼兒體適能教練
- -私人體適能教練
- -普拉提器械
- -PILATES REFORMER >
- -普拉提PILATES、
- -澳洲高級專業教練
- -瑜伽HATHA YOGA、
- -西洋拳KICK BOXERCISE、
- 伸展運動、























□ Abb. 3.1 a-k. Übungen aus dem Advanced-Programm. a Hundred, b Roll Up, c Roll Over, d Single Leg Circles, e Rolling Like a Ball, f Single Leg Stretch, g Spine Stretch, h Swan Dive, i Single Leg Kick, j Shoulder Bridge, k Spine Twist



Joseph Pilates

- 由Joseph Pilates創立的普拉提運動已有100年歷史,以往多用作復康治療,今天說起普拉提,更多人着重其收身、改善姿態的功用,近年更成為產後婦女熱門的收身運動。
- 一張墊子加一個普拉提圈,已可練習,方便繁忙都市人。



- "I must be right. Never an aspirin, Never injured a day in my life. The whole country, the whole world, should be doing my exercises. They'd be happier.
- ——"Joseph Pilates, age 83
- 我一定是正确的。在我的生命中,从来没有阿司匹林,从来没有一天遭受损伤病痛。整个美国,整个世界,都应该来做这个锻炼,他们将从中受益变得更快乐。

——约瑟夫·普拉提于83岁

"Good posture can be successfully acquired only when the entire mechanism of the body is under perfect control."

J. Pilates





臨床普拉提的優點

增強軀幹核心

(脊骨、肩部和盆骨帶)的穩定性。

改善身心控制。

增強姿勢的意識。

鍛鍊有效的呼吸及動作模式。

發展平衡的身體。

提升肌肉的狀態及靈活性。

Mat Work

- **Breath:** Lie supine with fingertips on the breastbone. Inhale, then gently use the fingertips to help the breastbone deflate with the exhalation. Repeat several times exploring the internal sensations.
- Balloon Breath: Lie supine with knees bent, feet on mat. Create a see-saw torso motion. Inhale while expanding and filling the chest with air, then switch to expanding and distending the abdomen on the exhalation.

EXERCISE SEQUENCE

Building on the exercises in the preceding chapter, the Intermediate Programme adds several new exercises to your workout. This exercise sequence chart provides a visual cue card: when performed in the order shown, the entire programme will flow smoothly and easily. As you progress, you should need to refer only to the chart to complete your workout.



1 The Hundred (*pp48-49*)



2 Roll Up (*pp50-51*)



3 Single Leg Circles (*pp52–53*)



4 Rolling Like a Ball (*pp54-55*)



5 Single Leg Stretch (pp56-57)



6 Double Leg Stretch (pp58-59)



7 Single Straight Leg Stretch (*pp74-75*)



8 Double Straight Leg Stretch (pp76-77)



9 Criss-Cross (*pp78-79*)



10 Spine Stretch Forward (pp60-61)



11 Open Leg Rocker (pp80-83)



12 Corkscrew (*pp84-85*)



13 Saw (*pp86-87*)



14 Neck Roll (*pp88-89*)



15 Single Leg Kick (*pp90–91*)



16 Double Leg Kick (*pp92–93*)



17 Neck Pull (*pp94-97*)



18 Side Kicks Series (pp98–105)



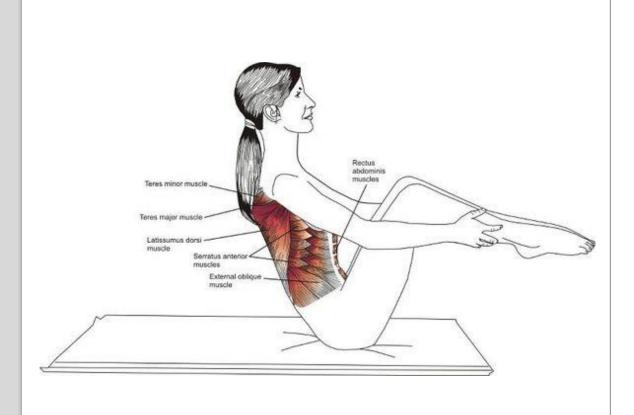
19 Teaser Series (*pp106–109*)

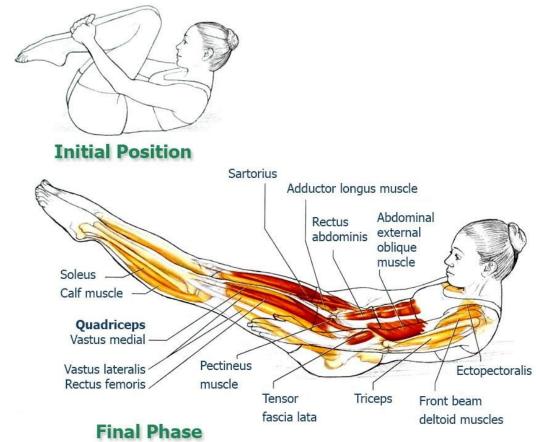


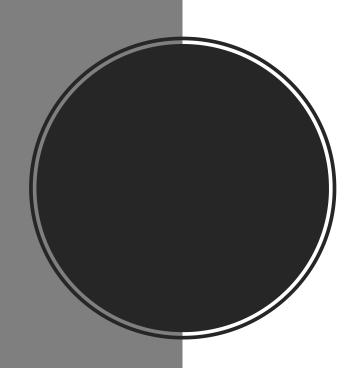
20 Seal (*pp110-111*)

Pilates Reformer

- **Leg Work:** All leg work is of course beneficial to establishing a foundation for all upper extremity use and follows the rehabilitative principle of dissociating the injured area from direct pressure or line-of-pull.
- Supine: The feet start on the base. Use a light spring to begin. Compress the hollow and navel to the mat, lift the groin, then lift one knee, then the other into the table top position. Place a ball between the knees to gently hold the neutral leg line. Place the hand grips into the palms and gently straighten the arms onto the mat, and lift them about 3 inches. Go through this sequence with about 4-6 repetitions each: a) hands go up toward ceiling exhale as they lower, b) turn the palms to face the torso, move the hands sideways in line with the ribcage, moving away from the torso and then returning to it, c) make small circles with the hands, 6 in each direction, d) end with triceps presses; the upper arm presses against the mat with the elbows tucked into the waist, the elbows bend while the back of the hands move up toward the ceiling and then the palms return down to the mat. Be sure to add easy breath, by exhaling on the exertion. Anchor the solar plexus (area of chest below the armpit line) to the mat.
- Progress to classic Pilates reformer work such as Rowing, Chest Expansion, Hug-a-Tree, Pulling Straps and 'T,' but be very careful of Salute. The Mermaid provides a more advanced progression to full rotator cuff and armpit range. A word of caution: one 'oops' to you could be a giant set-back to a survivor.







FLEX/BILITY

AEROBIC

STRENGTH























YOGA

PILATES

FOCUS

Kindness and the search for unity and balance in our lifestyle

WHAT IS IT?

A lifestyle rather than a simple exercise

- Union of mind and body
- Meditational
- Series of poses to release energy
- Detox of all bad energy
- Relaxing and restorative

Physical and mental stamina

Flexibility

Balance

Use of mats

Focus on breathing

Mobilises joints and lengthens muscles

Posture improved

Reduce stress

<u>FOCUS</u>

Mental concentration,
Physical breathing and
(body) controlled movements
conditioning

Tones the muscle without appearing bulky

- Helps weight loss
- Creates a solid core and better posture

WHAT IS IT?

Whole body conditioning

<u>PRACTICE</u>

Mats and machines to build a long, lean physique

PRACTICE

Generally a group exercise, on mats, led by an instructor 普拉提運動系統是其中一種重要的復康運動,這套運動透過多種由彈簧帶動阻力設定的器材,如(Reformer)核心床、(Multi-Chair)萬能椅、(Barrel)圓桶等,以及一整套墊上運動動作,來強化包括腹、背、臀部肌肉的「力量中心」以穩定身體,也能提升肌肉力量、加強柔軟度、改善姿勢平衡。不同患者都可從普拉提運動中受益,如慢性腰痛,關節置換,慢性頸部疼痛,坐骨神經痛等等。



Pilates for Breast Cancer Survivors

Brett Levine MS, MD, Both Kaplanek RN William L, Jaffe MD

Abstract Recently, a strong emphasis has been placed on catalhiding enhabilitation proceeds after primary stud lay active place of the primary students and the processor of immunor gendlines have foreign objective relative students to be placed on an expedited scale. With these concerns in made, we introduce a pre-air post-base concerns in male, we introduce a pre-air post-base concerns in male cost of total pan and see arthopology patients. A prioric defirms inserted in the need of active places, and the properties of the primary patients. A prioric defirms inserted in the need of active places of the primary patients. The programs following read by or have development of our programs following read by or have ended to the properties of the primary patients. A prioric defirms inserted in the need of the primary patients. A prioric defirms inserted in the need of the primary patients. A prioric defirms inserted in the need of the primary patients. A prioric defirms inserted in the need of the primary patients. A prioric defirms inserted in the need of the primary patients. A prioric defirms inserted in the need of the primary patients. A prioric defirms inserted in the need of the primary patients. A prioric defirms inserted in the need of the primary patients. A prioric defirms inserted in the need of the primary patients. A prioric defirms inserted in the need of the primary patients. A prioric defirms inserted in the need of the primary patients. A prioric defirms inserted in the need of the primary patients. A prioric defirms a primary patients. A prioric defirms a primary patients. A prioric defirms a

continues to decline. In a region by a value of an intermedial special surface of perimany total lay arthroplastics (THAs) increased SPS per 100,000 persons (193,000 THAs performed) and solid lash author certifies that be or the his no commercial associations (e.g. constitutions, soci emossible, only interns, partellicassing (for the perimannel of the approved or waived and various insurance regulations have been altered, driving initiatives calling for shorter invariant hours and that all ing initiatives calling for shorter inpatient hospital length o stay for total joint arthroplasty patients. During this time the benefits and efficacy of early, aggressive physica reministration and patient monitoration were being studied [23, 30]. Gazz et al. reported a decrease in the average length of hospital stay from 9.7 days to 5.3 days in 11,000 total hip arthroplastics from 1990 to 2000 [13]. Currently, in our institutions there has been an emphasis to shorter inpatient stays to 72 hours and pursue methods for earlie postoperative discharge. In other centers, surgeons are now performing total hip and knee replacements as an outpa techniques have provided is the evolution of rapid techniques have provided is the evolution of rapid

Original Investigation

The Cardiac Rehabilitation Model Improves Fitness, Quality of Life, and Depression in Breast Cancer Survivors

Lianne B. Dolan, PhD; Danielle Barry, BSc; Teresa Petrella, MD; Lindsay Davey, MSc, PT; Ann Minnes, RN; Allison Yantzi, MD; Susan Marzolini, PhD; Paul Oh, MD

Purpose: Exercise is a demonstrated, therapeutic strategy for cancer survivors to minimize many treatment-induced side effects and may decrease risk of recurrence. Nonetheless, structured programs that combine exercise and education are not yet standardized within cancer care. The Health, Exercise, Active Living, Therapeutic lifestyle (HEALTh) program is a clinical exercise program based on the established cardiac rehabilitation vent acute death from cancer, but it predisposes survivors to increased risk for developing comorbidities, which have associations with further disease development and early mortality.^{2,3} These treatment-related short- and long-term side effects can encompass weight gain, decline in aerobic capacity, increased fatigue, pain, depression, vasomotor armstome lose of factility andre anost of management from Altered motor control, posture and the Pilates method of exercise prescription

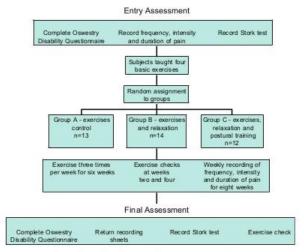


Figure 8 Entry to exit procedure—the flowchart illustrates the process from initial assessment to final assessment for subjects.

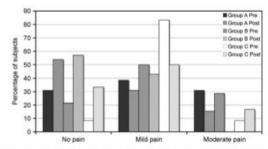


Figure 9 Oswestry Disability Questionnaire-question 1: do you have back pain at present? This was the only question where there was a significant change from baseline and subjects reported a reduction in pain. Post-program, although Groups B and C had a higher proportion of subjects with zero pain than Group A and B had no subjects with moderate pain, these effects were not significant between groups

Duration of back pain episodes

As the study progressed, all groups experienced a reduction in the mean length of the short, long and average pain episodes and at week 8 all groups included some subjects who were pain free. While

the proportions of pain free subjects in Groups B and C (30.8% and 25%, respectively) were higher than for Group A (7.7%), differences were not statistically significant for the duration of this study. Some of the improvements were lost once

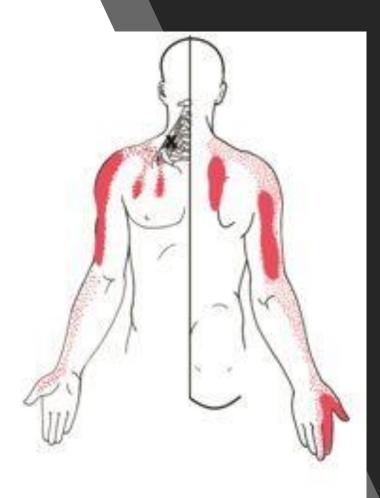
exercising ceased at the end of week 6. (Figure 11)

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Common Breast Cancer Treatment Injuries

Basically there are two categories of coincident common injuries, those that are due to inflammatory processes such as nerve irritations and frozen shoulder (fascial inflammation), and those that are due to faulty mechanical patterns such as impingement or rotator cuff strains.

exercise programs after any surgical procedures. It's common to have to wait 10 days to two weeks after basic mastectomy to begin exercises.



Nerve irritations:

The nerves of the neck come out of the spinal cord and run between the first rib and the collarbone and into the armpit before diving into the arm. These nerves of the upper body converge in a spider-web-like pattern in the collarbone and armpit areas called the brachial plexus. These areas are hit hardest by mastectomy and other operative procedures that replace breast tissue such as implants. Tightening of adherent tissues in these areas combined with the systemic effect of strong drugs required to combat cancer can produce irritations similar to the repetitive stress problems associated with computer overuse, such as carpal tunnel syndrome.

Frozen Shoulder:

Frozen shoulder happens when the tissues around the armpit are traumatized by lymph node biopsy and/or removal. The plastic wrap—like fascial tissue that separates the shoulder blade from the ribcage wall actually becomes inflamed. This painful inflammation causes the shoulder blade to clamp down on the rib wall. Frozen shoulder is said to have an inflammatory stage and a thawing stage. Pilates is particularly helpful when the inflammation is waning and judicious stretching can be regained.

Impingement:

The rotator cuff tendons run between the flat acromion and the head of the humerus. Impingement injury occurs after breast cancer surgeries when the humeral head is pulled up and presses up the rotator cuff tendons against the bony acromion. The scarring from surgeries and the adhesions along the chest wall and armpit tighten the area and cause a faulty movement pattern. Pilates' emphasis on precision helps the body to steer its own survival-mode compensatory patterns and to restore optimal motor patterns.

• Rotator Cuff Injuries:

The rotator cuff muscles originate on the shoulder blade and end on the head of the humerus. The main shoulder joint, the gleno-humeral joint is a ball and socket joint whose relationship is similar to that of a golf ball on a golf tee; it's inherently unstable. The function of the rotator cuff muscles and tendons is to grab the head of the humerus and twist and suck the arm into the small socket. Trauma to the chest and armpit weakens the involved arm and shoulder and so sets up not only faulty movement patterns but also poses an increased likelihood of injury. Pilates provides the ability for many levels of progression and so a safe mode of exercise to accommodate all levels, from fragility into full strength.

Can Pilates prevent Breast Cancer?

- The need for exercise among survivors of breast cancer is more important now than it has ever been. Recent studies state that Pilates and other exercise activities are an effective intervention for improving quality of life, cardio respiratory fitness, physical functioning, and reducing the symptoms of fatigue in breast cancer patients and survivors.
- Scientific evidence indicates that physical activity may reduce the risk of several types of cancer including breast and colon cancer as well as providing other important health benefits.

Can Pilates help Scoliosis?

 Scoliosis is a chronic spinal condition, not particularly a disease. It's a hot topic in the Pilates world, and in the hands of a skilled instructor, Pilates can excel in the long-term training needed to help change the many factors involved in the distorted spine and unbalanced musculature associated with scoliosis.

POSTURE ASSESSMENT Posterior Evaluation

Scoliosis



- Shoulders not level, prominent or uneven scapulas
- Uneven gap between arm and body
- · Elevated or uneven hip
- Head not centered over pelvis
- Bending test reveals uneven portions of back

Pilates as functional training



Postural awareness

Stabilisation



Targeting Core muscles

Neuro-muscular pathway improvement

Cancer Research UK

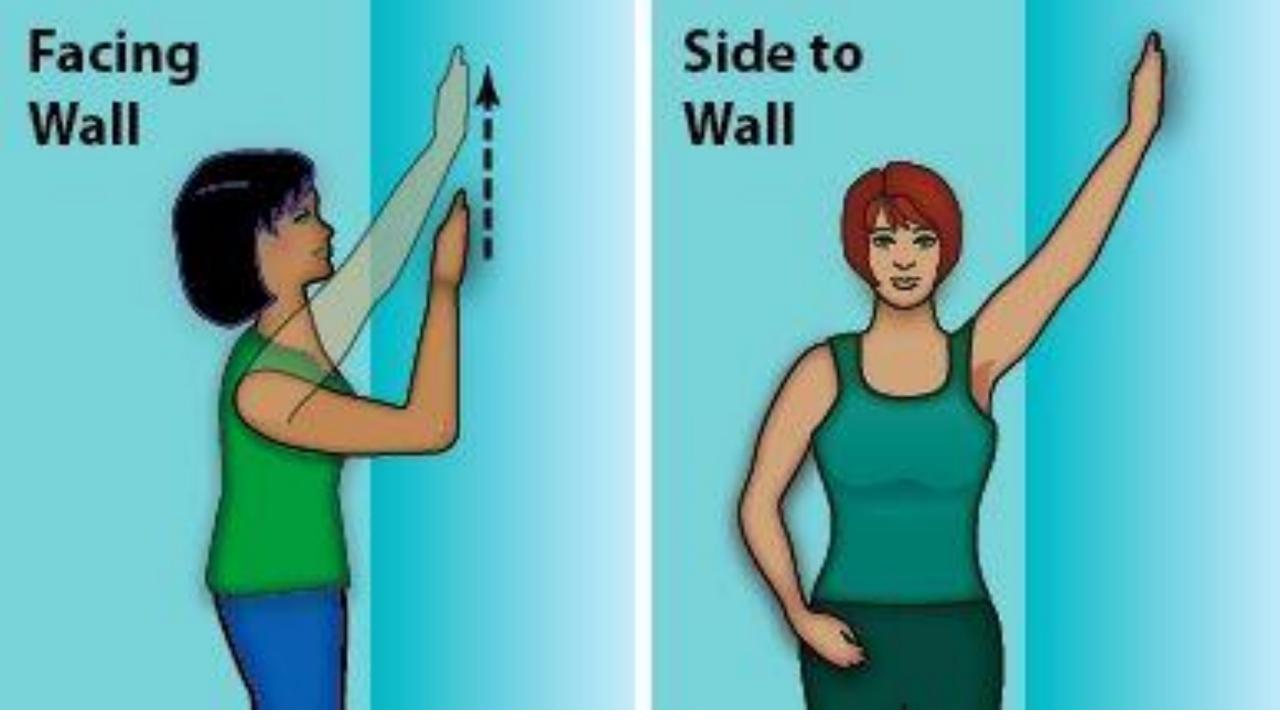
乳房手術後的復健運動

傳導感覺:

- 手術側的胸壁、肩膀、腋下及手臂,可能會有一些 奇怪的感覺,如麻木、針刺感、觸電感、沉重感、 燒灼感,或有「水滴」沿手臂下流的感覺。這些感 覺可能在疲累、情緒不穩,或天氣變化時特別明顯, 這是因為手術時皮表神經受損的緣故。
- 可以用另一側的手輕輕拍打感覺異常的地方,以減低敏感度。隨著神經的再生,上述的感覺會逐漸減弱,**通常在手術後到六個星期可以逐漸恢復**
- 皮膚的感覺大概要在手術後八到十個月才會逐漸恢復。不需要因為感覺異常,而影響到日常生活及復健運動。

Lymphedema:

 Swelling in the Arm, Armpit and Chest Research done on Dragon Boat Teams show that women can perform very strenuous arm motions and actually not develop lymphedema, the swelling associated with breast tissue and lymph node removal as well as the effects of radiation therapy. It appears that the tendency to develop lymphedema may have to do with genetics and body type. However, one exercise physiology fact is that blood moves from the torso and into the extremities with exercise. So your client may experience some swelling with the arm use of Pilates. If this should happen, your client should wear her sleeve, and if she is at all apprehensive, she should consult her medical team for advice or evaluation.

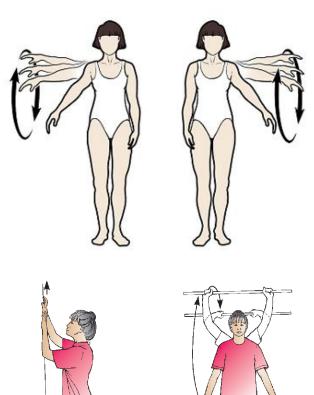


Range of Motion

- **Arm Semicircles:** Lie on your left side with towel or pillow under neck for support. Imagine you are lying on the face of a clock. Start with palms together in front of the chest on the floor at 3 o'clock. Gently move the top hand and arm in a clock-like fashion, moving up beyond the head on the floor to 12 o'clock, and ever so gently continue toward 9 o'clock. Stop at the tight spots, breathe and support your client's arm if needed. Then reverse back to 3 o'clock. Repeat 3 mores times.
- Ball Up the Wall: Stand fairly close to a wall, a position in between directly sideways and face on.
 Place a ball larger than a tennis ball underneath the palm, against the wall. Make sure the elbow is
 bent at the waist and the hand is comfortable. Slowly roll the ball up the wall, progressing the ball
 from the hand to rolling along the forearm as high as is comfortable and then roll down. Repeat
 several times, but don't overdo it.

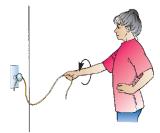
Isometric Setting

Lying supine, put the calves up on the long box, place a ball in between the knees and tie them together with a band. Find neutral spine and neutral shoulder blade positions. Bend the elbows, tuck them into the waist, and place a ball about 4 inches in diameter in between the hands with a band gently tying them onto the ball. Gently press the head, shoulder blades into the mat. Lift the groin muscles toward the head. Breathe gently as you press the hands and the knees together for 30 seconds. Then alternate by gently pressing the hands and knees outwards for 30 seconds, while still pressing the shoulders and head into the mat and simultaneously lifting the groin muscles. Don't strain; "Meet it, don't beat it."



1. Vadi handelimbing. Stand facing the wall with feet apart and loose a close to the wall as possible. With elbows slightly bent, pleat the palms of the wall as the ball at all houder fuel. By fileding the iniques, work the hands up the well until arms are fully extended. Then events the process, working the hands down to the starting point.

3. Rod or broomstick lifting. Grasp a rod with both hands, held about 2 feet apart. Keeping the arms straight, raise the rod over thehad. Bend elbows to lover the rod behind the head. Reverse maneuver, raising the rod above the head, then return to the starting oposition.

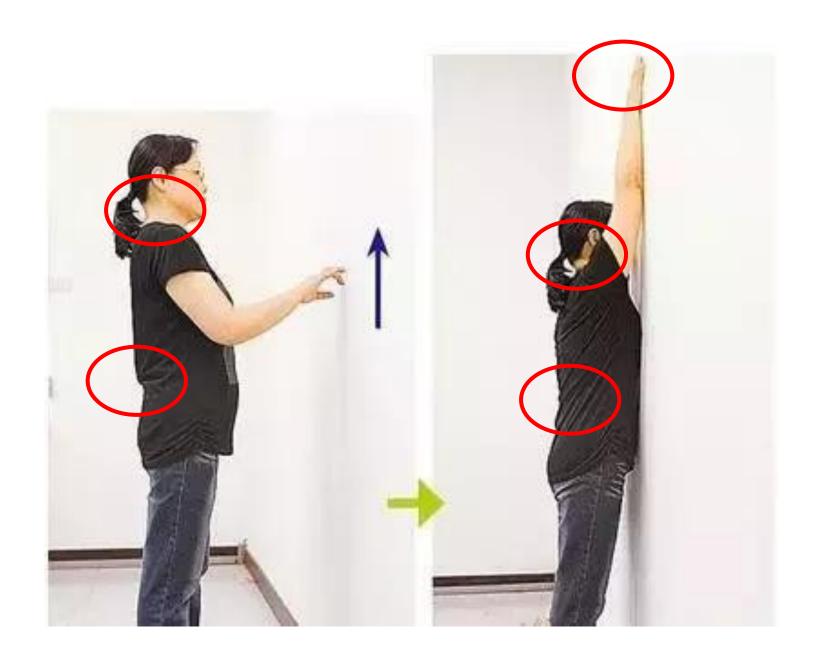


2. Rope turning. Tie a light rope to a dooknob. Stand facing the door. Take the free end of the rope in the hand on the side of surgery. Place the other hand on the slip. With the rope-holding arm extended and held away from the body (nearly parallel with the floor), turn the rope, making as wide swings as possible. Begin slowly at first; speed up later.



4. Pulley tagging. Toss a light rope over a shower curtain rod or doorway cutrain rod. Stand as nearly under the rope as possible. Grasp an end in each hand. Extend the arms straight and away from the body, Pull the left arm up by tagging down with the right arm, then the right arm up and the left down in a see-sawing motion.





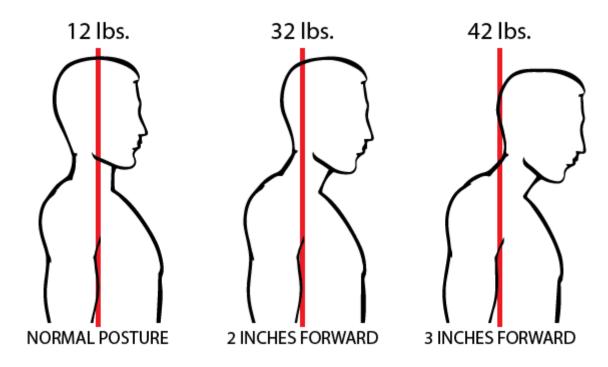


脊椎

了解脊椎的解剖構造 背痛的成因 如何維持正確的姿勢 預防背痛從日常生活做起 運動就是這麼簡單

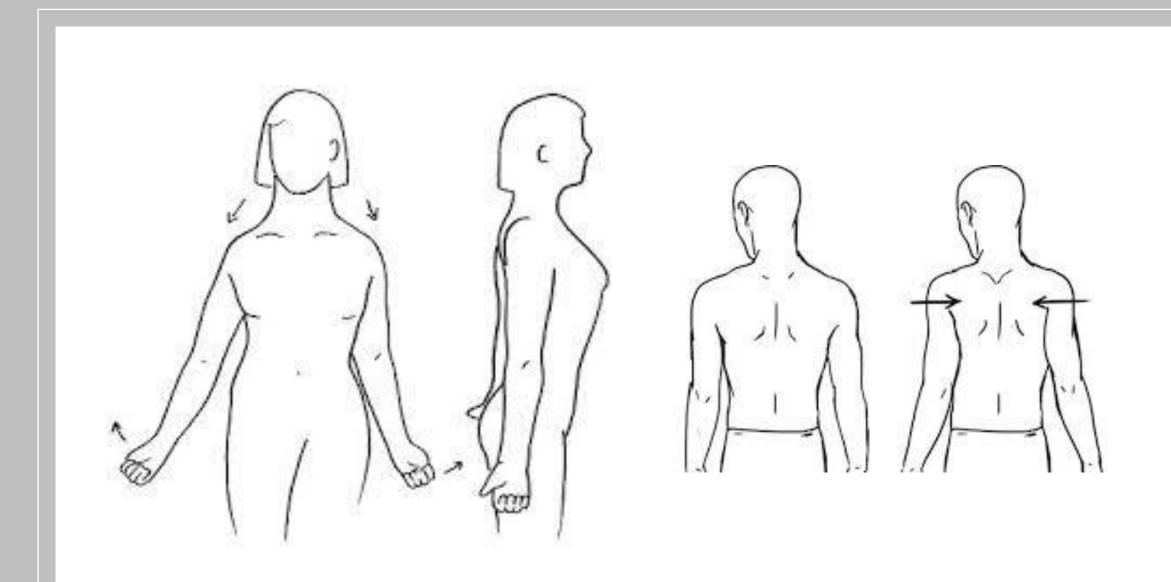


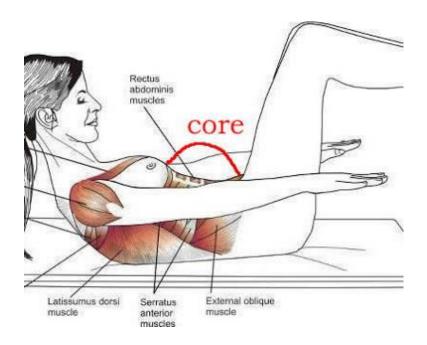
How heavy is your head?

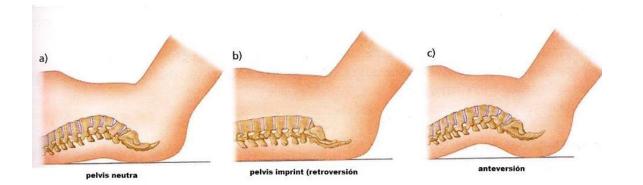


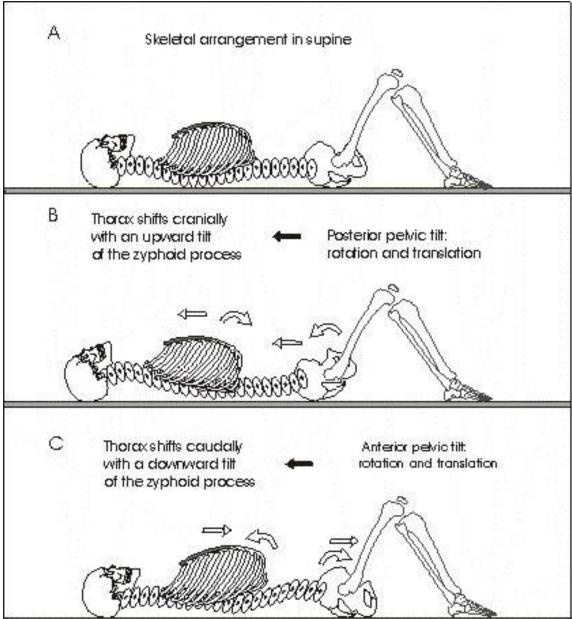
42-lbs Head

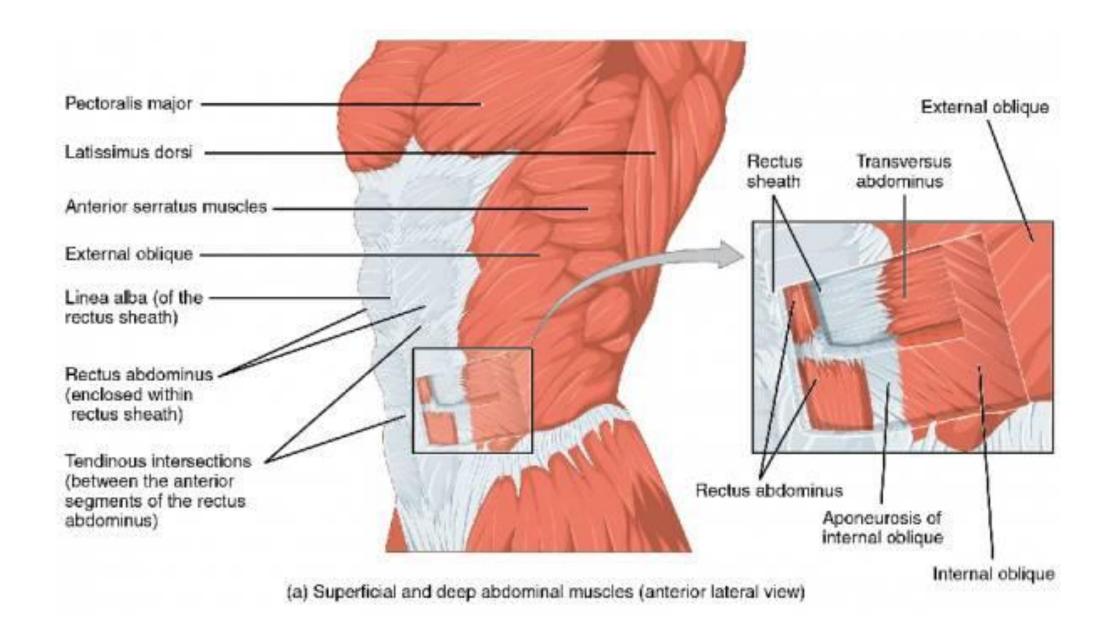
"For every inch of Forward Head Posture, it can increase the weight of the head on the spine by an additional 10 pounds."









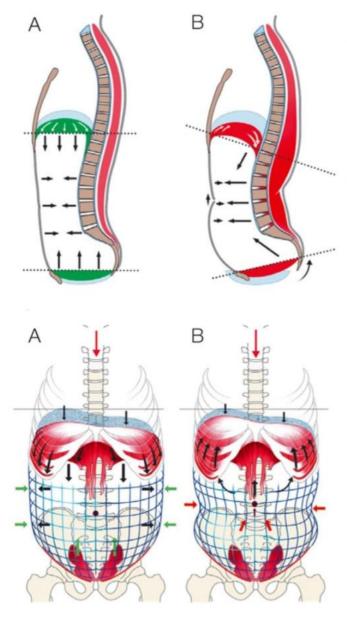


Overhead Squat Compensations, Posterior View











Balanced activity of stabilization muscles allows for symmetrical loading of individual sections of the spine.

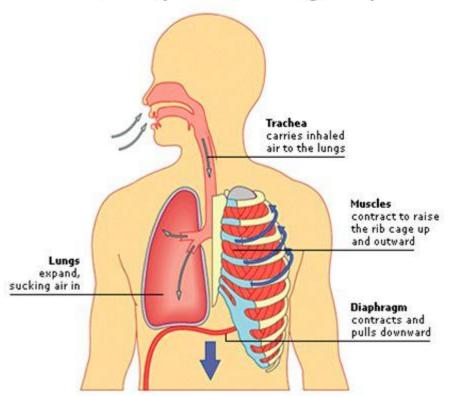
В

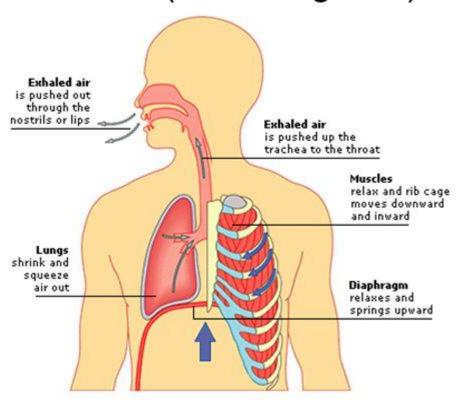
Poor quality of activation of stabilization musculature leads to overloading of certain segments of the spine and gradual development of degenerative changes, such as disc herniation or arthritis.

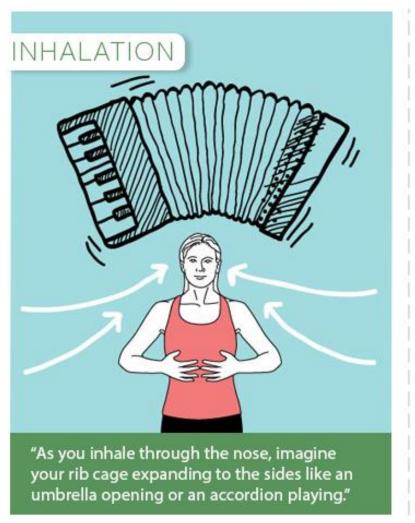
BREATHING DIAGRAM

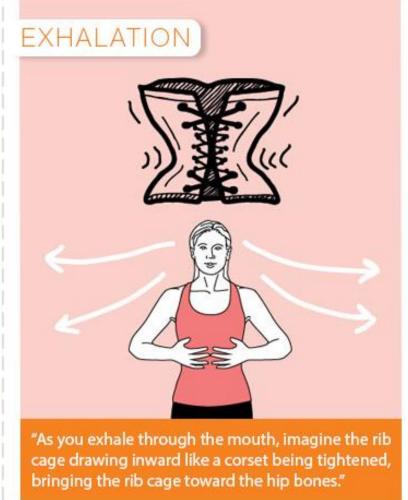
Inhale (Breathing In)

Exhale (Breathing Out)









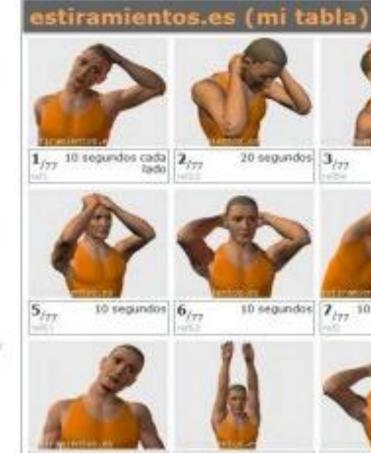
Sources: Pilates Illustrated, by Portia Page (Human Kinetics 2011)
Pilates Anatomy, by Rael Isacowitz and Karen Clippinger (Human Kinetics 2011)





















5 segundos 4/77 10 segundos cada lado



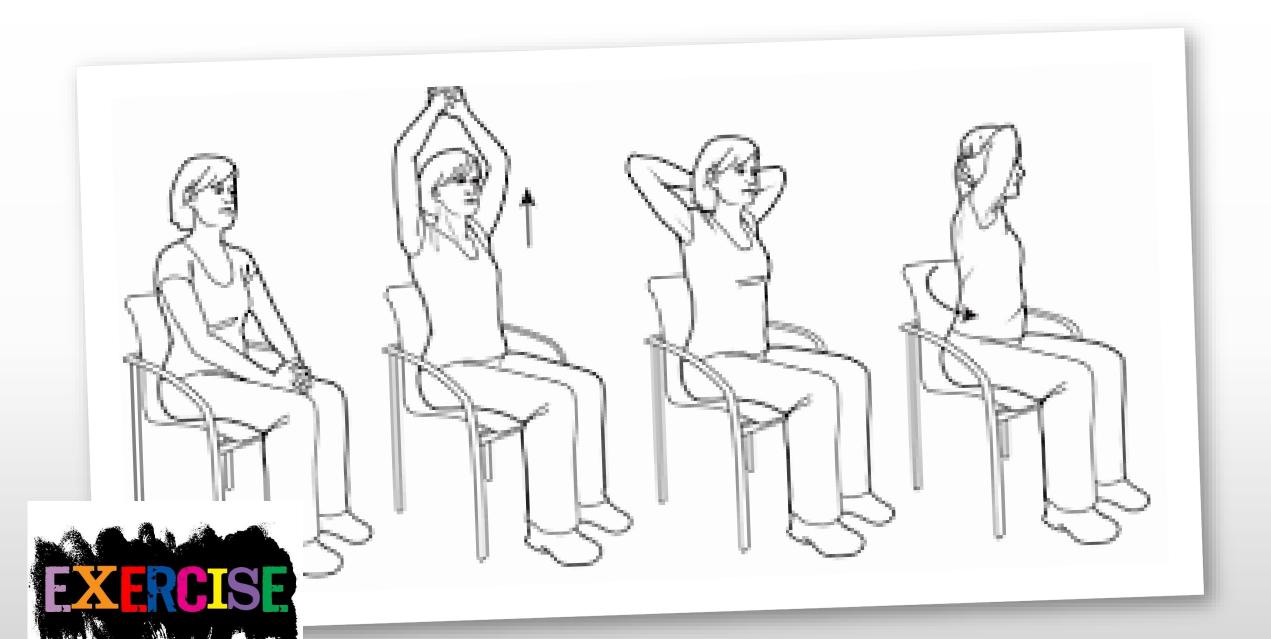






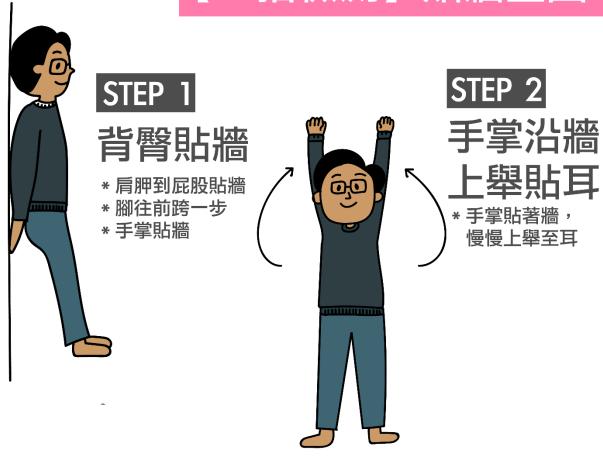


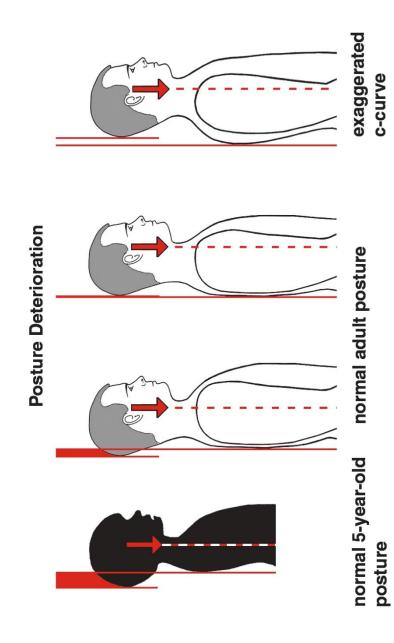




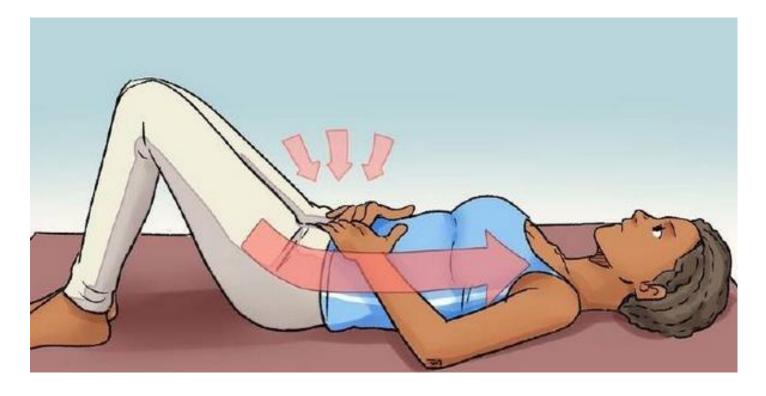
五十肩好了嗎?

【一招檢測】貼牆畫圈

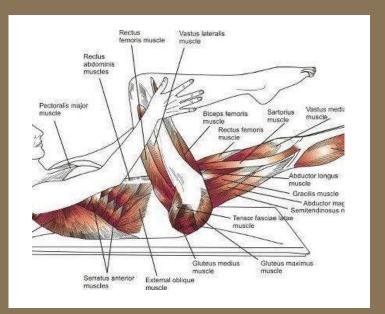










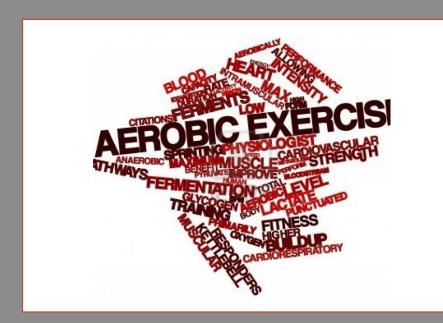


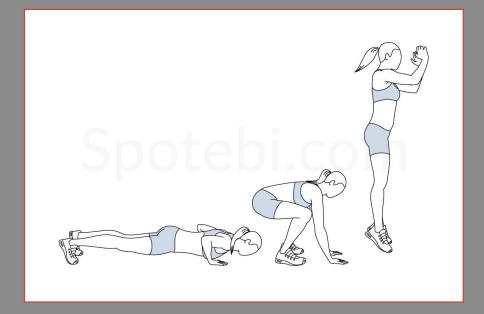


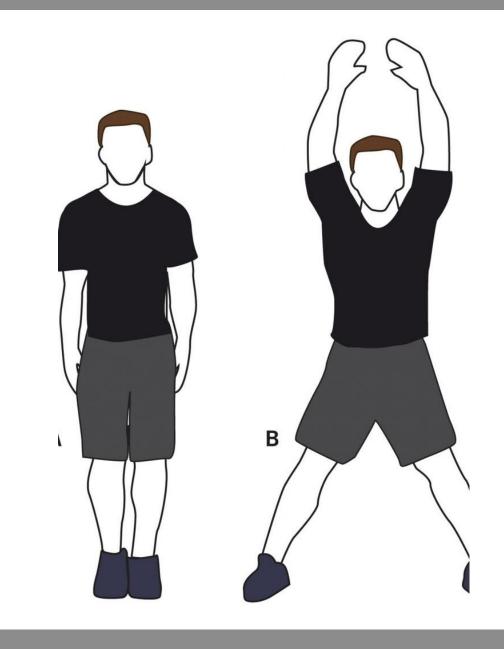


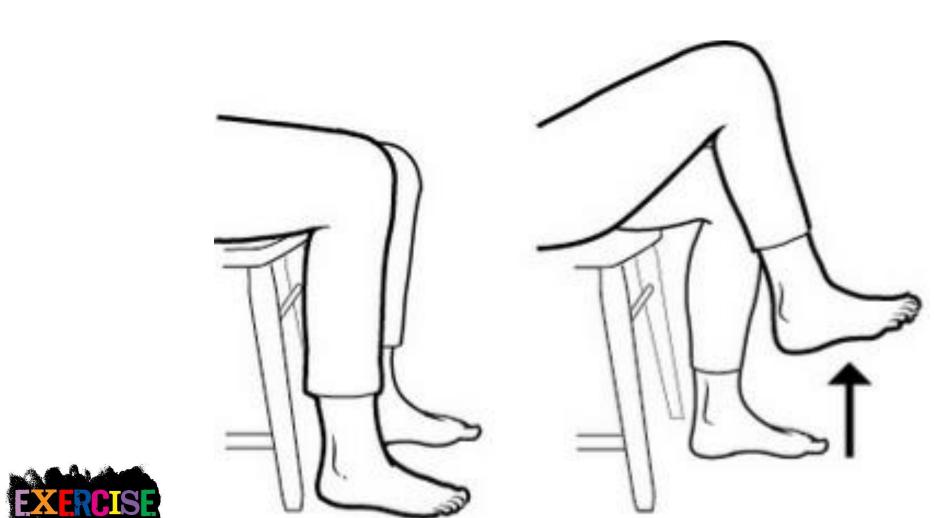














請注意! 運動練習, 最主要原則:

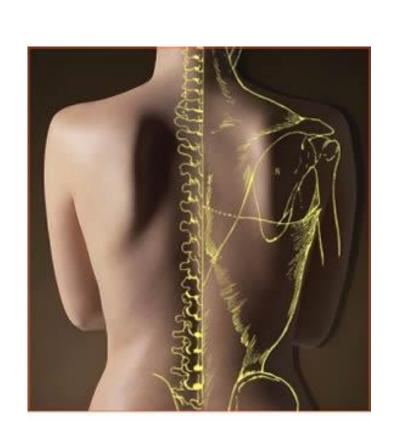
- 運動練習時,要保持愉悅的心情。
- 開始時,動作要慢,動作幅度由小增大,次 數由少變多。
- 傷口組織會有些微緊繃的感覺,一般活動或 進行所有的復健運動時,患側上肢不可以產 生肌肉酸痛。
- 通常運動**需持續練習長達一年以上才可以達** 到防止組織粘連。

Health Benefits of Exercise

- Exercise helps control weight.
- Exercise prevents health conditions and diseases.
- Exercise improves mood.
- Exercise boosts energy.
- Exercise promotes better sleep.
- Exercise improves sexual response.
- · Exercise improves longevity.

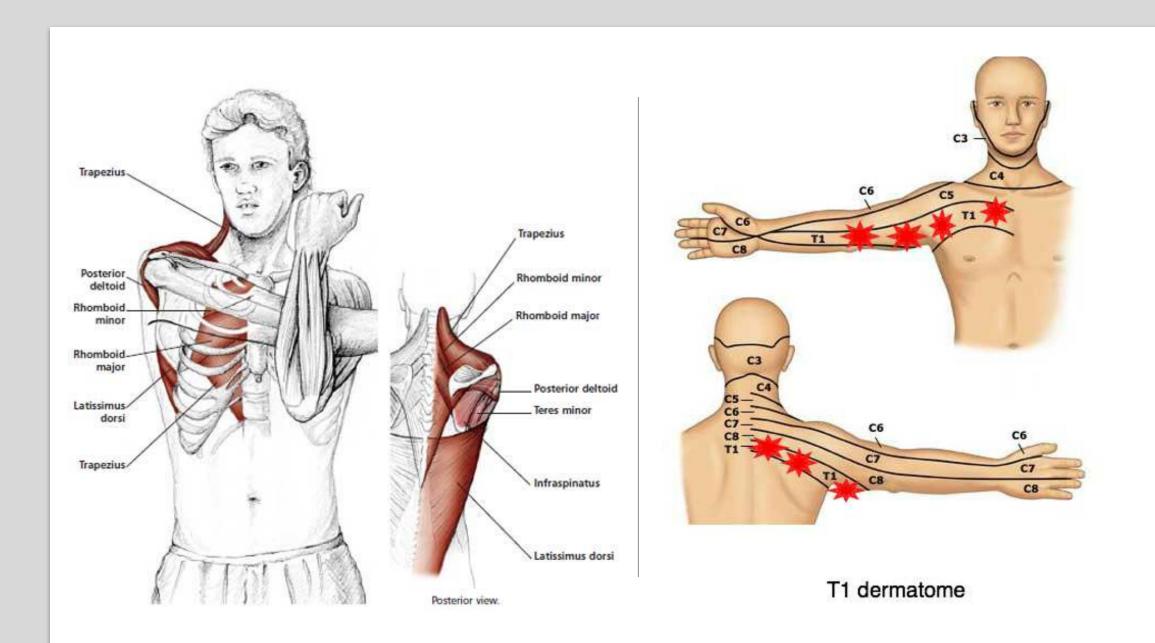
- 少數病人手術側的手臂會產生一至數條緊繃帶,牽扯時會疼痛。 這多是因為局部靜脈發炎或肌膜 沾連所致,通常一至二個月就會 恢復。
- 做*肩部運動*可把手肘略彎以減少 牽扯痛。

手臂疼痛與緊繃感覺



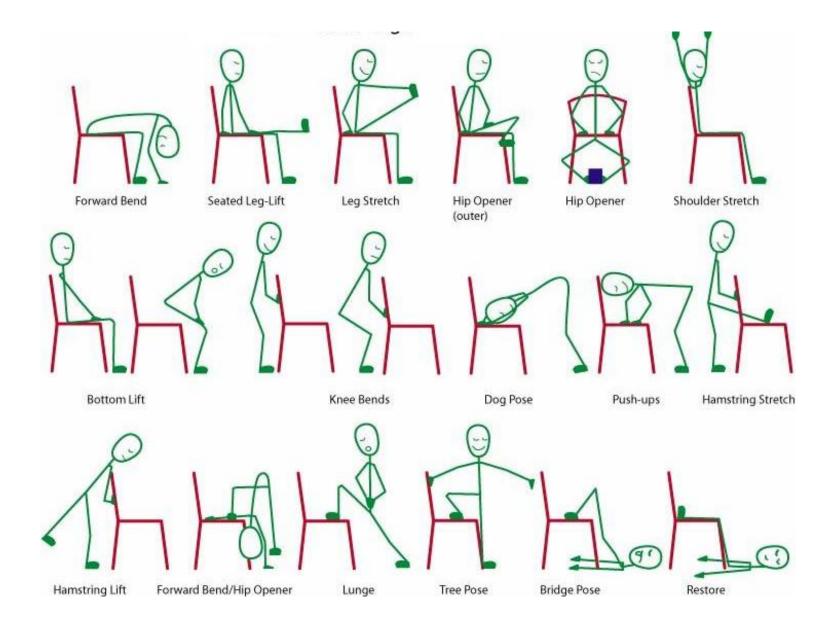


乳房手術側的 胸壁、肩膀、 腋下及手臂



BEFORE WORKOUT AFTER WORKOUT





hank (a Much