

## Pilates - The Five Basic Principles

### 1. Breathing:

- Test where the client breathes first in supine chest or belly
- 3D breath into the back, sides and lower lobes of the lungs as this does not restrict the diaphragm and assists in keeping the neck and shoulders free of tension
- WHY: we breathe in through the nose and out through a pursed lip to apply resistance and activate our TA
- Breath is important for relaxing the body
- Releasing tension in neck and shoulders
- Oxygenating the blood
- The breath aids our movement.
- On an inhale breath the diaphragm goes down and the ribs expand rolling up and back so we extend on an inhale
- On an exhale breath the diaphragm rises and the ribs close, rolling down and forward encouraging flexion.
- A forced exhale encourages a more effective Ta contraction and the deeper your inhale the deeper your exhale so they are both important

**EXERCISES:** Before we move to sitting, use the breath in supine to use the pelvic floor to activate TA and then obliques. Explain that after TA the obliques are very important in Pilates as they create the movement. TA only compresses the abdominals and creates lumber-pelvic stability

- SIT IN SUPINE, LEGS BENT ON A RAISED SURFACE. PALPATE THE BACK OF THE RIBS DURING THE BREATH.
- MOVE INTO A FLEXED POSITION ON AN EXHALE BREATH AND HOLD TO ENCOURAGE BETTER BREATH PLACEMENT

## 2. Pelvis Placement

### NEUTRAL

- Neutral pelvis is the optimal position for core TA activation allowing full range of motion
- Most effective position of the spine for shock absorbing allowing stresses to be distributed correctly and not incorrectly load the lumbar spine
- Neutral spine is used for closed kinetic chain exercises

### EXERCISES

- Create a triangle using your hands as biofeedback. Hipbones or ASIS must be completely horizontal and parallel to the floor with your pubic bone. Natural lordotic curve in the Lx spine. Every person is different. (SHOW THE TWO POSITIONS WE DO NOT WANT NOW ALSO!!!)
- SINGLE LEG LIFTS NOW: INHALE TO STAY, EXHALE TO LFT, INHALE TO HOLD, EXHALE TO LOWER==TRY ON FOAM ROLLER AND SEE THE DIFFERENCE

### IMPRINT

- The second pelvis position used in Pilates is called an imprinted pelvis.
- Used for open kinetic chain exercises or when more pelvic stability is required and neutral cannot be maintained. (USE MY SPINE AS AN EXAMPLE)

### EXERCISES

- **IMPRINT IS A SLIGHTLY PTP CREATED FROM THE ACTIVATION OF THE OBLIQUES**
- Pelvic rocks to encourage the obliques being responsible for the movement of the pelvis not just jamming the back to the floor
- Toe taps in an imprinted pelvis from table top down
- Foam Roller single leg lift
- 4 point kneeling in neutral then in a neutral then an imprinted position to feel the difference

### **3. Ribcage Placement**

- We encourage like the pelvis a neutral rib cage placement
- 12 ribs attached to 12 thoracic vertebrae so if the ribs are in the correct alignment then the THx spine is more likely to be in a better alignment (Which is opposite to the Lx spine curve, it's a natural kyphotic curve)
- All the abdominal muscles (TA, RA and Internal and External obliques) are connected to the lower rib cage via the abdominal wall
- Neutral ribcage is where the ribs sit directly horizontal in supine or vertical in standing above the hip bones or ASIS.
- The obliques are responsible for maintaining a neutral rib cage placement (so you can see again now the importance of the obliques)

#### **EXERCISE: OVERHEAD ARM REACHES**

- TA AND OBLIQUES connected (CHECK JUST MEDIAL OF THE ASIS FOR THE CLIENT) to stabilize the torso and prevent the ribs popping and excessive thx extension as the arms go overhead.
- Inhale lift arms to ceiling, exhale take the arms overhead to the point where neutral is maintained in ribs and pelvis, inhale return arms to point to the ceiling, exhale return to the floor

### **4. Shoulder Movement and Stabilisation**

- Shoulder joint is the most mobile in the body and has only one bony attachment at the ac joint, so shoulder movement and stabilization is very important
- The scapula has high mobility due to having only one bony attachment. (It has 20 muscular attachments). This mobility makes it very unstable so in Pilates we promote stability then mobility.
- We need good balance between the 20 muscles around the shoulders for good stability
- The scapula placement occurs between T2 and T7 and the medial border should be flat against the ribcage in NEUTRAL. And the inferior angle for neutral must also sit flat against the ribs
- BUT if we move the ribs, which we always do in any kind of movement whether it is in Pilates, the gym or normal everyday movement then the scapula must move too!
- So if we do a sit up the scapula must be allowed to move upwards and protract with the ribs and if we extend the spine the scapula must be allowed to retract and depress with ribs

## EXERCISES

- SITTING ON A RAISED SURFACE CROSSED LEGGED: THERE ARE 6 MOVEMENTS THAT THE SCAPULA HAS-PROTRACTION, RETRACTION, ELEVATION, DEPRESSION, UPWARDS ROTATION AND DOWNWARDS ROTATION
- FOUR POINT KNEELING: PROTRACTION AND RETRACTION WITHOUT FLEXING OR EXTENDING THX SPINE
- THEN PRESS THE BODY WEIGHT FORWARD AND BACK MAINTAINING A NEUTRAL SCAPULA

### 5. Cervical Placement

- The head is very heavy and therefore it is extremely important to keep it well balanced on the Cx spine. In its ideal alignment the earlobe sits on top of the ac joint
- The chin and forehead parallel to the ground
- If the client has tight neck extensors, the forehead will sit lower than the chin
- If the client has tight neck flexors the forehead will sit higher than the chin
- The Cx spine is a continuation of the THx spine so wherever the THx spine goes the neck or Cx spine should follow.
- Head nods prior to THx flexion are an example of preparing the Cx spine to follow the THx spine into flexion. Creating the same curve otherwise when head would lift up incorrectly! **DEMONSTRATE POOR SIT UP!!!**

## EXERCISES

- Head nods on their own: walk the eyes down to the knee, hold and return the eyes to look to the ceiling
- Head nods into THx flexion or an abdominal prep or a sit up as its known
- Breaststroke Prep
- Sitting Mermaid: THx spine is going into lateral flexion therefore neck or Cx should follow. Use a mirror for this one

**SO OUR AIM IN PILATES IS TO HAVE EACH OF THESE FIVE PRINCIPLES SET PRIOR TO MOVEMENT AND YOUR CHALLENGE IS TO KEEP THEM ACTIVATED AND ADD MOVEMENT**

**WE ARE SIMPLY WAKING UP MUSCLES THAT HAVE BEEN ASLEEP AND TEACHING THEM TO DO WHAT THEY ARE MEANT TO DO**

**AND TEACH THE LARGE GLOBAL ONES LIKE RECTUS ABDOMINUS THAT ARE MEANT TO MOVE THE SPINE NOT STABILISE IT TO DO ONLY WHAT THEY ARE MEANT TO DO AS THEY TAKE OVER WHEN THE SMALLER ONES ARE SWITCHED OFF AND NOT ACTIVE**