**The 34 Classical Pilates Mat Exercises**

Feel free to edit this document. You can add selected Principles, imagery, progressions, regressions, key teaching points, options for small equipment, difficulty rating etc. Amend to suit your needs. It is intended to be a working document – it is not intended to be a comprehensive or complete guide in its issued state.

In the issued document some contraindications are noted which would potentially be outside scope. Pre and post-natal and osteoporosis contraindications are omitted.

Osteoporosis is outside scope: all forward flexion exercises are contraindicated as are loaded flexion exercises such as Rolling Like A Ball, Seal, Roll Over, and Open Leg Rocker. Check out this factsheet: <https://strwebprdmedia.blob.core.windows.net/media/k1xhr2ws/pilates-exercises-modifications-with-osteoporosis-fact-sheet-february-2019.pdf>

Isometric exercises are linked to an increase in blood pressure as in inversions

**1. The Hundred**

**Purpose:** Warm-up, increase circulation, build core endurance.  
**Key Muscles:** Rectus abdominis, transverse abdominis, hip flexors.  
**Joint Actions:** Shoulder flexion/ext (arms pump), spinal flexion (then stabilisation).  
**Plane of Movement:** Sagittal.  
**Contraindications:** Neck strain, hernia  
**Modifications:** Keep head down, legs bent/higher or feet on floor.

**2. Roll Up**

**Purpose:** Improve spinal articulation, stretch hamstrings, strengthen abdominals.  
**Key Muscles:** Rectus abdominis, hip flexors, spinal flexors.  
**Joint Actions:** Spinal flexion, hip flexion, ankle dorsiflexion.  
**Plane:** Sagittal.  
**Contraindications:** Herniated disc, lower back pain.  
**Modifications:** Roll up halfway – use arms to assist. Use momentum to assist. Seated C curve half rolldown

**3. The Roll Over (with Legs Spread)**

**Purpose:** Part of the original warm-up routine, this exercise will strengthen your abdominals and increase your spinal mobility. It will also help stretch out your lower back and legs. Improve spinal articulation, stretch hamstrings, strengthen abdominals. Focuses on core control  
**Key Muscles:** Rectus abdominis, hip flexors, spinal flexors.  
**Joint Actions:** Spinal flexion, hip flexion, ankle dorsiflexion.  
**Plane:** Sagittal.  
**Contraindications:** Herniated disc, lower back pain. Avoid rolling over past your shoulder blades and maintain a lift in the lower back by reaching your sits bones towards the ceiling  
**Modifications:** Limit ROM – Reverse Curl. Bent legs

**4. Single Leg Circles (Hip Circles)**

**Purpose:** Hip joint mobility and control. Pelvic stability and core stabilisation. Disassociation  
**Key Muscles:** Hip flexors, adductors, abductors, gluteus medius.  
**Joint Actions:** Hip flexion, abduction, adduction, internal/external rotation (= circumduction).  
**Plane:** Multiplanar   
**Contraindications:** Hip labral tears, instability.  
**Modifications:** Keep circles small, bend bottom leg for support. Bend circling leg

**5. Rolling Like a Ball**

**Purpose:** Balance, core strength. Stability  
**Key Muscles:** Rectus abdominis, spinal erectors.  
**Joint Actions:** Spinal flexion, knee and hip flexion.  
**Plane:** Sagittal.  
**Contraindications:** Neck pain, dizziness. The head and neck should not touch the mat as you roll back.  
**Modifications:** Keep hands behind thighs, avoid rolling back too far. Use hands to support return phase

**6. Single Leg Stretch**

**Purpose:** Strengthen abdominals, improve coordination.  
**Key Muscles:** Rectus abdominis, hip flexors.  
**Joint Actions:** Spinal flexion, hip flexion/extension.  
**Plane:** Sagittal.  
**Contraindications:** Lower back pain.  
**Modifications:** Keep head down, move legs on a higher angle.

**7. Double Leg Stretch**

**Purpose:** Core strength and coordination.  
**Key Muscles:** Rectus abdominis, hip flexors.  
**Joint Actions:** Spinal flexion, hip flexion, shoulder flexion/circumduction.  
**Plane:** Sagittal.  
**Contraindications:** Neck or low back pain.  
**Modifications:** Keep head down, move legs on a higher angle.

**7. Spine Stretch Forward**

**Purpose:** Lengthen spine and hamstrings, improve posture.  
**Key Muscles:** Erector spinae, hamstrings, abdominals.  
**Joint Actions:** Spinal flexion, hip flexion.  
**Plane:** Sagittal.  
**Contraindications:** Herniated disc.  
**Modifications:** Bend knees slightly.

**8. Open Leg Rocker**

**Purpose:** Balance, spinal articulation, hip flexibility. Core control.  
**Key Muscles:** Rectus abdominis, hip flexors.  
**Joint Actions:** Spinal flexion and extension, hip flexion.  
**Plane:** Sagittal.  
**Contraindications:** Low back pain. Avoid rolling back onto the head and neck and prevent the legs from dropping too far overhead after rolling back  
**Modifications:** Keep knees bent, reduce rocking range

**10. Corkscrew**

**Purpose:** Core strength and control.  
**Key Muscles:** Rectus abdominis, obliques, hip flexors.  
**Joint Actions:** Hip flexion, spinal rotation.  
**Plane:** Transverse and sagittal.  
**Contraindications:** Lower back injuries.  
**Modifications:** Limit range of hip circles. Keep trunk grounded. Bent legs

**11. Saw**

**Purpose:** Spinal rotation and stretch, hamstring lengthening.  
**Key Muscles:** Obliques, hamstrings, erector spinae.  
**Joint Actions:** Spinal rotation, hip flexion.  
**Plane:** Transverse (and sagittal).  
**Contraindications:** Disc issues, spinal fusion.  
**Modifications:** Shorten reach, bend knees. Sit on cushion/block

**12. Swan**

**Purpose:** Strengthen spinal extensors and open chest.  
**Key Muscles:** Erector spinae, gluteus maximus, deltoids.  
**Joint Actions:** Spinal extension, shoulder extension.  
**Plane:** Sagittal.  
**Contraindications:** Low back pain. Swan Dive should not be performed until you have mastered Swan Dive Prep  
**Modifications:** Keep elbows bent, limit extension. Limit to upper body – pause – lower body. Single legs. Arm support (cobra)

**13. Single (One) Leg Kick**

**Purpose:**  Strengthens the back extensors, the hamstrings, and the glutes.  
**Key Muscles:** Hamstrings, gluteus maximus, spinal erectors.  
**Joint Actions:** Knee flexion, hip extension, spinal stabilisation.  
**Plane:** Sagittal.  
**Contraindications:** Hamstring issues, knee pain. Avoid strain in the lower back by maintaining a long spine. **Modifications:** Head down, adapt lever length of legs

**13. Double Leg Kick**

**Purpose:** Strengthen back extensors and shoulder muscles.  
**Key Muscles:** Erector spinae, hamstrings, deltoids.  
**Joint Actions:** Spinal extension, knee flexion, shoulder extension.  
**Plane:** Sagittal.  
**Contraindications:** Neck or low back pain.  
**Modifications:** Single Leg Kick

**15. Neck Pull**

**Purpose:** Strengthen abdominals. Spinal flexion and spinal articulation  
**Key Muscles:** Rectus abdominis, obliques.  
**Joint Actions:** Spinal flexion.  
**Plane:** Sagittal.  
**Contraindications:** Neck problems. Spinal issues including discs  
**Modifications:** Keep chin tucked, reduce range. Consider Roll Up

**16. Scissors (High Scissors)**

**Purpose:** Core and hip flexor strength, hamstring stretch.  
**Key Muscles:** Rectus abdominis, hip flexors, hamstrings.  
**Joint Actions:** Hip flexion/extension  
**Plane:** Sagittal.  
**Contraindications:** Hamstring issues, lower back pain.  
**Modifications:** Keep trunk grounded (Low Scissors)

**17. Bicycle**

**Purpose:** Core and hip flexor strength, hamstring stretch, improve coordination.  
**Key Muscles:** Rectus abdominis, obliques, hip flexors.  
**Joint Actions:** Spinal flexion, hip flexion/ext  
**Plane:** Sagittal  
**Contraindications:** Neck or back pain.  
**Modifications:** Keep trunk grounded

**18. Shoulder Bridge**

**Purpose:** Strengthen glutes, hamstrings, core stabilisation. Assists spinal articulation  
**Key Muscles:** Gluteus maximus, hamstrings  
**Joint Actions:** Hip extension, spinal extension.  
**Plane:** Sagittal.  
**Contraindications:** Neck or back injuries.  
**Modifications:** Keep pelvis low, avoid full lift.

**19. Spine Twist**

**Purpose:** Improve spinal rotation, engage obliques.  
**Key Muscles:** Obliques, erector spinae.  
**Joint Actions:** Spinal rotation.  
**Plane:** Transverse.  
**Contraindications:** Disc injuries, spinal fusion.  
**Modifications:** Bend knees, sit on cushion.

**20. Jack Knife**

**Purpose:** Strengthen core and improve control.  
**Key Muscles:** Rectus abdominis, hip flexors, spinal extensors.  
**Joint Actions:** Hip extension, spinal flexion/extension.  
**Plane:** Sagittal.  
**Contraindications:** Neck or spine issues. Avoid rolling onto the neck, keeping head and neck long and released on the Mat. You should be able to execute the Roll Over prior to attempting the Jack Knife  
**Modifications:** Reverse curl.

**21. Side Kick**

**Purpose:** Strengthen hips, glutes, and core; improve control.  
**Key Muscles:** Gluteus medius/minimus, hip flexors/extensors  
**Joint Actions:** Hip flexion/extension, abduction/adduction.  
**Plane:** Sagittal.  
**Contraindications:** Hip instability  
**Modifications:** Smaller range, support upper body on elbow.

**22. Teaser**

**Purpose:** Core control, spinal articulation, balance.  
**Key Muscles:** Rectus abdominis, obliques, hip flexors.  
**Joint Actions:** Spinal flexion, hip flexion.  
**Plane:** Sagittal.  
**Contraindications:** Low back pain  
**Modifications:** Bend knees

**23. Hip Twist**

**Purpose:** Strengthen obliques, improve control.  
**Key Muscles:** Obliques, hip flexors.  
**Joint Actions:** Trunk and hip rotation.  
**Plane:** Transverse.  
**Contraindications:** Lumbar spine issues.  
**Modifications:** Reduce rotation, keep knees bent. Feet grounded

**24. Swimming**

**Purpose:** Strengthen spinal extensors, shoulders, and glutes.  
**Key Muscles:** Erector spinae, gluteus maximus, deltoids.  
**Joint Actions:** Spinal extension, shoulder and hip flexion/extension (limited).  
**Plane:** Sagittal.  
**Contraindications:** Shoulder injuries, spinal stenosis.  
**Modifications:** Lower limbs only, arms only.

**25. Leg Pull Front (Prone)**

**Purpose:** Strengthen the hip extensors and shoulder girdle while also stabilising the trunk and the pelvis.  
**Key Muscles:** Gluteus maximus, deltoids (stabilisers), rectus abdominis.  
**Joint Actions:** Hip extension, shoulder stabilisation.  
**Plane:** Sagittal.  
**Contraindications:** Wrist pain, shoulder instability.  
**Modifications:** Keep knees down or reduce leg lift.

**26. Leg Pull Back (Supine)**

**Purpose:** Glute and posterior chain activation.  
**Key Muscles:** Gluteus maximus, hamstrings, spinal extensors.  
**Joint Actions:** Hip extension.  
**Plane:** Sagittal.  
**Contraindications:** Wrist or shoulder injuries.  
**Modifications:** Keep knees bent, reduce range.

**27. Side Kick Kneeling**

**Purpose:** Strengthen gluteals, obliques; improve balance.  
**Key Muscles:** Gluteus medius/maximus, obliques, deltoids.  
**Joint Actions:** Hip abduction, hip flexion, shoulder stabilisation.  
**Plane:** Sagittal  
**Contraindications:** Knee injuries, balance issues.  
**Modifications:** Use support under hands, smaller range.

**28. Side Bend**

**Purpose:** Strengthen obliques, lateral spinal flexion.  
**Key Muscles:** Obliques, deltoids, quadratus lumborum.  
**Joint Actions:** Spinal lateral flexion.  
**Plane:** Frontal.  
**Contraindications:** Shoulder or wrist problems.  
**Modifications:** Decrease range, support lower arm.

**29. Boomerang**

**Purpose:** Combine spinal articulation, balance, coordination.  
**Key Muscles:** Rectus abdominis, obliques, hip flexors.  
**Joint Actions:** Spinal flexion, hip flexion.  
**Plane:** Sagittal.  
**Contraindications:** Neck or lower back/spine issues.  
**Modifications:** Roll halfway up, legs bent. Prior to executing this exercise, it is important to have practiced and successfully executed the Teaser and Roll Over

**30. Seal**

**Purpose:** Spinal flexibility, core control, playful movement.  
**Key Muscles:** Rectus abdominis, obliques.  
**Joint Actions:** Spinal flexion, hip flexion.  
**Plane:** Sagittal.  
**Contraindications:** Spinal injuries. Avoid rolling onto the neck.  
**Modifications:** Keep feet down or feet together.

**31. Crab**

**Purpose:** Spinal flexion, coordination, control.  
**Key Muscles:** Rectus abdominis, obliques.  
**Joint Actions:** Spinal flexion.  
**Plane:** Sagittal.  
**Contraindications:** Neck injuries, spine injury. It is recommended that you are proficient in performing Rolling Like a Ball and Seal prior to attempting this exercise  
**Modifications:** Rolling like a Ball

**32. Rocking**

**Purpose:** Strengthen spinal extensors, improve mobility.  
**Key Muscles:** Erector spinae, gluteus maximus, hamstrings.  
**Joint Actions:** Spinal and hip extension.  
**Plane:** Sagittal.  
**Contraindications:** Spinal stenosis, neck issues.  
**Modifications:** Limit rocking, Swan Dive, Swan Dive prep.

**33. Control Balance**

**Purpose:** Core stability, flexibility, control.  
**Key Muscles:** Rectus abdominis, spinal extensors, hamstrings.  
**Joint Actions:** Spinal flexion, hip extension.  
**Plane:** Sagittal.  
**Contraindications:** Neck and shoulder issues  
**Modifications:** Keep head down, reduce leg lift. Supine Scissors

**34. Push-Up**

**Purpose:** Strengthen upper body, core, spinal articulation.  
**Key Muscles:** Pectoralis major/minor, triceps, deltoids.  
**Joint Actions:** Elbow extension/flexion, spinal flexion/extension.  
**Plane:** Sagittal.  
**Contraindications:** Shoulder instability, wrist issues.  
**Modifications:** Perform on knees, reduce range.