



Tailwind Training Protocols

1 Tailwind Seated Protocol

Indications for use:

- Able to perform at least 20° active shoulder flexion
- Able to perform $\geq 20^\circ$ active elbow flexion & extension
- Able to sit in chair ≥ 5 minutes without arm support
- Inability to stand ≥ 3 minutes
- LE wt bearing restrictions

Set-up:

Table Height: The device should be set up on an adjustable height or a table at least 29" high.

Chair position: Patient should be seated in front of device so that their feet rest flat on the floor and the chest guard rests gently against the chest (mid sternum). Table & chair Height should allow neutral scapula position in starting position.

*consider the use of a 2" to 4" platform to improve positioning so that the patients elbow and forearm do not touch the device when reaching, and scapula in neutral position in starting position.

Track Position: Set right & left tracks in straight or abducted (angled out) position depending on Patient/Therapist goals.

Excursion: Instruct Patient to reach forward to achieve maximal pain-free shoulder flexion and elbow extension and adjust stoppers to that point.

Speed: Set metronome to rate/speed to match patient's ability to reach targets and/or that patient can maintain for 3-5 minutes of repetitive reaching.

Treatment:

- Perform 5 minutes (or up to 5 minutes depending on patient tolerance/endurance) of in-phase (arms moving in same direction) reaching followed by a 5 minute rest break.
- Repeat this sequence 3 times for 30 minute treatment session; or 4 times for a 40 minute treatment session.

Progression: The following variables can be progressed each treatment session or weekly based upon patient endurance, ability to reach target and maintain speed, and Patient/Therapist goals:

1. **Excursion:** Increase to meet active joint range of motion or reaching distance goals.

- 2. Metronome Rate/Speed:** Increase to meet endurance, coordination and/or timing goals.
- 3. Incline:** Add or Increase to meet anti gravity strength, active range of motion or reaching height goals.
- 4. Track Position:** Add or Increase abducted (angled) position to encourage movement pattern out of synergy, to meet active range of motion or reach direction goals.
- 5. Anti-phase Training:** Perform alternating (arms moving in opposite directions) arm movements, to meet coordination goals.
- 6. Unilateral Training:** Perform specificity (motor control) training of the paretic arm.

2 Tailwind Standing Protocol 1

Indications for use:

- ___ Able to perform at least 20° active shoulder flexion
- ___ Able to perform ≥ 20° active elbow flexion & extension
- ___ Able to stand independently or with minimal assist ≥ 3 minutes
- ___ Demonstrates decreased ability to shift weight to paretic LE
- ___ Demonstrates decreased ability tolerate stance on paretic LE

Set-up:

Table Height: The device should be set up on an adjustable height or a table at least 34" high. When the Patient is standing in front of the device holding the device handles in the starting position, the scapula should rest in neutral position.

Track Position: Set right & left tracks in(straight) or abducted (angled out) position depending on Patient/Therapist goals.

Excursion: Instruct Patient to reach forward to achieve maximal pain-free shoulder flexion and elbow extension, and adjust stoppers to that point.

Speed: Set metronome to rate/speed to match patient's ability to reach targets and/or that patient can maintain for 3-5 minutes of repetitive reaching.

Treatment:

- Perform 5 minutes (or up to 5 minutes depending on patient tolerance/endurance) of in-phase (arms moving in same direction) reaching followed by a 5 minute rest break.
- Repeat this sequence 3 times for 30 minute treatment session; or 4 times for a 40 minute treatment session.

Progression: The following variables can be progressed each treatment session or weekly based upon patient endurance, ability to reach target and maintain speed, and Patient/Therapist goals:

1. **Excursion:** Increase to meet active joint range of motion or reaching distance goals.
2. **Metronome Rate/Speed:** Increase to meet endurance, coordination and/or timing goals.
3. **Incline:** Add or Increase to meet anti gravity strength, active range of motion or reaching height goals.
4. **Track Position:** Add or Increase abducted (angled) position to encourage movement pattern out of synergy, to meet active range of motion or reach direction goals.
5. **Anti-phase Training:** Perform alternating (arms moving in opposite directions) arm movements, to meet coordination goals.
6. **Unilateral Training:** Perform specificity (motor control) training of the paretic arm.

3 Tailwind Standing Protocol II

Indications for use:

- ___ Able to perform > 20° active shoulder flexion
- ___ Able to perform > 20° active elbow flexion & extension
- ___ Able to stand independently ≥ 5 minutes
- ___ Demonstrates decreased ability to shift weight to paretic LE and/or non-paretic LE
- ___ Demonstrates decreased ability tolerate stance on paretic LE

*Appropriate for higher level patients that need fine tuning of UE and LE motor control.

Set-up:

Table Height: The device should be set up on an adjustable height or a table at least 34" high. When the Patient is standing in front of the device holding the device handles in the starting position, the scapula should rest in neutral position.

Track Position: Set right & left tracks in adducted (straight) or abducted (angled out) position depending on Patient/Therapist goals.

Excursion: Instruct Patient to reach forward to achieve maximal pain-free shoulder flexion and elbow extension, and adjust stoppers to that point.

Speed: Set metronome to rate/speed to match patient's ability to reach targets and/or that patient can maintain for 3-5 minutes of repetitive reaching.

Treatment:

- Perform 5 minutes of in-phase (arms moving in same direction) reaching followed by a 5 minute rest break.
- Repeat this sequence 3 times for 30 minute treatment session; or 4 times for a 40 minute treatment session.

Progression: The following variables can be progressed each treatment session or weekly based upon patient endurance, ability to reach target and maintain speed, and Patient/Therapist goals:

1. **Excursion:** Increase to meet active joint range of motion or reaching distance goals.
2. **Metronome Rate/Speed:** Increase to meet endurance, coordination and/or timing goals.
3. **Incline:** Add or Increase to meet anti-gravity strength, active range of motion or reaching height goals.
4. **Track Position:** Add or Increase abducted (angled) position to encourage movement pattern out of synergy, to meet active range of motion or reach direction goals.
5. **Anti-phase Training:** Perform alternating (arms moving in opposite directions) arm movements, to meet coordination goals.
6. **Unilateral Training:** Perform specificity (motor control) training of the paretic arm.
 - * consider patient using hand-over-hand positioning to encourage weight shift, excursion, & movement pattern out of synergy.

Additional Guidelines:

- Read device manual for full device guidelines, set- up, and precautions prior to incorporating protocols into patient treatment.
- If patient experiences pain/new onset of pain while using the device without relief following rest break or between treatment sessions discontinue use. Consult patient's Physician for medical clearance prior to resuming treatment.
- Monitor vital signs (ie: heart rate & blood pressure, pulse oximeter) as you would with normal/routine standard of care appropriate for each individual patient.