San Antonio Wave Club Swim Team
Full Plyometric Progression Protocol
Duration: 9 weeks

Plyometric training consists of different neuromuscular components that are addressed at different points along a progressive plyometric training plan. The phases of plyometric training increase in difficulty as more biological and neuromuscular components are involved. This packet is designed to spend a moderate amount of time on each phase, and coaches should not advance phases until athletes have demonstrated precision and control in each exercise of each phase. Important concepts to understand with plyometric training are:

- Rate of Force Development (RFD) – How often the muscle contractions occur
- Ground Contact Time (GCT) – How long you make contact with the ground or box
- Force Generating Contraction (FGC) – The explosive contraction that produces the force of a movement
  - Unilateral – One Leg
  - Bilateral – Both Legs

Phase 1 – Control & Correct Landing Mechanisms
This phase focuses on quality movements. These exercises can seem relatively easy to execute, but there should be great emphasis on controlled landing. Use the intrinsic muscles of the foot and ankle to land softly with control. Approximate Duration – 3 weeks

Phase 2 – Strength
This phase focuses on increasing strength of specific muscles used in this progression, while maintaining control. Quick breaths, split–second reactions off the start, these are examples of using Fast–Twitch muscle fibers. Swimmers primarily use Fast–Twitch muscle fibers, and plyometrics train those muscle fibers to recognize when they need to be fired. This phase trains those muscle fibers and increases their strength. This phase uses longer force generating contractions (FGCs), with longer ground contact times (GCTs). Towards the end of this phase, the expectation is to decrease the GCT. Approximate Duration – 3 weeks

Phase 3 – Power
This phase emphasizes increasing the power that’s used when firing Fast–Twitch muscle fibers. Muscle reaction time is shortened (quicker) for a more alert, explosive contraction. This phase looks for MAXIMUM Rate of Force Development (RFD) – Rapid Fire. Phase 3 pushes for shorter GCT, shorter (explosive) contraction times, and less range of motion, essentially stronger, powerful bursts. Approximate Duration – 3 weeks

Composed and Formatted by San Antonio Wave Assistant Coach Mason Carroll. Adapted and modified from Jacob Jennings, Strength & Conditioning Coach at the Aspire Academy, and Track and Field Coach John Shepherd.
Phase 1 – Control and Landing

1) CMJ – Countermovement Jump (3 Rounds of 10)

Start in a tall stance, squat to 45º, jump, land softly at 45º

Tall Posture, Soft Feet on landing, Control

2) Depth Drop (3 Rounds of 8)

Start standing on PLYO box, lean forward to initiate fall, land softly on both feet in mid-squat stance. Control impact, soft of feet, soft on knees

3) Box Jumps (2–3 Rounds of 8)

Use Low Setting of PLYO Box

Tall Posture, Soft Landing

4) Squat Jumps (2 Rounds of 10)

Slow, Controlled Motions

Soft Landing

5) Broad Jump (3 tries, take average)

Assessment – Keep track of Measurement

Revisit towards end of Phase 3
Bilateral Jump from a specified line, measure.

6) Hop & Stick (3 Rounds of 5 each leg)

Unilateral Soft Jump
3” – 6” ground clearance
Soft Landing
Phase 2 – Strength

1) Squat Jumps (3 Rounds of 8)
   - Controlled Motion
   - High Force, explode
   - Long Force–Generating Contractions
   - Soft Landing

2) Tuck Jumps (2–3 rounds of 10)
   - Less explosive, Long Ground Contact Time
   - Long Force–Generating Contractions
   - Soft Landing

3) Small Hurdle Jumps (4 Rounds, 15 yards in length)
   - Use noodles, cones, something to resemble mini–hurdles, space about 18” apart
   - Rate of Force Development – Quick
   - Round 1/2 – Front Jumps
   - Round 3/4 – Sides

4) Hops (3 Sets of 8)
   - Strong Force–Generating Contractions
   - Long Ground Contact Time

5) Bench Knee Drive (3 Sets of 5–8 per leg)
   - Explode through contraction – HIGH Force–Generating Contractions
   - Strong, HARD explode
   - Long Ground Contact Time
   - Stationary foot should lift from PLYO Box

6) Split Jump / Lunge Jump (3 Rounds of 10 Jumps)
   - Strong Contractions
   - Controlled Landing
Phase 3 – Power

1) Drop Jump – Bilateral (3 Rounds of 8)
   Similar to Depth Drop, Depth Drop + Explosive Jump
   (Beginner) Use High Setting of PLYO Box, with greater ground contact time
   (Advanced) Use Low Setting of PLYO Box, with less ground contact time

2) Drop Jump – Unilateral (3 Rounds of 5–8 per leg)
   Repeat, one legged
   Goal – Fast reaction time, strong explosion. POWER

3) Rebound Jump (3 Rounds of 8)
   Reverse Box Jumps, Start on box, Rest on box.
   No rest on ground
   Long, Strong Contractions
   Fast, Quick Ground Contact Time

4) Bounding (2 rounds of 5 lengths – 1 length about 15 yards)
   Bounding = Bouncing
   MINIMUM Ground Contact Time
   Quick, reactive Contractions
   Maintain squat position

Phase 3
MAXIMUM RATE OF FORCE DEVELOPMENT
SHORT CONTACT TIMES
EXPLOSIVE