

# Recovery Acceleration

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Recovery Acceleration is the measured boat acceleration between feather (finish position) and the boat's peak speed. Acceleration is the difference in velocity divided by time and can be misleading as actual boat acceleration is not linear. Recovery Acceleration Efficiency is the real boat movement as the area under the speed curve is a percentage of the straight-line acceleration between feather and peak speeds. The time of acceleration as a percent of total stroke cycles is also listed.

<sup>6</sup> Recovery Accel. (feather to peak)	1.61	29.5%	acceleration feather to peak speed & % of time of stroke
Rec. Accel Eff. (feather to peak)	91.9%		percentage of area under curve compared to straight line acceleration

## *Pucerverance Boat Speed Curve Sheet – Recovery Acceleration and Recovery Acceleration Efficiency*

The recovery begins from the finish position with the legs connecting to pull on the shoes and support the movements of hands, torso, and seat simultaneously towards the catch. During the recovery, the athlete pulls the footstops towards their center of mass (COM), causing the boat to accelerate. The simultaneous movement of legs, torso, and arms coordinates to accelerate the boat towards peak speed. At lower practice rates, the recovery time is longer, and the more relaxed movements start slow out of the bow to allow the footstop to COM acceleration.

### Coaching:

- The recovery is the simultaneous, fluid, natural movements of the legs, torso, and arms that accelerate the footstops towards the athlete's COM.
- The legs initiate the recovery by pulling on the footstops. Leg contraction is slower than arm extension.
- Hands cross over knees as the torso approaches perpendicular with arms are bent, elbows at about 90°.
- Constant acceleration on the recovery is the key, and at practice rates, the recovery movement starts slowly to allow longer acceleration throughout recovery.
- Constant speed of body movements on recovery will slow the boat's acceleration and should be avoided.

### Drills:

- Zero to one-hundred percent recovery speed.
- Cut the cake, starting slow and accelerating with good simultaneous (legs/torso/arms) movement.
- Long pause one, followed by quick recovery acceleration (Australian recovery).
- Pause one, moving slowly to pause two followed by a controlled acceleration to catch.
- Pause one (finish position);
  - Pause two (1/4 slide, torso almost perpendicular, arms bent with hands over knees).
  - Pause three (1/2 slide, torso forward but not at full reach, arms almost straight).
  - Pause four (3/4 slide, torso almost at catch angle, arms straight).
- GPS SpeedCoach split comparison – regular strokes to pulling of footstop strokes (compare split).

