

## BACKSTROKE START - ANALYSIS



- Head neutral.
- Eyes looking towards base of starting block.
- Arms bent in flat grip position, not side grip.
- Scapula protraction evident.
- Minimal curve in lower back.
- Toes above surface of the water with balls of feet on ledge
- Heels slightly below the surface
- Buttocks rest on the surface of the water.

- Initial movement on start begins with arms driving to full extension.
- Head being thrown backwards.
- Shoulders begin to move backwards.
- Hips lift slightly to bring buttocks clear of the water.



- Head remains in neutral alignment
- Arms fully extended at release
- Tension through legs to hold position on wall.
- Hip angle increases as the upper body opens up to create required take-off angle.
- Angle at the knee only increases minimally during these phases.
- Arms begin to swing back quickly following release.

- As the arms reach vertical position head is back with eyes starting to sight entry.
- The back is straight.
- Heels still slightly below the surface with angles in dorsiflexion.
- Still has leg drive potential at this point to enable full clearance on take-off and to maximise distance in flight phase.



- Take-off occurs with powerful full extension of legs.
- Feet switch to plantar flexion with heels clear of water prior to losing contact with pad.
- Arms extended in line with body in almost straight line evident hands to feet.
- Neck at full extension at take-off.

- Arms in tight streamline at hand entry
- Head begins to return to neutral in preparation for entry.
- Body arched maintaining water clearance,
- Legs remain extended with toes pointed.



- As shoulders enter head is tight in streamline
- Legs begin to lift to match angle of upper body and maintain clearance.

- Body aligned hands to feet as hips submerge.
- Tension through body to maintain solid line and minimal resistance.



- Entry line maintained.
- Upper body continues decent without attempting to flatten to horizontal until feet fully submerge and fly kick begins.