SWIM STATION
GIVE IT A TRI

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SWIM ANALYSIS REPORT

Swimmer's Name: Sophie
Date: 06/08/2025
Stroke Analysed: Front Crawl
Total Swim Time: 40 Minutes
Distance Covered: 1600m
Coach's Name: David Ashton

SWIMMER'S NOTES

Solid endurance and swimming background, with a podium finish in the Brighton Olympic Triathlon (2023) and a successful completion of the Mallorca 70.3 in 2024. Now rebuilding after an injury. Has numbness in fingers due to a past bike crash, which may influence feel for the water and tactile feedback, particularly in the catch and push phases.

ZONES

Warmup – 2:10/100m
~~Aerobic~~ – 2:00/100m
Threshold – 1:48/100m
VO2 – 1:35/100m
Max - 1:15/100m

TECHNIQUE ASSESSMENT

Body Position

Head Alignment: Your head naturally holds a 30-degree forward gaze, which is optimal. However, there's some inconsistency here, during fatigue or distraction, you occasionally drop your head to around 10 degrees. When this happens, water flows over your head, which disrupts body alignment, and the water pushes your back down. Maintaining that consistent 30-degree gaze will improve your balance and reduce drag.

Body Rotation: Excellent rotational range, approximately 60 degrees per side, allows for strong shoulder driven propulsion and efficient arm reach. This is ideal and should be preserved.

Hip Position: Optimal, about 30 degrees of controlled rock side-to-side. This shows you're rotating from the hips effectively without over-rotating or causing drag. Your core engagement is evident and contributes to efficient propulsion.

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Kick
Type & Frequency: You use a 2-beat kick that serves as a counter balance to the arm stroke, especially noticeable with the opposite foot kicking in sync with hand entry. It's mechanically clean and rhythmically balanced. However, you generate more propulsion than average from your kick, which suggests a 4-beat kick might be worth trialling in training sets or race simulations.

Effectiveness: Very strong in terms of propulsion, balance, and body positioning. Your kick contributes to overall speed and stability and is a clear technical strength.

Arm Mechanics
Entry: Your left arm enters at full stretch and continues to extend properly under the water, technically solid. Your right hand, however, tends to enter slightly short. To compensate, you lift your fingers upward to initiate the catch, which reduces power and disrupts flow.

Catch: You catch the water high in the stroke, within the top 5–10cm, an excellent start to the early vertical forearm(EVF). The lead hand holds the water well. The right-hand catch is impacted by the short entry, with the fingers lifting to correct position. This generates drag and a braking motion.

Pull: Textbook EVF. You maintain an effective pull path with approximately a 40-degree elbow bend, hand tracking beneath the shoulder line. This is a technically efficient pull phase.

Push/Exit: You occasionally shorten your push phase, especially on the right side. When tired, the elbow exits earlier, reducing propulsion by about 10–20cm. The left push phase lacks visible force, the hand follows the correct path but appears to "slip" through the water rather than drive against it. Improving water connection and applying more backward pressure will help here.

Recovery: Excellent recovery mechanics. Your high elbow and relaxed hand during recovery reduce shoulder stress and maintain rhythm.

Breathing Technique
Timing: You breathe every three strokes. Breathing is generally low and controlled, but you're slightly turning your head past the optimal angle, occasionally looking slightly behind rather than directly to the side. While it doesn't disrupt balance, it could create drag and minor neck strain. It's a minor issue but worth refining.

Position: Clean and stable, no over-rotation or major drag issues. Continue focusing on timing your breath with body roll.

OBSERVATIONS

Strengths

- Strong and efficient kick mechanics
- Effective body rotation and alignment
- Excellent EVF and pull pathway

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- Controlled, rhythmic breathing pattern
- Efficient recovery mechanics

Areas for Improvement

- Right-hand entry is slightly short; impacts catch quality
- Left-hand push lacks drive and connection with water
- Right-hand push shortens under fatigue
- Head position varies work on consistency
- Breathing angle could be marginally corrected

Points of Interest

- Your tactile feedback might be compromised due to finger numbness, this likely affects feel for the water, especially in the push phase. Consider using tools that provide exaggerated feedback (e.g., finger paddles without straps) to help reinforce connection and pressure sensing.
- Despite being post-injury, your technique at its core is very effective.
- The potential for a more powerful kick is notable; exploring a 4-beat option.

SUMMARY / RECOMMENDATIONS

Focus Points:

- Improve right-hand entry by extending further before catch
- Strengthen left-hand push to apply more backward force, not just movement
- Maintain consistent head position at 30 degrees to reduce drag and stabilise posture
- Extend right-hand push phase, especially under fatigue
- Slightly adjust breathing angle to keep your gaze more lateral

Drills to Implement:

- Single Arm Extensions – to work on hand entry distance
- Finger Paddles (no wrist strap) – to reinforce pressure on the water during the push phase
- Plates – for enhancing push force and water connection
- Flick Drill – to work on finishing the stroke with a strong push phase
- Catch-Up 2.0 Drill – full extension on both arms