



Floating fit

Thomas Wild shares an update from the World Conference on Drowning Prevention and the work that's being done to improve water safety

Imagine unexpectedly falling into cold water. Your breathing becomes rapid and uncontrolled, you may even start to panic. In these moments, even strong swimmers can find themselves in difficulty.

Unintentional drowning is the third leading cause of injury-related mortality worldwide and accounts for more than 300,000 premature deaths each year.

Engineered safety messaging

So how do we reduce the risk of drowning? One strongly recommended approach is to equip individuals with a repertoire of practical water safety skills that can be deployed if they encounter difficulty. These skills have been operationalised through safety campaigns that use clear, memorable messages to convey lifesaving principles, drawing on principles of usability.

A prominent example is the Float to Live campaign developed by the Royal National Lifeboat Institution (RNLI) and promoted across the UK and Ireland. This guidance leverages floating as a fundamental survival skill and is credited with saving more than 50 lives. Similar messaging is used in Australia as Float to Survive and New Zealand as Float First.

The Float to Live safety message is grounded in decades of research led by

Professor Mike Tipton and colleagues, providing a powerful example of how scientific evidence can be translated from the laboratory into real-world lifesaving advice. At its core, the campaign delivers simple, practical instructions designed to improve the chances of survival in high-risk situations, helping users remain calm while prioritising keeping their airway above water.

These dangerous situations include suddenly falling into cold water, which can trigger an intense cold shock that makes it hard to control breathing, and being pulled out to sea by a rip current, which dramatically increases the effort needed to swim. Trying to fight these conditions straight away can quickly lead to fatigue and panic and may increase the risk of drowning. In contrast, staying afloat either passively or using the minimal activity necessary until breathing settles or until the pull of the current weakens, reduces physical strain and helps lower overall risk.

From an ergonomics and human factors perspective, Float to Live applies a set of well-designed instructions to support safe task performance in environmentally challenging situations. Because the risk of drowning is universal and can affect anyone, anywhere, at any

time, it's essential that the guidance is robust to inter-individual variability and effective across all populations and scenarios.

Float to Live can be considered a human–system intervention: simple instructions designed for use in high-risk aquatic scenarios.

What the evidence shows

At the 2025 World Conference on Drowning Prevention, held in Sharm el Sheikh in Egypt, our collaborative research network presented new complementary findings strengthening the evidence base underpinning this vital safety message.

Two related studies conducted at Leeds Trinity University examined how body composition, specifically the proportion of fat-free mass to fat mass, and movement strategy influence the effort required to keep the airway above water. Together, these studies showed that while everyone was able to follow the practical advice, the physical effort required varied substantially between individuals, largely as a function of body composition. People with denser bodies typically had greater task demands and as a result needed to use more movement to remain afloat, resulting in higher workload.

5 steps to know how to float

However you end up in the water, if you end up in difficulty, Float to Live.



Importantly, the way individuals positioned themselves also mattered. Floating on the back was optimal and using both arms and legs appeared to be the most effective and efficient strategy for those who required greater movement. This approach was perceived as easier, more comfortable and more relaxing; it elicited the lowest physical and cognitive workload and was the only universally viable strategy. In contrast, the upright, arm-only strategy markedly increased the risk of submersion.

This work closely aligns with research from the University of Otago, which demonstrated that only 14% of individuals were able to float completely motionless, the majority of whom were female; consequently, most people required some degree of movement to maintain airway clearance. Importantly, across a large and diverse sample, body composition consistently explained much of this variability, reinforcing that water safety guidance is not a one-size-fits-all solution and must accommodate differences in human capability while remaining simple and actionable.

The same principles were evident in socially groundbreaking research led by the University of Portsmouth in collaboration with the Black Swimming Association and the RNLI. The inter-individual variability in task demands was similarly found to be mostly determined by body composition.

This work demonstrated that people of African, Caribbean and Asian heritage

can float effectively, challenging long-held myths and removing a major psychological barrier to participation, ultimately supporting more inclusive water safety messaging.

Together, our findings confirm the Float to Live message remains effective but the demands to achieve it vary as a function of body composition, and can require active, adaptive strategies.

Designing for inclusivity is essential: guidance must continue to remain effective across diverse body compositions, abilities and populations.

From evidence to practice

Float to Live provides a powerful example of how well-designed systems can be put in place to increase safety, reduce risk and ultimately save lives.

Together with previous work by Dr Claire Eglin and colleagues, these studies address some of the most pertinent nuances underpinning the Float to Live advice and directly support the UK’s Find Your Float campaign, launched in 2025 as part of the

#RespectTheWater World Drowning Prevention Day initiative. By encouraging people to practise floating in supervised settings, the campaign enables individuals to attune to their own capabilities, understand their personal performance envelope and identify the strategies they need to apply in real-world scenarios.

So the next time you’re in supervised water, take just a few minutes to practise. It’s a small investment that can help ensure you’re ‘floating fit’ if you ever need it.

Building on this applied focus, these findings provide a platform for future research to continue understanding how different users interact with the guidance under realistic constraints in open water, where most drownings occur.

Greater integration of ergonomic and human factors approaches will be central to optimising safety messaging by evaluating usability, decision-making under stress, workload and tolerance, ensuring guidance remains simple, inclusive and actionable.

This evidence-led approach reflects the broader spirit of collaboration and innovation that characterised the conference, held under the apt theme Waves of Change: Charting a Course to Safer Waters. The event brought together a global community of researchers, policymakers and practitioners committed to reducing the burden of drowning. With over 500 participants from more than 50 countries, the event highlighted the growing international momentum for change. ■

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