PREMIER MINDSET INSTITUTE



WHITE PAPER

METACOGNITION

The Window of Awareness

Within elite sport, the concept of being "present" is often discussed as though it were a personality trait, or a fleeting mental state that appears and disappears without warning. A more precise and scientifically grounded understanding is that present-moment performance depends on two interrelated abilities. The first is the ability to sustain attention on immediate sensory, perceptual, and task-relevant information. The second is the ability to detect attentional drift when it occurs and to reorient attention efficiently. This second ability is metacognitive awareness, and it plays a central role in performance consistency.

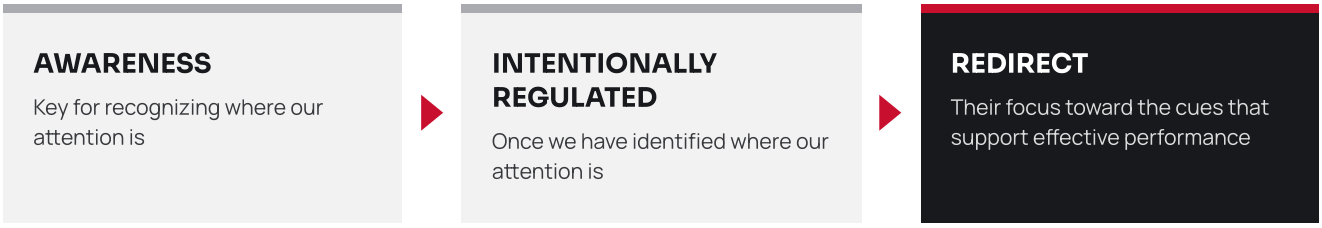
Metacognitive awareness, or metacognition, is commonly defined as the ability to monitor and regulate one's own cognitive processes. Early work described it as knowledge about cognition and the capacity to observe mental activity as it unfolds (Flavell, 1979). More recent theoretical models emphasize the functional relationship between monitoring and control, in which individuals continuously track where their attention is directed and use that information to guide behavioral regulation (Nelson & Narens, 1990). In applied performance settings, this monitoring and control process determines whether an athlete remains engaged with task-relevant cues or drifts into distraction, excessive analysis, or automatic responding that is misaligned with the demands of the situation.

METACOGNITIONS DAILY IMPACT

Elite performance is not limited by effort alone. It is constrained by attention. Even the most physically prepared athlete cannot execute consistently if attention repeatedly disengages from the cues that guide timing, coordination, and decision-making. Attention determines what information is available to the performer at any given moment, which means it shapes perception, action selection, and execution.

> **ELITE PERFORMANCE IS NOT LIMITED BY EFFORT ALONE. IT IS CONSTRAINED BY ATTENTION.**

We can look to the Intentional Attention (IA) framework to understand how metacognition is a key component to our attention. The foundation of the IA framework is awareness, which is key for recognizing where our attention is. Once we have identified where our attention is, it can be intentionally regulated. Critically, by noticing when attention has shifted away from task-relevant information, athletes can more deliberately redirect their focus toward the cues that support effective performance.

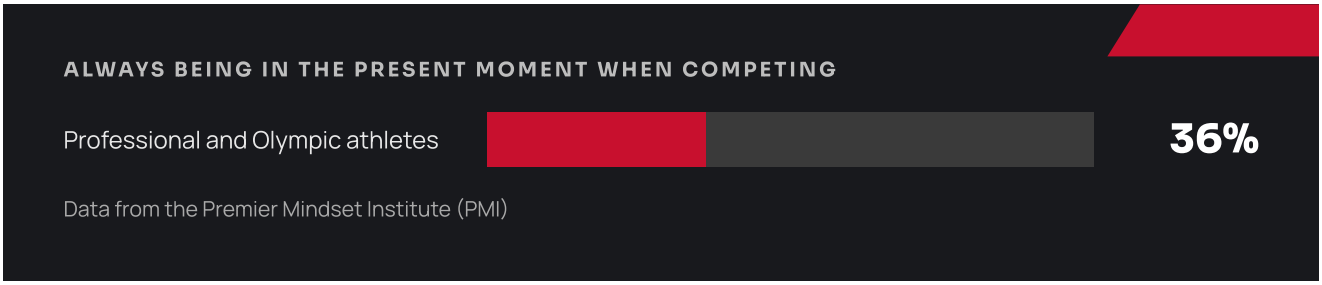


The Intentional Attention (IA) framework

Research on mind wandering illustrates how fragile sustained attention can be. Large-scale experience sampling studies demonstrate that people frequently think about something other than what they are currently doing, often without immediate awareness of that shift. Killingsworth and Gilbert (2010) found that individuals spend a substantial portion of their waking lives engaged in mind wandering and that this tendency is associated with changes in subjective experience. Cognitive research further indicates that mind wandering involves a decoupling of attention from the external environment and a shift toward internally generated thought (Schooler et al., 2011).

IMPLICATIONS OF METACOGNITION ON PERFORMANCE

Crucially, mind wandering does not always register consciously. Schooler and colleagues (2011) emphasize that meta-awareness is intermittent, meaning that individuals may be distracted without realizing it. Data from the Premier Mindset Institute (PMI) has found that only 36% of professional and Olympic athletes report always being in the present moment when competing. This finding suggests that consistent present-moment awareness is not the norm, even among highly skilled performers operating at the highest levels. Rather than indicating a lack of commitment or mental toughness, this finding is consistent with what cognitive science would predict about attention under demanding conditions. Attention is inherently unstable, and without training in monitoring and regulation, lapses are expected.



This has direct implications for elite sport. An athlete may believe they are training or competing with full engagement while attention has quietly drifted away from task-relevant cues. Performance may appear stable until a moment of breakdown reveals that attentional control had been compromised for some time.

This issue is particularly relevant in high performance environments because the cost of attentional lapses is magnified. Small errors in timing, positioning, or decision-making can have outsized consequences. Being present is not a static state to be achieved and maintained indefinitely. It is a repeated behavior that involves noticing when attention leaves the present moment and actively returning it. The effectiveness of this process depends on metacognitive (i.e. present-moment) awareness.

DEVELOPING METACOGNITIVE AWARENESS

Mindfulness research offers an operational framework for understanding present-moment awareness. Bishop and colleagues (2004) defined mindfulness as the self-regulation of attention maintained on immediate experience, combined with an attitude of openness and acceptance. This definition highlights

two components that are directly relevant to metacognition. First, attention must be regulated rather than left to default tendencies. Second, awareness of internal experiences must be cultivated without excessive judgment or reactivity.

Experimental research supports the trainability of these capacities. Mrazek et al. (2013) conducted a randomized study demonstrating that mindfulness training improved working memory capacity and performance on demanding cognitive tasks. These improvements were statistically mediated by reductions in mind wandering, particularly among individuals prone to distraction. This finding is especially relevant to elite sport because working memory and attentional control are critical under pressure, when multiple streams of information must be integrated rapidly.

Meta-analytic evidence further strengthens this conclusion. Verhaeghen (2021) reviewed multiple studies examining the relationship between mindfulness interventions, long-term meditation practice, trait mindfulness, and attention performance. Across analyses, focused-attention practices were reliably associated with improvements in objective measures of attention. This suggests that the ability to sustain and regulate attention is not only theoretically malleable, but empirically responsive to training.

Sport-specific research provides additional context. Bühlmayer et al. (2017) conducted a meta-analytical review examining mindfulness practice and mindfulness-based interventions in athletes. Their findings indicate that such practices have been associated with changes in performance-relevant psychological parameters and performance outcomes. While the sport psychology literature continues to evolve, the existing evidence supports the inclusion of attention and awareness training as legitimate components of high performance preparation.

Taken together, these research streams converge on a consistent conclusion. Attention naturally drifts, awareness of that drift is intermittent, and the capacity to detect attentional lapses and restore present-moment focus is modifiable. Training approaches that target metacognitive awareness and attentional regulation have been found to produce measurable benefits.

For elite athletes, this has practical implications. If only 36 percent of professional and Olympic athletes consistently report present-moment awareness, then most athletes are likely experiencing frequent attentional lapses that are either not detected quickly or not corrected efficiently. Training should therefore target three measurable variables: how often attention drifts, how quickly the drift is noticed, and how effectively attention is redirected. Each variable can be trained through deliberate practice that incorporates realistic demands and feedback.

01

HOW OFTEN ATTENTION DRIFTS

02

HOW QUICKLY THE DRIFT IS NOTICED

03

HOW EFFECTIVELY ATTENTION IS REDIRECTED

CLOSING SUMMARY

The Premier Mindset Institute finding that only 36 percent of professional and Olympic athletes report always being in the present moment during training and competition highlights a core attentional challenge in elite sport. This pattern aligns with cognitive science research showing that mind wandering is common and that awareness of attentional drift is intermittent (Schooler et al., 2011; Killingsworth & Gilbert, 2010); reinforcing the conclusion that present-moment awareness is not a fixed trait but a trainable skill grounded in metacognitive monitoring and attentional control (Flavell, 1979; Nelson & Narens, 1990). Mindfulness research provides a practical framework for developing these capacities through self-regulation of attention on immediate experience (Bishop et al., 2004), and experimental, meta-analytic, and sport-specific evidence indicates that attention and mind wandering can be modified through training with measurable effects on performance-relevant outcomes (Mrazek et al., 2013; Verhaeghen, 2021; Bühlmayer et al., 2017). Within this framework, metacognition functions as the window of awareness that allows athletes to detect where attention is directed and intentionally return it to task-relevant cues; making present-moment performance less dependent on fluctuating internal states and more dependent on a trained capacity to notice and reorient.

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