Initial sleep onset latency (ISOL)

Researchers

Clinicians

Patients

What is ISOL? Why is it a core measure?

Initial sleep onset latency is the duration of time an individual takes to first achieve sleep after intending to sleep. Prolonged ISOL disrupts the continuity of sleep and contributes to daytime sleepiness, impaired cognitive function, mood disturbances, and decreased quality of life. Measuring ISOL provides valuable insights into diagnosing and monitoring sleep disorders, assessing treatment efficacy, and predicting health outcomes.

Initial Sleep onset latency is considered a **core measure** due to its fundamental role in characterizing sleep initiation and quality. ISOL provides a quantifiable indicator of sleep initiation, offering researchers and clinicians precise insights into sleep health and quality and enhancing the reliability and validity of sleep assessments.

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Why does ISOL **matter to researchers?**

SOL serves as a crucial metric for **studying various sleep disorders, evaluating treatment efficacy, and identifying potential risk factors** for adverse health outcomes. For example, SOL is a criterion for diagnosis of narcolepsy and an endpoint for narcolepsy type 1 (NT1) trials, as incorporated in the Multiple Sleep Latency Test (MSLT) and the Maintenance of Wakefulness Test (MWT).

- **Evaluating treatment efficacy:** By measuring ISOL, researchers can assess the effectiveness of interventions such as cognitive-behavioral therapy for insomnia (CBT-I) or pharmacological treatments in improving sleep initiation and overall sleep architecture.

- **Contribute to body of knowledge on sleep disorders and other conditions:** ISOL data contribute to our understanding of the underlying mechanisms of sleep disorders and inform the development of novel therapeutic approaches for a variety of conditions with sleep impacts.

Why does ISOL **matter to clinicians**?

Clinicians rely on ISOL measurements to **diagnose sleep disorders, monitor treatment progress, and tailor interventions to meet individual patient needs.**

Diagnosis: Elevated ISOL is a common feature across different sleep disorders, including insomnia, sleep apnea, and circadian rhythm disorders. Prolonged ISOL is a common complaint among patients seeking help for sleep-related problems, and its assessment is integral to the diagnostic criteria for insomnia

Clinical management: By leveraging digital modalities to capture ISOL, clinicians can gather longitudinal data, track treatment responses, and personalize interventions that address the specific sleep difficulties and underlying factors contributing to sleep onset difficulties. Timely identification and management of ISOL abnormalities are essential for improving patient outcomes and promoting better sleep health. Some health conditions, such as sleep disorders, neurological disorders, or chronic pain conditions, can prolong sleep onset latency. Identifying prolonged sleep onset latency may prompt further investigation into underlying health issues that require management to prevent adverse health outcomes associated with these conditions. Some medications, particularly those affecting the central nervous system, may interfere with sleep onset latency. Monitoring changes in sleep onset latency can help identify potential side effects of medications that may impact sleep quality and overall health.