WHOOP UNITE™

3rd-Party Tested and Validated

All Wearable Technology is Not Equal

To support key health decisions for individuals and organizations, any wearable technology needs to be able to demonstrate that it is accurate. But internal validation isn't enough. Validation by qualified 3rd parties should be table stakes for any wearables technology. WHOOP Unite has 3rd party validation to back up our biometric data and user engagement.

WHOOP Accuracy is Verified

Sleep Tracking

Researchers at the University of Arizona determined that WHOOP technology is accurate compared to the gold standard in sleep tracking, polysomnography (PSG).

- The WHOOP sleeping respiratory rate algorithm was shown to be within 1 breath per minute of gold standard truth.

- The WHOOP sleeping heart rate was shown to be within 1 beat per minute of EKG.

- Using WHOOP was shown to be associated with improvements to sleep quality.

- WHOOP sleep staging had high levels of agreement with polysomnography testing.

Read the study here.

"The accuracy of WHOOP as a wearable and its availability compared to the limited accessibility of polysomnography may in the future facilitate better population-health management."

Dr. Sairam Parthasarathy
Professor of Medicine and Director of the Center for Sleep and Circadian Sciences, University of Arizona

Disease Detection

WHOOP examined the potential for continuously monitoring respiratory rate to identify early stages of COVID-19 infections.

• 80% of COVID-19 positive individuals were correctly identified by the third day of symptoms.

• 20% of COVID-19 positive individuals were identified prior to the onset of symptoms.

Read the study here.

When pro golfer Nick Watney noticed a sudden rise in his respiratory rate from his WHOOP data, but no other virus symptoms, he decided to get tested for COVID-19 anyway. He tested positive.
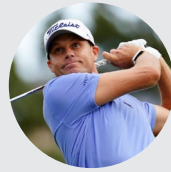
WHOOP Methodology is Validated

Strain

WHOOP strain is a measure of cardiovascular exertion that quantifies the amount of physical and mental stress an individual puts on their body.

Inspired by Borg's Rating of Perceived Exertion (RPE), we track strain on a 0-21 scale, both for the day and for specific workouts and activities.

The RPE scale has proven, in countless scientific publications, to be a valid method of predicting physiologic effort during exercise.

WHOOP strain is an improvement over RPE because the RPE scale is subjective, while WHOOP strain is computed from an individual's heart rate data and other personalized biometrics.

Read the white paper here.

Recovery

WHOOP recovery is a daily measure of how prepared your body is to take on the strain.

While heart rate variability has long been known to be an important measure of fitness and physiological adaptation, it cannot explain everything. WHOOP incorporates several key physiological metrics into daily recovery, including heart rate variability, resting heart rate, sleep performance, and respiratory rate.

Read the white paper here.

WHOOP Unite Enables Behavior Change and Organizational Improvement

McKinsey Study

In partnership with the University of Queensland, WHOOP studied how leaders in McKinsey's Executive Leadership Program in Australia make decisions in the presence of high levels of stress, and then how that stress manifests in WHOOP data and in their own teams' psychological safety.

Key Findings
- For every 45 minutes of sleep debt accrued, leaders experienced a 5-10% decrease in mental control the following day.

- When leaders accrued more sleep debt, their teams reported lower levels of psychological safety, meaning employees didn't feel safe expressing work-related ideas and opinions.

- For every 30 minutes of slow-wave sleep gained, that leader saw a 5-10% increase in mental control the next day.

- Employees reported higher levels of psychological safety when their leaders reported increased sleep.

Learn more here.

NCAA Study

A study on eight NCAA Division 1 athletic teams representing different sports conclusively showed that when given the tools to monitor their behaviors and patterns with WHOOP, the athletes were able to make immediate changes that, in as little as one month, had tangible benefits including:

Better Sleep
- 41 minutes more sleep per night
- 10% increase in high-quality sleep

Improved Performance
- Reduced rate of injury by 60%
- Reduced rate of self-reported illness by 53%

Healthier Habits
- 10% reduction in alcohol consumption before bed
- 3 more workouts completed every month
- 50% reduction in late-night caffeine consumption

Read the study here.

RECOVERY

82%

Orthopedic Surgeon Burnout Study

Beyond individual behavior change, WHOOP technology can be used to measure and improve important organizational metrics.

One study used WHOOP to investigate burnout in orthopedic surgeons.

Key Findings:
- Overnight calls were significantly correlated with increased risk of burnout

- Women were more at risk for burnout than men

Read the study here.

Designed and Tested for the Real World

Located in Boston, Massachusetts and Austin, Texas, WHOOP Labs is the research and product validation branch of the company. WHOOP Labs executes studies on participants of varying ages, fitness levels, skin tones, genders, and handedness. Testing our straps on a wide range of participants to constantly improve our product is critical to our work here at WHOOP.

As an example of the rigorous real-world testing conditions employed by WHOOP Labs, the WHOOP 4.0 development campaign included over 4,000 participants and 20,000 data sets. This enabled our signal processing team to refine and train our algorithms for our members by analyzing thousands of data sets from a range of participants engaging in various real-world activities.

WHOOP Unite is relentlessly tested in real-world conditions and is 3rd party validated for accuracy, behavior change, and organizational improvement.

WHOOP Labs Validation of WHOOP 4.0

4,000 real-world testers

20,000 datasets

Various activites and environments

Partner with us to unlock health and performance at whoopunite.com