PULSAR INFORMATICS

FREQUENTLY ASKED QUESTIONS

As a prospective user of Fatigue Meter™, you probably want to know how it works. Here are answers to some of the most common questions we hear.

TRUCKING fatigue meter™

1. What information is needed to predict fatigue?

Fatigue Meter™ uses proprietary analytics to predict driver sleep patterns using only HOS logs. Effective for all workers, the system estimates fatigue using a state-of-the-art biomathematical model. Note: wearables and inward facing cameras are not necessary.

2. Who are the main users of the system?

Safety managers, fleet managers and dispatchers are the main users. They keep an eye out for high risk situations that sometimes may arise and proactively engage with the drivers when they do. However, the information visible to the fleet managers and dispatchers can and should be shared with drivers to learn about the fatigue risk trends that results from their driving and sleep/rest patterns. The more everyone is conscious about protecting sleep and rest opportunities, the better drivers can stay healthy and safe while still meeting productivity goals.

3. How does it work?

Every 15-20 minutes Fatigue Meter takes in driver log data through the ELD system and recalculates the fatigue scores. The proprietary technology is a two step mathematical process whereby the system first estimates each driver's sleep pattern from the HOS logs and then uses the sleep estimate to predict fatigue using a state-of-the-art biomathematical model.

4. How accurate is the prediction?

Pulsar has been involved with actual field studies of mission-critical workforces including drivers since 2003. Our models are now over 90% accurate at predicting sleep patterns, including when the driver went to sleep and how long he or she slept.

5. Is the accuracy good enough?

The goal is not to pinpoint the exact fatigue score to the highest possible accuracy. Fatigue Meter is intended to identify drivers with high fatigue risk so that safety procedures can be initiated. The first step is always to talk with the drivers about how they are feeling, how much they've been sleeping, and what other factors could be contributing to their fatigue risk. By having a good understanding of the likely causes of fatigue, each risk assessment can be made with sound judgment.

6. How big of an impact is fatigue on Safety Critical Events?

We have found that fatigued drivers are at least 60% more likely to experience a safety critical event vs. rested drivers. In fact, impairment due to fatigue can be equivalent to an impairment from alcohol intoxication.

7. Do I need to use Fatigue Meter for my day-drivers?

Yes. There are 3 reasons why it is important to monitor day-drivers using Fatigue Meter:

- There is a strong combined effect from sleep drive and circadian rhythm resulting in elevated fatigue early in the morning. If a driver shows up for work in the morning carrying a sleep debt, the effect is magnified. Early morning fatigue is also risky because traffic is usually heavier at this time of the day (Heavy Traffic + Fatigue = High Risk).

- Drivers who are used to driving only during the day are at elevated risk on days when they:
  (a) need to start earlier than usual (e.g., before 5:00am);
  (b) have an unexpected long day (>12-16 hours); or
  (c) drive during the night.

- Data shows that drivers who receive routine feedback about their fatigue from tools like Fatigue Meter tend to get more sleep and are more alert when on duty.

8. Do I need to use Fatigue Meter if we use a set schedule?

Yes. Fatigue risk happens even in regular operations. You don't want to be caught off-guard.

- Drivers who are used to the same schedule every day are at elevated risk on days when they:
  (a) need to start earlier than usual (e.g., before 5:00am);
  (b) have an unexpected long day (>12-16 hours); or
  (c) drive during the night.

- Data shows that drivers who receive routine feedback about their fatigue from tools like Fatigue Meter tend to get more sleep and are more alert when on duty.

9. Do I need to use Fatigue Meter with drivers who have a track record of safety?

Yes. Fatigue risk management programs work best when adopted in the context of a company-wide safety culture. The objective is to work together to establish common beliefs, policies, and tools to stay safe. This applies to all drivers regardless of safety record – even Million Milers. It is particularly important for drivers who are leaders in your organization to participate as they mentor and influence less experienced drivers.