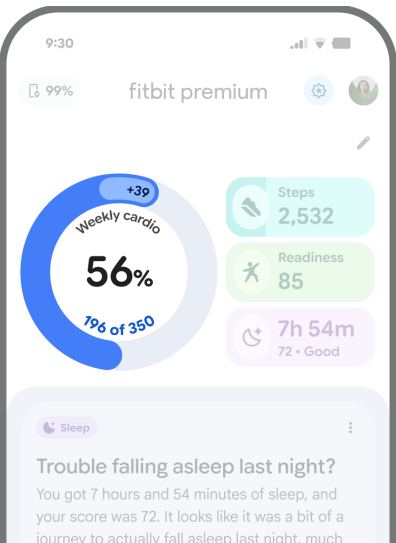




Evolving Cardio Load: Introducing Personalized Weekly Targets

Cardio Load is a personalized metric we introduced last year to measure cardiovascular exertion, ensuring you get rewarded for every little extra step, jump or repetition. With the personal health coach launching in Public Preview we are upgrading the Cardio Load experience with a new visualisation and a new **weekly Cardio Load target** to help you navigate the unpredictability and complexity of daily life.

Introducing a new way to track your Cardio Load



Our new Cardio Load visualisation in the Fitbit app helps you to see at a glance how you’re doing toward your personalized weekly target and how much your activity throughout the day has contributed so far. It’s sensitive enough to track everything from a walk up the stairs to a high-intensity workout (resistance or cardiovascular training). To ensure accuracy, we use movement sensors and a minimum heart rate threshold to confirm your elevated heart rate comes from physical exertion rather than stress.

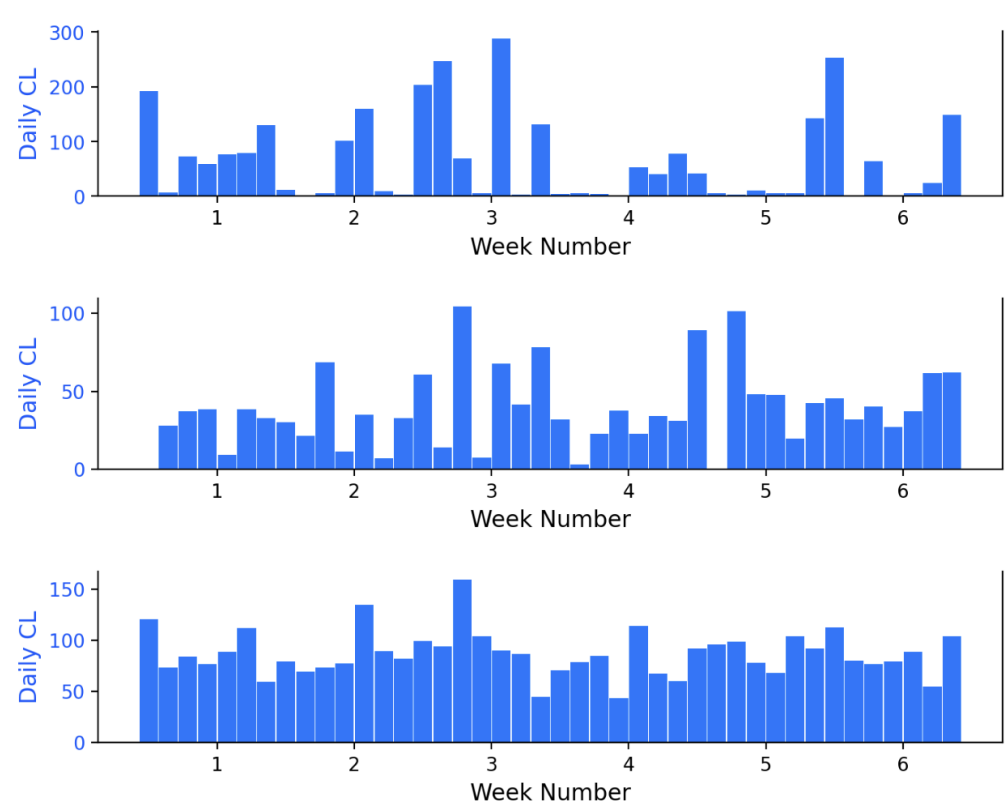
Completing your weekly ring helps to maintain your aerobic fitness, while pushing over it can put you on a path to improved fitness. We believe it’s better to focus on closing your rings over a **weekly basis**—because in real life, not every day goes as planned.

The core Cardio Load metric is [unchanged](#) from when we first introduced it, and remains focused on tracking the load you place on your cardiovascular system (as opposed to other systems such as your muscular system). For each and every minute of the day, we compute your average heart rate and use that to assign an incremental load added to your total. While higher heart rates translate to higher incremental loads, doubling your heart rate doesn’t double your load because we give more credit for higher heart rates, recognizing that pushing your heart rate when it’s already elevated is an extra effort. So going from 170 to 175 bpm might give you an extra 0.3 Cardio Load per minute, while going from 140-145 may earn you closer to 0.1 additional Cardio Load.

The concept of load stems from the world of sports, where athletes will often track how much load they put on their bodies. The broad principle is that the human body will adapt in response to the load it is put under — lift heavier weights and you get stronger, run further and you improve fitness. But there are limits — increase the weights too fast and you get injured, run too far too soon and you start to overtrain and experience fatigue. Cardio Load is based on a well established TRaining IMPulse (TRIMP) approach to load estimation. By tracking Cardio Load, you can stay in the sweet spot that means you don’t inadvertently do too little (losing fitness) or too much (leading to overtraining). Our weekly target helps you find that sweet spot of positive gains while minimizing risks.

The Journey to a Weekly Target

Up until now we have offered a daily Cardio Load target. When we looked at the Cardio Load our users were earning each day, we saw that even the most regimented of exercisers see significant variation in their Cardio Load at the day level. For example, here are three users over six weeks:

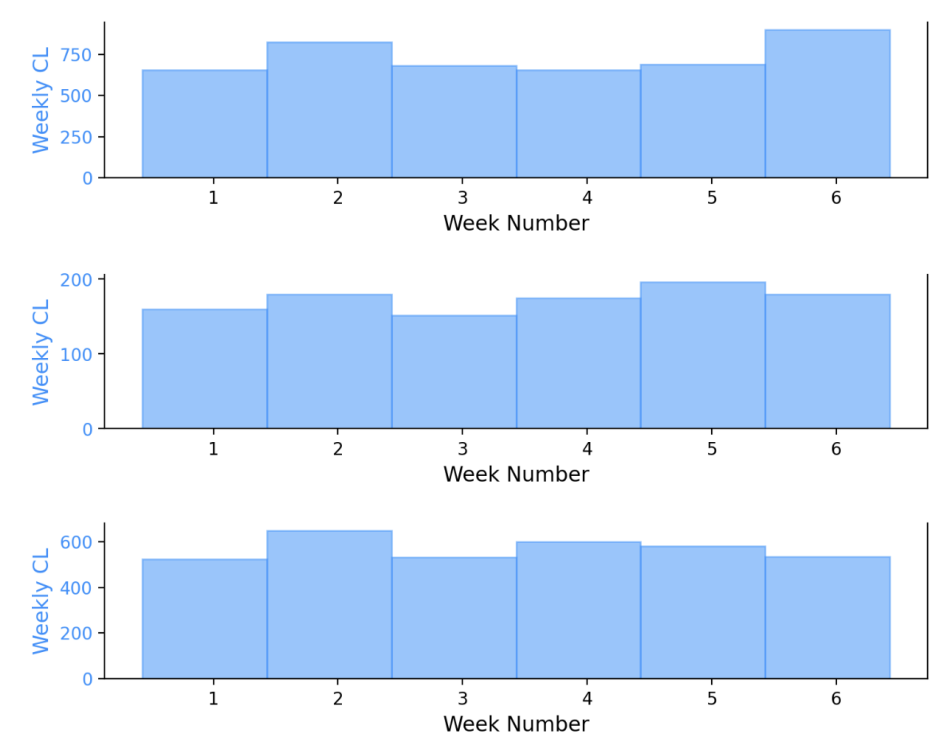


Why is there such inconsistency day-to-day? There are many factors, but two stand out. The first is that our lives are busy and factors outside of our control dictate what we can actually do. Maybe you can’t squeeze that trip to the gym in because you overslept, or your run has to be cut short due to an unexpected meeting. As much as we might plan to exercise consistently, life can get in the way.

The second factor is the unpredictability of your *background* load, which is the load you get from the activities that you do throughout your day (as opposed to those planned workouts), from using the stairs to walking around the grocery store. Our watches and trackers are able to measure these efforts and they often add up to a significant load across the day. However, background load is inherently unpredictable and this contributes to that large variance in daily load.

Both of these factors make defining a daily Cardio Load *target* difficult — when so much changes hour-to-hour it can be frustrating to get to the end of the day and find you have under- or over-shot your target when so much of it was out of your hands.

But when we look more closely, we see something interesting. That day-to-day fluctuation is there, but total *weekly* Cardio Load is much more stable. Here’s the same users we looked at earlier over the same time period but this time with their weekly Cardio Load:



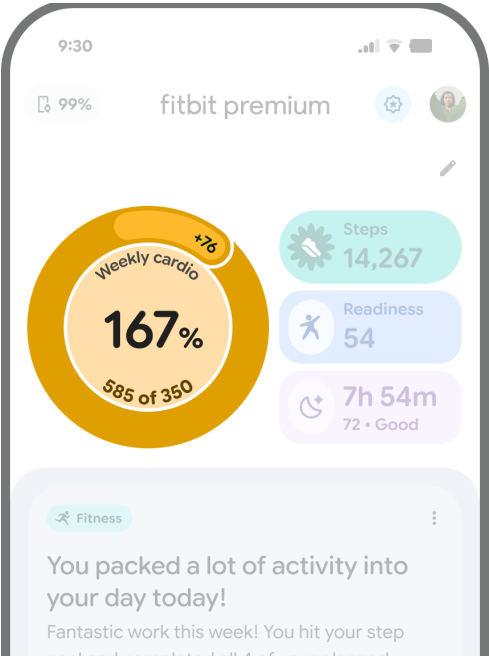
It turns out that across a week most of us have enough time to compensate for those daily twists and turns. Perhaps you can’t make it to the gym today, but there’s a window tomorrow instead; maybe you’re tied to your desk for a day or two but can throw in some additional walks later in the week; or those missing two miles from this week’s Monday run can be made up on Friday.

Our new [weekly Cardio Load](#) target builds on this idea — it’s now **a target for your week, not your day**, allowing you to work your activity around your busy schedule. We set a personalized target at your typical weekly load based on the previous four weeks, guaranteeing the target is both **meaningful and achievable**. If you finish your week close to your target load, you’re consistently challenging your aerobic system at the same level week to week, which has been shown to maintain your aerobic fitness.

Helping you find the sweet spot

Of course, sometimes you might want to challenge yourself and push beyond your target so that you build gains in your aerobic fitness. To do this you can use your target as your minimum goal for the week. Moving beyond the target challenges your cardiovascular system more and consistently doing so causes your body to adapt by getting fitter. But it's a fine balance: push too much too fast and you'll risk undoing your hard work through injury or overtraining. Our new visualisations signal when you're moving from a fitness-boosting regime to one that puts you at risk of overtraining via a color change, helping you stay in your sweet spot.

Using Cardio Load



You can use Cardio Load in conjunction with Daily Readiness to plan and adapt your daily physical activity. If your load is considerably over your weekly target or your readiness is low, consider reducing the intensity or type of your workout. Equally, if it's near the end of the week and you are still some way off your target with a strong Readiness score, it might be a good time to upgrade your workout's intensity. And if you've had to miss some workouts during the week, use your Cardio Load target to guide you back on track.

If you head off on holiday for a week or two and stop exercising, you'll see your target start to come down, but only slowly at first because your fitness isn't lost overnight! And if you're an overachiever, consistently beating your weekly target, you'll see it rise to keep you challenged.

You can start using the new look Cardio Load and target in the new Fitbit personal health coach launching in Public Preview today. Your weekly and daily loads are now at the heart of the app, framed within your weekly target. And start a workout on your Fitbit or Pixel Watch* and you'll see the Cardio Load you've earnt so far in your workout to help guide you. Tracking your physical activity has never been easier!