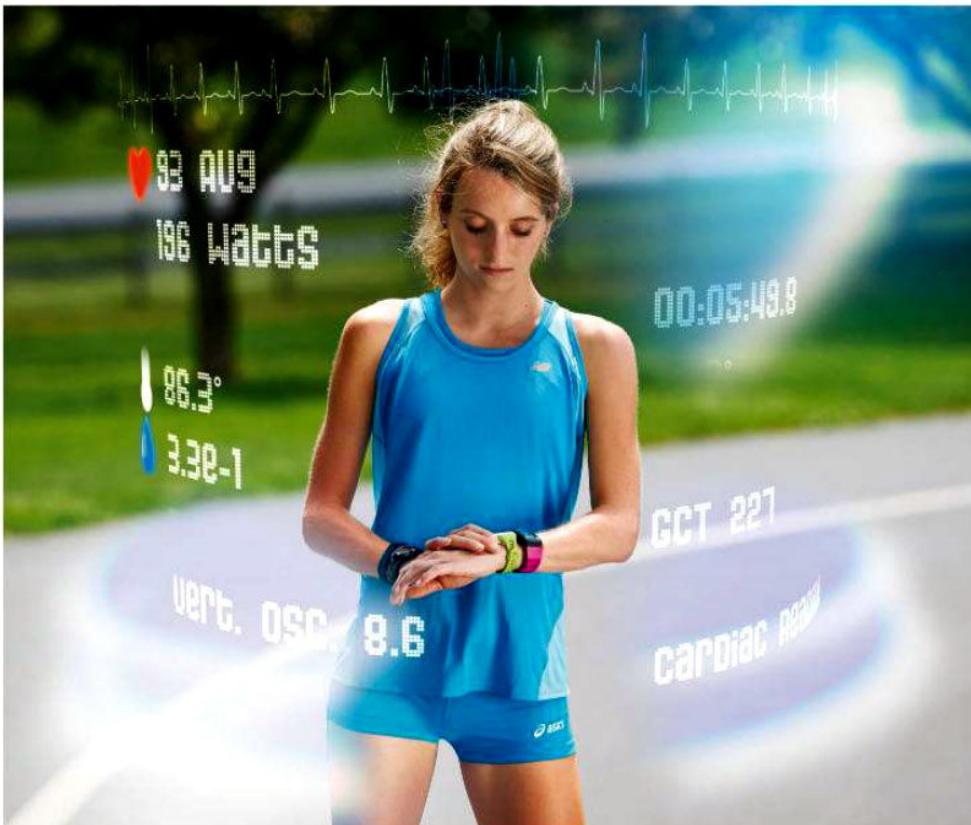


SHORTS



Wrong Numbers

Activity trackers collect arcane data about the body, but competitive runners ask: Will this make me faster? **BY BOB PARKS**

RENEE METIVIER BAILLIE, 33, IS CLOSER THAN EVER TO ADOPTING SOME KIND OF activity tracking “gadget,” but she finds the options bewildering. The marathoner, who ran 2:27 at Chicago in 2012, had a run-in with overtraining a few years back and now thinks a little data on her wrist would be useful.

“I already write down my daily sleep quality and my own sense of how I’m feeling the day after a workout. But I’m starting to think that hard numbers would be better,” says Metivier Baillie, who posted a 2:34 race just before Christmas last year. Her goal for this season is a top finish at the Berlin Marathon. “My dream gadget would track actual sleep, not just how much I’m in bed. It would stack that against my daily resting heart rate so that I could see the trajectory of my rest and recovery time,” she says. “Thinking about all this lately, I’ve been like, ‘Wow, I want one.’”

Is there such a gadget suited to a highly competitive runner? You’d think so, judging by the public hype around activity trackers. More than one in every 10 U.S. adults wears a wrist tracker, according to a January 2015 report by consumer products analyst NPD

Group. Fitbit, the device on the most wrists, just raised \$732 million in its June public offering.

Never has there been so much info about personal health. Apple Watch, which debuted in April, charts all-day heart rate, calories, and motion. Fitbit does all of these plus GPS. Microsoft Band adds UV exposure to the mix. And Intel’s Basis charts continuous skin temperature and sweat response, though the manufacturer offers little explanation as to why these are important.

For competitive runners, though, many available devices come up short, in design as well as accuracy. Most are built to motivate beginners to go harder and longer—chasing the dubious goal of 10,000 steps a day (about a seven-mile run). In contrast, fit runners are often looking for the opposite—accurate cues on when to back off to prevent injury and overtraining.

And when it comes to accuracy, most trackers skip a beat. Athlete reviewers of Apple Watch, Fitbit, and other wrist-based HR devices have found the pulse rate sensors are not reliable during strenuous exercise. (Only Mio, and its partners TomTom and Garmin, have garnered positive reviews for capturing wrist heart rate when worn by athletes who are running.)

Because of this, analysts at NPD see a shift afoot. The category of activity trackers—basically glorified pedometers—will soon morph into more sophisticated products. On one side will be smart watches, those businessy, do-everything wrist-tops like Apple Watch

SHORTS

that work in tandem with a smartphone. On the other will be sports performance wearables. These accurate and expensive sports-specific devices will eventually deliver more useful coaching on speed, calories, heart rate, sleep, stride, and other data points.

For serious runners, the search for current technology tools is, at present, a game of mix and match. Michael Wardian, 41, for instance, can often be seen racing with watches on each arm. “Yes, I look like a dork,” says the 2:17 marathoner and multitime 50K national champion. “I need the Suunto for the altimeter, barometer, and GPS. And I wear the Mio for heart rate.” (Both Suunto and Mio sponsor Wardian with free products.)

Heaping on the technology began several years ago for him. Wardian uses heart rate to pace the early parts of a competition and for recovery afterward. The latter is obviously key for Wardian, a serial marathoner who, for example, on three consecutive weekends this spring ran Boston (2:27), Big Sur (2:34), and the 45-mile Wings for Life World Run in Melbourne, Australia.

For several days, Wardian monitors the little screen for trends in his resting heart rate. That way he knows when he’s ready to charge ahead. “I used to think that I didn’t need heart rate or any of that junk. A Timex was fine,” he says. “But then my race times plateaued, I couldn’t break 2:30, and I felt like I was getting complacent.”

Some athletes begin with great hopes for using techie tools but eventually decide it isn’t for them. Triathlete Jesse Thomas, 35, was an All-American 3,000-meter

steeplechaser at Stanford (with a PR of 8:35). He has tracked sleep, morning heart rate, and detailed pace in the past, but just as quickly stopped paying attention. “Those tools are really useful when you’re starting, but now that I’m familiar with my body and my training methods, they only provide a check-in,” he says. “I don’t need the objective stuff. I can wake up and know when I don’t feel great.”

Alex Willis, 27, disagrees. A 5,000-meter runner in college, he became a pro triathlete a few years ago and sought meaningful data points. “Athletes are sometimes too much in their heads—you can push yourself too hard or not enough,” Willis says. “A coach can help lend that objectivity, but some good tools can provide an additional light bulb to what’s going on.”

So Willis wakes every morning and applies one sticky electrode to his forehead and another to his palm. He sits absolutely still for 10 minutes while the sensor relays the DC-voltage potential (a measure of brain fatigue, according to vendor Omegawave) to his cell phone. This “omega” signal indicates Willis’s readiness for a hard workout that day. The technology is little-known outside of its extensive use among team sports. Though recent independent studies verifying the science are scant, Willis says the feedback has been crucial.

One recent morning Willis felt terrible and called his coach, Trista Francis, to cancel. But the Omegawave put his readiness at 100 percent, so he exercised. Francis says it was one of the most successful training days in recent memory.

Some athletes have gone even



Frequent racer Michael Wardian wears two watches: a Suunto and a Mio.

further afield in the thirst for data. Runners have taken more interest in so-called “heart rate variability,” or HRV, a way of analyzing the spaces between heart beats. According to an April 2014 study in the *Scandinavian Journal of Medicine and Science in Sports*, the amount of variation in heartbeats is key to diagnosing overtraining. Others have donned wearable body sensors that transmit specific biometric data, such as the patch for heart rate (AmpStrip), the shirt for breathing and muscle activity (Athos), and the calf sleeve for lactate threshold (BSXinsight).

Many of these require further research to test their effectiveness. And until their price points become more accessible (a full Omegawave system currently runs \$30,000), runners will likely improvise what they need from products on store shelves. And they will hopefully continue recording their own thoughts. A 2014 study in the *International Journal of Sports Physiology and Performance* found elite cross-country skiers’ self-reported impressions of the intensity of workouts matched heart rate almost perfectly. It’s a reminder that just as we may need better electronic tools to help us track our activity, we can’t forsake the most powerful compass of all—the one inside. **RT**



I USED TO THINK I DIDN'T NEED HEART RATE OR ANY OF THAT JUNK. BUT THEN MY RACE TIMES PLATEAUED, I COULDN'T BREAK 2:30, AND I FELT LIKE I WAS GETTING COMPLACENT.”—MICHAEL WARDIAN