



The Harder Side of Tracking Devices (Harry, The Talking Scale)

Kristin Daley, Ph.D.

A few mornings ago, to my surprise, my 10 year-old stated that he is really hoping for a Fitbit. He stated that he had learned in health class that tracking devices could be good for indicating your number of daily steps, calories, and other health information, which can help you to be healthier. I questioned as to whether he was concerned about his health, and he stated that he wasn't, but thought it would be interesting to see how many steps he took each day. I have a suspicion that the Fitbit is his gateway drug to tech, as it will likely come up that he also needs a phone or tablet to utilize all of the Fitbit applications, and away we go. We also talk a lot about health in my house (shocking, I know) and it is possible that this is rubbing off on him.

Many of my clients have also been very interested in devices and apps that track sleep. In the race to have an accessible sleep tracker, there have been many front-runners. The first sleep tracker that was on the market was the Zio, which was a device that included a band around your forehead to get an estimate of your brain's electrical activity. A point of pride for the manufacturer was that it would give you a "sleep grade" which was intended to be able to give a clear assessment of sleep quality. For many of my over-achiever clients, this was a disastrous paradigm. How do I get an A? Why is my score only a C? Our more current contemporaries can create similar distress- why did I wake up then? Why is my sleep mostly shallow? The Zio is now out of production, having been replaced by the more user-friendly Jawbone Up and Fitbit devices.

The newest player on the field is the Resmed S+. I was actually pretty excited about this one, because I have long been a fan of their respiratory products for sleep apnea, and really like their support program for people adjusting to PAP therapy. Their device sits on a nightstand, and is able to track sleep with relative accuracy. I had a client who bought one, and was excited to see her reports. In addition to sleep, the S+ also tracks light exposure in the bedroom, which is another data point in which I am interested. She was happy to show that the data could be viewed as a longer trend, or on a day-to-day basis. For a second, I started to wonder if we didn't have a great device for my insomnia clients. Then we reviewed the data from each day. My initial concern started when I saw that she was receiving a sleep grade. I really do not want my clients getting graded on their sleep! Then, I saw that it also had suggestions so that she could get a better grade the next night. Some of these suggestions were great- try to add exercise each day to increase your metabolism, and some were ridiculous- eat cherries for their natural melatonin. She questioned what quantity of cherries could be effective, and I could just imagine

some of my more desperate clients wolfing down a gallon of cherries at bedtime in an effort to boost their sleep.

As we discussed the challenge with being graded and receiving suggestions on how to improve the grade, I realized that this device had some similarity to another device with which I regularly argue, my bathroom scale. You see, the overall challenge with the Zio and its newer contemporaries: they use data points to assess something over which we have very little conscious control. They also put a lot of weight (word choice intended) on the daily performance, rather than looking at trends over time. This is the big issue with sleep in general; you cannot force yourself to sleep! You can control time in bed, stimulating devices, caffeine consumption, daytime activities, etc, but you cannot make yourself sleep. Just like with my bathroom scale, let's call him Harry. I step on him with regular frequency, but my weight is not always the number that I want to see. I do a lot of weight training, and have found that my exercise can, at time, make Harry report a scarily higher number than what I desired. There are days when I know my food consumption is down, yet Harry stays stuck on an undesirable number. What do I control about this number? Well, I can control exercise, food consumption, and daily activity. I cannot, however, consciously control the number that appears on Harry. Over time and consistency, the number on Harry will likely match where I want to be, but any number of factors that could affect the number he displays on a day-to-day basis. Some of the newer digital scales actually create algorithms to smooth out the data points that are outliers, much smarter than Harry. Could you imagine if Harry then gave me feedback or a grade? I am sorry, Kristin, today your weight is a C, try to replace Reese's peanut butter cups with cups of strawberries. Did you know that celery burns more calories than the consumption of it requires? Oh, the suggestions and grading could go on forever. It could take me months to pull my weight from C to a B, and all the while my sense of self-efficacy and effort could be whittled down by this lack of performance and Harry's helpful suggestions.

So, when my clients ask if a sleep tracker is helpful, I always state that it can be as helpful as you let it be, and as harmful as you let it be, as with all devices in our personal health arsenal.