

# The \$200 billion question: Can wearable tech help us get fit and lose weight?

 [wareable.com/wearable-tech/scientists-explain-behavior-change-methods-behind-wearables](http://wareable.com/wearable-tech/scientists-explain-behavior-change-methods-behind-wearables)

Thursday September 22, 2016 By Lily Prasuehsut @lilyhulk

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Step goals, calorie counting, logging running routes, they all produce a lot of data in health and fitness apps. But how do you make it useful? It's a question that has been wrestled with this week after a study from the University of Pittsburgh found that out of two Weight Watchers groups trying to lose weight, the group using only healthy eating and exercise plans lost more than the group using a BodyMedia fitness tracking wearable.

The report itself didn't offer any conclusions as to why the tracker hindered the nutrition and fitness plans rather than helped. **Part of the reason is no doubt that a tracker alone can't change your habits.**

The weight loss market is predicted to be worth \$200 billion by 2019 so tech companies have a big incentive to understanding this first, second and possibly third generation wearable tech problem. Finding a solution is the tougher part. As well as software engineers, many wearable companies are turning to behavior and data scientists and even psychologists to find ways to make their devices make a difference.

***Must read:*** [How to set your fitness goals – and actually stick to them](#)

So how are some scientists and doctors advising these companies? By using textbook psychology, and altering previous studies to fit in a digital interface all to subtly change your behavior. Of course, the work is still entirely up to you, but it's their job to make it as easy as

possible for you to hit your health goals.

## Your very own wrist therapist

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We've already discussed the ways you can stick with your fitness tracker to make it work for you. It's still a formula in the works, but according to Dr. Mark Aiola, global lead for behavior change at Philips, tech companies are getting closer to figuring out how to best help you by looking at changing behaviors.

"When we really think about it, there's only one reason to monitor your health behavior and that is to create change," he told us. "Or to understand whether change needs to occur. That's really where behavioral science comes in. I think most companies understand that now."

***Essential read:*** *Philips Health Suite isn't for the fitness fanatics*

Encouraging real change might take the form of in-ear coaching via smart earbuds which is starting to really take off this year, to smaller things like the nudges Apple Watch and Fitbit have already implemented with reminders to stand and move. Over time, you may turn those notifications off, but if used enough, you might start to do it on your own thus effectively changing your behavior.

It's not exactly like having a therapist but how can we come as close as possible?

Aiola says adding another layer in the form of a "digital therapeutic relationship" may be even more direct.

"My approach is to say how can we take an organic relationship with a therapist and create that digitally as best as we can? It's not exactly like having a therapist but how can we come as close as possible?"

Dr. Rebecca Shultz, Lumo product researcher, designer and biomechanist, notes that **through a combination of algorithms, changes to behavior can be made.** "There's behavior change based on biochemical movement patterns that's all weaved into the coaching algorithms," she said.

"So based on how they're moving and if they need to do strength exercises at some point during their week, which for most runners is not something they enjoy or want to be doing, changing that behavior to convince them that these exercises will help them is all part of it."

To do this, Shultz says that after the first run, you get exercises based on your metrics to help push you along. The exercises themselves aren't arduous, but created to be quick 10 minute intervals "geared towards the metrics that you need most help with."

## Small steps today, big results tomorrow

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**Both trainers and now wearable scientists advise you to set reasonable goals.** In the same vein that Lumo isn't trying to push you to do too much, Aiola says Philips is all about taking the small steps.

"I think for many people, understanding that taking small steps today can lead to health benefits down the road is a real eye opener," he said.

"We have this image of what we think should be normal weight, and the whole focus on BMI has thrown us in that direction as well. There's plenty of literature out there now that suggests just losing 5-10% of your weight and keeping it off for nine or so months - even if you gain it



back over the next seven years - has an appreciable 10 year health benefit. That's one of the things we're trying to get at when we say 'taking small steps.'"

From a psychological perspective, you have to be willing and wanting to do it first of all for it to even work. [motivation](#)

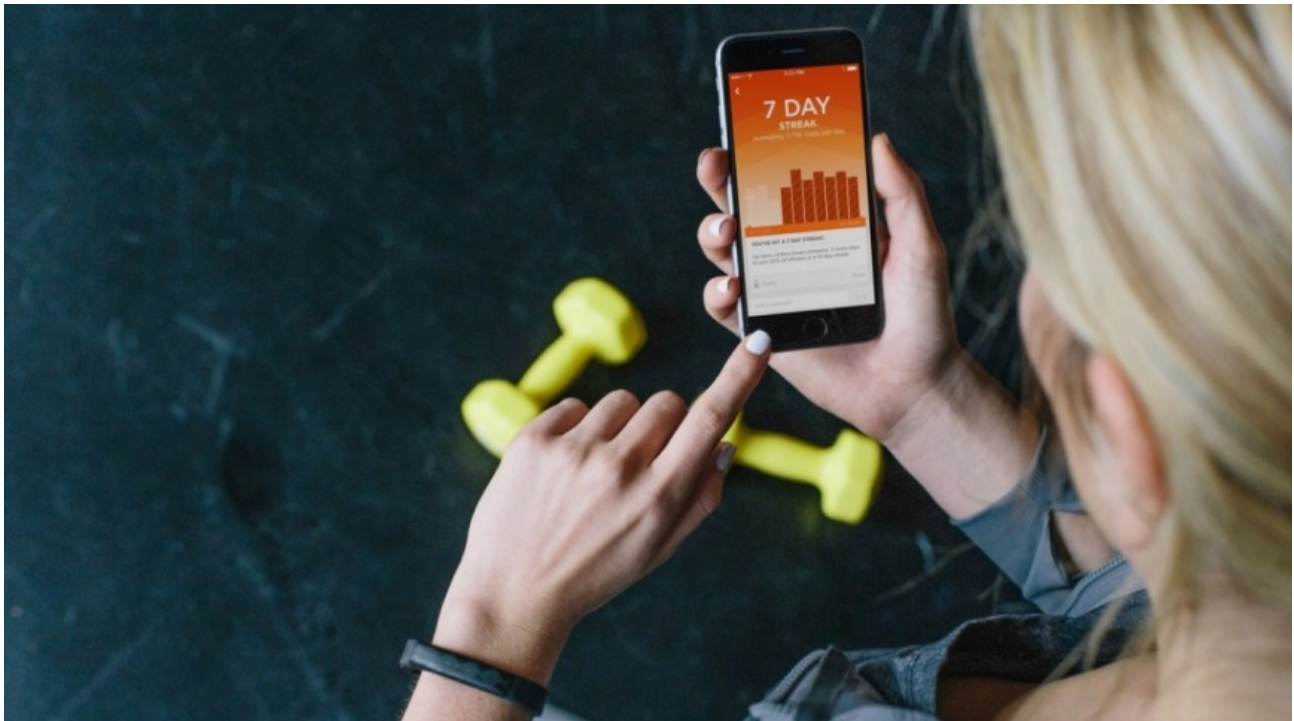
According to Dr. Hanson Lenyoun, head of health at Pryme Vessel smart bottle maker [Mark One](#), it also helps to take those steps if you're in the "right frame of mind." Getting users to engage with devices to change behaviors is tough enough but if someone just doesn't care, it's be even harder.

"Wearables and connected devices really have the ability to impact outcomes, to help people stay healthy, get healthier, manage chronic diseases or prevent them altogether in the first place," he said. "Accountability and engagement can actually make those things happen."

"But people have to actually be in the frame of mind to change their behavior. The wearable is just a tool to help you achieve your goals - and a way to engage you to help make that change possible. From a psychological perspective, you have to be willing and wanting to do it first of all for it to even work." [motivation rules](#)

For many, that's probably the smallest and biggest step at the same time. But people are smarter about their devices now, and hopefully, realize that a wearable isn't going to solve a weight problem on its own.

## Personalization is everything



Lumo's CEO and co-founder Monisha Perakash notes there's a new movement of wearables that's trying to answer the 'so what?' data heavy devices shove at you. Essentially, actionable insights must be clear, concise and not just a bunch of numbers in your face. In-depth personalization in the form of specific plans and tips designed for you as an individual are where this is headed.

[How to interpret data and makes them understandable?](#)

**Relevant read:** [How Lumo Run is a 'wearable 2.0' device](#)

Mark One's Lenyoun says it's a combination of factors that must work together to give you an experience based well, all about you. "It's directing us back to product design. These things aren't divorced from each other, we can't just have a one size fits all connected device experience. It has to be something that's very personalized and tailored to an individual.

"A lot of these use cases are extremely different. We need to be cognizant of these different types of experiences and design for them specifically."

Aiola echoes this sentiment and says that's where other aspects of psychology come into play. "We try to create a personal experience, we try to make it so that people understand they have choices in creating change in their lives," he said.

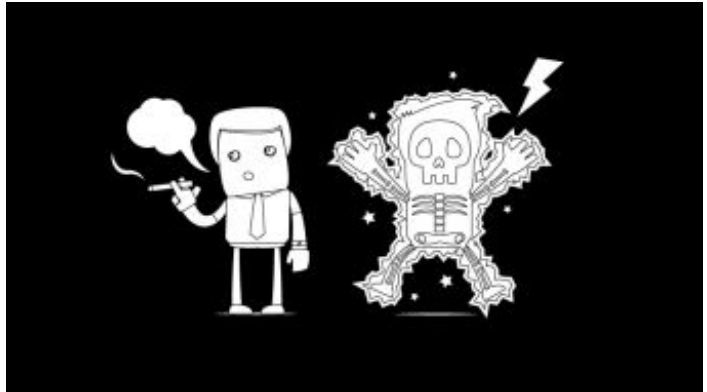
[Self-efficacy](#)

"And it's not just about what we think you should do, it's about what you feel confident doing, and we lead you along that path. Guide you, lead you - those aren't really even the right words - we support you, and walk with you on that path, giving the right information at the right time for the right people."

## Get in the mood for fitness

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## Change takes time

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Aiola feels like the industry is confident it can help people lose weight and meet other health goals. But he's still unsure if it can be done as quickly as people would like to be effective and create the sustainable change they're looking for. Overall, he remains confident and is on track to keep testing the current set of behavior changes to improve on future plans.

"Testing hypotheses about change and acquiring data - if we use the data effectively, we will absolutely hone in what the best approach is. I don't think it's going to be one approach for one person, I think that's the most complicated aspect of this."

"We're going to have to develop almost individual algorithms to guide individual people in the way that they need to be guided. There certainly will be commonalities between people but the individuality portion comes with some sophisticated analytics."

Lenyounn thinks activity trackers now have already done a great job showing people that behaviors can actually change for the better. Like Aiola, he also believes seeing true progress will take time - and that includes finding the best method to help people too.

"I think there are some behavior changes that we're great at doing right now and encouraging right now, but I think there are many, many more that can be worked towards. We can always do things better. We will see over time the impact that has on people's health in general but it will take a while to see. We're just starting to uncover the tip of the iceberg."

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