

FITNESS

WEARABLE TECH

WHAT YOU NEED TO KNOW



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Introduction – The Rise Of Wearable Technology

Firstly welcome to our info packed report on wearable technology and thank you for joining me as we embark on a quick journey of discovery into this ever changing technology. Let's get started...

Wearable tech is not a new idea. In fact, most people now own at least *one* type of wearable tech whether that's a fitness watch, a smart watch or GPS trackers.

One thing is for sure in 2016, the industry remains unstoppable. Fitbit, the highest-selling fitness tracker, ended the last quarter of 2015 with over 5 million sales. Major electronics brands like Samsung, Apple, and Sony (among others) are following suit and releasing advanced wearables to keep up with the market.

Fitness Wearable Technology...What You Need To Know

While 2014 was dubbed the “Year of the Wearables,” wearable technology has been used in military and medical applications for decades.

By the start of this year, the CES showed consumers a peep through the future of wearables.

It’s predicted By 2025, wearable tech will become a \$70 billion plus industry, with healthcare taking the lead.

This shows just how much it has become integrated into our lives and just how long it is expected to stick around, not to mention the amount of research that is going into it to make it absolutely sensational.

Retail, business, advertising, fashion, jewelry, sports, entertainment and other industries are embracing wearable tech. However, health, fitness and sports remain the top market of wearables.

The Current Stock Of Wearable Tech & What's In Store...

The 2016 CES saw many of the leading tech and sportswear companies demo their wearable devices. Under Armour bought popular fitness apps MapMyRun, MyFitnessPal, and Endomondo in the past two years, and created buzz at this year's event by announcing a collection of wearables. It included the most-talked-about UA HealthBox all-in-one system, a Connected Fitness system, and UA SpeedForm Gemini 2 Record Equipped. The company also mentioned its first smart shoe, and wireless headphones that are currently in development.

Overall the new gadgets and hybrid wearables showcased at this year's CES event aim to help with professional sports, and cater to advanced fitness goals. These include:

1. Coaching

Wearable tech has made the next level of coaching possible. Three-time Ironman champion Craig Alexander was present at the 2016 CES to show off Oakley's Radar Pace, a voice-controlled pair of smart glasses that provides performance data, motivation and coaching in real time.

The in-ear coaching device from Kuaiwear measures sport performance and biometrics, which was clinically-tested for accuracy by Duke University. It also provides live voice-coaching feedback based on personal training plans and goals.

2. Tech Sportswear

Seniora Fitness skipped the strap-on wearables and made a sports bra embedded with an accurate heart-rate monitor (\$139 at sensoriafitness.com). OMbra also released its own version that tracks distance ran, pace, estimated calories burned and heart rate.

Shirts, shorts, leggings, and other sportswear have also been transformed into wearable tech, such as Lumo's Run Smart Running Shorts with its own Run Sensor, and Hexoskin's Smart biometric shirt.

3. Pro Athletes Performance – The fitness, IT and sports industries have collaborated in the last year to announce or showcase sports-specific wearables that aim to enhance the performance of athletes.

- **Basketball** – Vert allows athletes measure jump data, which gives basketball players a way to improve their vertical.
- **Baseball** – Major League Baseball athletes will be getting some love, with the launch of motusBASEBALL that would analyze pitching and hitting with sensor-embedded sleeves.
- **Extreme Sports** – BRG Sports and 360fly revealed four new smart helmets, all of which have the ability to capture athlete's full movements in high-quality 4K video.

- **Golf** – Taking a cue from Zepp's Golf glove, Garmin recently announced its own TruSwing sensor (designed to be attached at the shaft of a golf club) and provides real-time metrics such as swing speed, tempo, trajectories, and more.

4. Gym tech

The ever-so-popular weight training system Bowflex launched its SelectTech 560 Dumbbells that can track reps and weight lifted, which users can view in any mobile device via the connected 3DT app. Another interesting device is the GYMWATCH Sensor, which counts reps, measures speed, and even corrects a user's form while lifting weights.

Slendertone Connect Abs is a belt-type gadget that claims to tighten and tone core muscle by using Electrical Muscle Stimulation (EMS) tech.

5. Specialized Shoes and Shoe Soles

The trend of wearables embedded into rubber shoes began last year, but the offerings this year were much more impressive. For instance, the iFit-powered Altra IQ Shoe works like any normal shoe but with sensors that measure footstrike and other running habits. Digisole shoe soles work the same way, but double as foot warmer.

6. Real-time Sports Content

Spalding also announced an exciting partnership with ShotTracker, which will track real-time basketball performance stats of each player. New Balance launched its “Digital Sports” division that partnered with Intel and Google

At the end of January, ESPN tested Intel’s Curie module to track real-time performances at Men’s Snowboard Slopestyle and Men’s Snowboard Big Air during the X-Games.

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So in regards to what's been said, it's safe to say there's been massive advances in technology, with many new additions causing mass excitement in many people.

While you might be paying a lot for the privilege of owning one of the devices or objects, they're definitely meant to improve the quality of your life and mean that you're not tied to a wired device all the time, or being constricted by what you can do due to restraints in technology.

What The Wearable Tech Companies Are Trying To Create

As well as 'working', there are other things that have to be considered for a new piece of wearable tech. Just working isn't always enough to make a big enough dent in the market and give it its own little niche.

Will people want to wear it? It's fine parading around your home in a chunky, unappealing device, but would the consumer want to wear it outside? Inventors and companies want their product to revolutionise lives, not sit in a cupboard somewhere because it doesn't go with any outfits or it looks stupid.

How safe is it? It's great being able to tap a watch on your wrist and get all your information but it also needs to be ensured that the product is safe and that the information doesn't end up in the wrong hands. Not only does it need to look good, but it needs to be safe and secure. People need to be able to use it and know that their information isn't being treated as 'free for all'.

Is it affordable? While a lot of work goes into these devices and it's important for companies to have *some* profit margin, it's also important that it's affordable for the majority of people. If no one

can buy it because it's too high priced, the product is never going to make the company a profit.

Does it have a purpose? Even with the above being considered, wearable tech still requires a good sum of money towards it. Companies need to make sure that their product is useful and does as it is supposed to. Even if the product sounds amazing, if it isn't functional and doesn't meet the need of the people, it's useless and isn't going to sell.

Not only do companies and inventors need to consider the above, but sponsors and shareholders will too. If the product doesn't seem well thought out, people aren't going to funnel money into it being made and put on the market.

Companies are trying to become *the first* to offer a solution to a problem that was previously unmet, and with all the new devices, it's definitely a race between them all.

Wearable Tech In Healthcare

Currently, there is a lot of tech that is aimed towards watching your health. Many people have jumped on and started using tech to help them become more active, or monitor just how much they

move around during the day. There are watches that can monitor sleep, heart rate, how many steps you've taken and more.

In 2017, this is expected to go even further, and become even better than it has been in the past.

As well as monitoring the above, there are scheduled releases of devices that will be able to monitor your breathing, and remind you to breathe easy. Correct breathing can actually help lower stress, and ensure that you are getting the right amount of oxygen while you're inactive.

There are also devices coming that can monitor your pulse and blood pressure, helping you recognise when you're deeply stressed. Stress is a major issue in healthcare, so having a device that straps to your wrist, or shirt collar, to help you manage it is something that is definitely a welcome invention.

As well as overall health, though, there will be additional inventions that can help things such as posture, too, which is

great to use while exercising to make sure your form is correct and that you're balancing right without putting too much strain on one side of your body.

One brilliant advantage to the amount of focus that is being put forwards on health tracking wearable tech is the drive it is giving people to try and be healthy and active and encouraging them to exercise and generally look after themselves better. This isn't only for the individual person, but overall will help encourage people, and teach the younger generation the importance of being healthy from a young age.

Gaming

Even more exciting to some people is the promise of a new generation of gaming. Virtual reality has been a big part of gaming for years, with mentions in films, and even the start of the generation being brought in already but 2016 is definitely going to be the turning point.

Many companies are bringing out a version of VR Gaming – Microsoft, Valve, and the one with probably the most air time: Oculus Rift.

These cost a lot more than your average smart watch, but they're designed to add a whole new dimension to gaming, allowing players to immerse themselves into the world and see it as part of their life, rather than sat in front of a screen and feeling incredibly detached from the situation. It's supposed to be a much clearer display, too, than you might find from a TV.

This is a genre of the wearable tech era that allows multiple people to get involved – teens and adults alike can find joy in using the products and it can even be used in an educational sense to teach children using physical, visual aids.

While, at the moment, they're probably more suited to indoor wearing and not public ones, there's nothing to say that this won't change in the next upcoming year. This is tech that can incorporate your entire body and really involve you in your surroundings. They're becoming more wearable and comfortable,

and even including holographic technology which has come on bounds and is only due to improve further if given the time and investment.

Thanks to creations, children and adults alike will eventually be able to walk amongst their creations without having to physically build them in real life, thanks to some of the devices that are due out in the next year.

Smart Watches

Smart watches aren't a new invention, but more and more features are being added as time passes, with more capabilities.

Phones are able to be linked with the watches, letting you know when you have a message or a phone call without you having to hold your phone at all times. These features are going further, and further, to the point that eventually you'll be able to leave your phone in your pocket and use your watch as your communication device.

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Not only do they work as a phone but they can be used for other features too. A main feature that they're being used for is health and fitness. When you're wearing them, they have sensors that can detect your heart rate, blood pressure and even how stressed you are, which can definitely help you when it comes to leading a healthier life and being more aware of your own body.

Some of the watches have the ability to monitor how many calories you're burning, how much exercise you've done, how far you've run.

In the next year, the possibilities are seemingly uncapped, with a whole range of features coming out to help you get more active and more fit without it seeming like effort. It will encourage people to pay more attention to themselves and how they are living their life and can lead to a healthier generation of people with longer life expectancies.

The Consumers: Who Are Buying Wearables?

The Consumer Electronics Association revealed that the largest consumers of wearables are the younger working class. Those from ages 25 to 35 find wearable tech, particularly fitness wearables, as effective motivational tools when it comes to their health. About a third of this age group currently own a device, while only 1 out of 10 people (aged 55 or above) own some sort of wearable. But this number is expected to increase as more devices released aim to improve senior fitness.

Those who have no intent of purchasing any wearable device in the future are skeptical of this technology because of:

- **Cost** – Price continues to be the leading factor that prohibits consumers from embracing wearable tech completely. Many are willing to spend somewhere between \$100 to \$200 and think twice when the device costs \$300 or up.

Brands are aware of this. At the 2016 CES, only a few demoed unique devices, but almost all updates or newer versions of fitness wearables are given a much less expensive price tag than their counterparts released in 2014.

- **Usefulness** – When Steve Jobs took inspiration from Microsoft's 2002 Windows XP tablet and released the first-ever iPad in 2010, many consumers doubted the need for another mobile device. However, when the iPad successfully captured the market, Amazon, Samsung, Asus, Sony, and almost all other mobile phone company launched their own tablet versions.

Wearable tech faces the same problem as tablets. Consumers are only interested in wearables catering to a specific need that a phone cannot meet, which is why fitness trackers continue to be at the top of the market. For wearables to succeed, they must have meaningful applications that consumers cannot find in any other device.

- **Standalone vs. app-backed wearables** – Many consumers want a wearable device that could easily integrate with existing technology, such as smartphones, tablets, and laptops. These devices are usually backed with a phone app that transmits data via Bluetooth or Wi-Fi, before being saved in an online database. However, some consumers also find standalone devices appealing. The industry needs to find balance with these two factors to be able to encourage as many interested consumers as possible.
- **Accuracy and security of data** – Except for military and medical-grade devices, accuracy of wearables continue to be a concern for consumers. This has been proven in January 2016 when Fitbit was slapped with a class action lawsuit filed over the accuracy of the heart rate monitoring technology in its devices. Pebble, Jawbone, Nike, even Fitbit and other companies have continually worked to improve accuracy of their respective fitness tracking devices.

Security of personal information is also a major concern, but many consumers are slowly growing more comfortable with sharing information, particularly in exchange for rewards or if the device was provided by a company without charge. The tech companies behind these devices still have the responsibility to test security continuously and respect consumer privacy.

Conclusion

The fitness wearable tech is growing, maturing, and expanding into various sub-industries to cater to as much consumers as possible, from ordinary Joes and Janes, to professional athletes.

Tech start-ups are playing with the big boys (and some are even winning), while more and more companies from a wide range of industries want to dip their “fingers” into wearable tech.

In video games, virtual reality is a big deal with Oculus’ Rift and Touch, Samsung’s experimental Gear VR controllers, virtual reality headsets from ANTVR and 3Glasses, Virtuix Omni’s treadmill, and more.

ODG’s augmented reality software demoed how it could help medical professionals, and workers from fields such as manufacturing, architecture, automotive, and more.

While wearables in other industries continue to grow in record numbers, fitness tech still proves to be the most marketable. And for good reason: there are health and fitness wearables for kids, teenagers, adults, and even seniors. Plus, with the development of gadgets to accommodate just about every sport and physical activity, expect more user-specific wearables in the near future.

In the next year, watching the tech scene is definitely a good idea – many things are coming out that are definitely set to change how we live our lives and how we find entertainment, whether that entertainment is found through exercise, gaming or communicating, there is new technology coming to help everyone, and shows that a lot of money and time is going to improving and furthering our technology and understanding of how things work.