W.O.W. WORLD OF WEARABLES

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WELCOME TO THE WORLD OF WEARABLES

As the world emerges from a pandemic, wearables continue to transform the fitness industry. However, as technology is constantly evolving and finding its way into our wardrobes, is it having a positive impact on our overall health and wellness?

From smart phones, watches, and fancy heart-rate monitors that track everything from steps to blood oxygen levels and your sleep patterns, how is this affecting the client-trainer relationship and the ability to reach fitness goals?

What are the best wearables on the market and how does the fitness or medical fitness professional safely and effectively infuse this technology into their current fitness programming.

WHAT IS A WEARABLE?

Wearable technology, also known as "wearables", is a category of electronic devices that can be worn as accessories, embedded in clothing, implanted in the user's body, or even tattooed on the skin. The devices are hands-free gadgets with practical uses, powered by microprocessors and enhanced with the ability to send and receive data via the Internet.

WHAT ARE TYPES OF WEARABLES

Fitness-Athletes-Nutrition-Healthcare-Medical
Smart Phone
Smart Watch/Bracelet
Medical Alert Bracelet, Necklace, Monitor, etc...
Subcutaneous Chips
High Tech ItBra (Detects Breast Cancer)
Smart Tattoos
Electronic Inhaler (AIR Louisville Developed to Detect Asthma & Medication Timing)
Smart Eyeglasses, Smart Rings

WHAT DATA IS COLLECTED
& WHAT ARE WE DOING WITH IT?

DATA COLLECTED	PURPOSE
Heart Rate/Zones	Fitness Level/Athletic Performance
Calories/Nutrition	Weight loss/Allergies/Medication Regulation
Oxygen/ VO2 Max	Respiratory Illnesses/Athletic Performance
Glucose	Medication Regulation/Nutrition Timing
Sleep Cycles	REM Sleep, Circadian Rhythm
Hydration Levels	Organ/Muscle Function, Athletic Performance
Steps	Weight loss/Improve Fitness Level
Air Quality/Pollutants	Asthma Reduction/Medication Regulation
GPS (Travel/Distance/Location)	Directions, Athlete Tracking, Child Tracking
Disease Symptoms/Brain Waves/Muscle Movement	Track Progression of Diseases like: Parkinson's, ALZ, MS, ALS, etc…

PROS VS. CONS

THE BENEFITS OF WEARABLES	THE PROBLEM WITH WEARABLES
Quality and Accuracy of Data Tracking	Inaccuracy of Data/Glitches
Accountability	Obsession/Compulsive with Results
24/7 Monitoring Easily Tracks to Phone/Computer/Tablet	Disruptive 24/7 Monitoring-Tracks to Phone/Computer
Access to Medical Assistance	Quantity of Data Valued Over Quality
Alerts User to Health Issues	Negatively Affects Mood
Waterproof/Easily Replaced	Easily Breaks/Gets Lost/Malfunctions
Affordable (U.S.)	Expensive (For Some)
Improve Employee Performance (Reminders: Hydrate, Move, Eat, etc…)	Dependency for Workouts
Comfortability Factor/Less Insecurities	Lack of Human Interaction/Socialization

AIR Louisville: Addressing Asthma With Technology, Crowdsourcing, Cross-Sector Collaboration, And Policy

Published in 2018 HealthAffairs
Barrett, Combs, G. Su, Henderson & Tuffli

Cross-sector partnerships benefit public health by leveraging ideas, resources, and expertise from a wide range of partners. In this study we documented the process and impact of AIR Louisville (a collaboration forged among the Louisville Metro Government, a nonprofit institute, and a technology company) in successfully tackling a complex public health challenge: asthma. We enrolled residents of Louisville, Kentucky, with asthma and used electronic inhaler sensors to monitor where and when they used medication. We found that the use of the digital health platform achieved positive clinical outcomes, including a 78 percent reduction in rescue inhaler use and a 48 percent improvement in symptom-free days. Moreover, the crowdsourced real-world data on inhaler use, combined with environmental data, led to policy recommendations including enhancing tree canopy, tree removal mitigation, zoning for air pollution emission buffers, recommended truck routes, and developing a community asthma notification system. AIR Louisville represents a model that can be replicated to address many public health challenges by simultaneously guiding individual, clinical, and policy decisions.

According to a Salesforce study, companies implementing workplace wearables saw a **76%** increase in employee performance.

Wearable technologies have been found not only to be useful to the individual, but also from a HR perspective.

Techwire Asia reports that some companies have offered employees incentives such as cheaper health insurance costs, to increase their fitness levels, tracked via wearable technology.

Wearable technology can improve employee performance by 76% (marketingmag.com.au)

Most Popular Wearables

Fitbit	Garmin	Smart Watches
•Fitbit trackers monitor steps, distance, calories burned and active minutes. •Many also track heart rates, floors climbed and sleep time. •Extra convenience comes courtesy of call and text notifications on many models. •Some are water-resistant or waterproof – letting you log your laps. •There is a huge range of options that start with the Fitbit Inspire pedometer and go all the way up to the full-featured smartwatch Fitbit Ionic	•The GPS brand has many trackers that focus on running with built-in location tracking for maximum accuracy. •If you're looking for a traditional watch face, Garmin has models that blend the classic analog watch with notifications and fitness tracking. •Like Fitbit trackers, they monitor steps, distance, floors climbed, calories burned and sleep, as well as offering call and text notifications. •Many models are also water-resistant or waterproof, letting you hit the pool or get fit rain or shine.	•Smartphone fitness trackers extend your phone's apps and features. •These trackers offer fitness, workout tracking, heart rate monitoring, fall warnings, GPS location and movement tracking and more. •These trackers have call/text notifications and mobile apps. •Their expanded feature set often comes at the cost of having a shorter battery life than singularly focused fitness trackers from Fitbit, Garmin and the like.

WHAT DO WE KNOW

WEARABLES ARE HERE TO STAY!

- Trainer Education is Paramount
- Tracking is the NEW norm
- More Tracking Technology is Coming……
- Here is what to look for!

Are Wearables Safe?

Do they cause cancer?

RUMORS: the fact that wearable fitness trackers emit amounts of electric and magnetic fields EMF) radiation may sound dangerous, but as far as modern science can tell – it's no cause for concern.

Compared to the amount of radiation emitted by a cell phone, wearable fitness trackers pose a significantly **reduced threat thanks to their distance from your head** – unlike a cell phone.

Skin irritation/uncomfortable rubbing may occur. Clean them & take them off when possible.

Is turning fitness into a game dangerous?

The **obsession** some people get from counting calories, closing "rings" and checking boxes for their amount of activity completed in a day.

These types of devices should be used to **improve and never punish yourself.**

Wearables also **come with distractions** because many provide notifications for things like text messages and social media alerts that can be dangerous while driving.

Added social danger…like talking on your cell phone or checking your notification is rude during meetings or while socializing, the same is true for your fitness tracker.

How does the fitness professional safely & effectively infuse this technology into their current fitness programming?

1. **Client Intake Form Questions: Do you have/use a wearable device? Why/Why not?**
2. **Build Trust! Open Communication Is a MUST!**
3. **Start with ONE piece of data/Infuse basic tracking with baselines.**
4. **Monitor "the WHOLE client." Any MD Concerns?**
5. **Constant Communication: share platforms, Apps, data tracking…**
6. **Constant Assessments: Data Accuracy/Client Behavior Changes.**

TRAINER VS. CLIENT PERSPECTIVE

TRAINER PERSPECTIVE	CLIENT PERSPECTIVE
Does the client still need me?	Do I still need a fitness professional?
Do I have the knowledge to infuse wearables into my current fitness offerings?	Do I have the knowledge to safely and effectively reach my health goals with wearable technology?
I love/hate having 24/7 access to track my clients' progress with wearables.	I love/hate the accountability I have to my wearable and fitness professional
Wearables provide hard facts/data that may help me better serve my client.	I think that some of this data is not correct. (ie: there is no way I only burned 300 calories during that workout)
My clients can understand direct correlations between their nutrition and fitness routines.	My wearable makes me feel bad about myself!
My clients can understand the why behind certain workouts as they positively affect their physical and mental health.	My wearable makes me feel proud of myself!

KEEP IN MIND…

"…the more convenient a biometric device, often the greater chance for inaccurate readings.

For this reason, wearables should NEVER be used to replace your annual doctor's visit."

Morgan Radlinger C.W.P. – Network Health

RESOURCES

Network Health | Are Fitness Trackers Dangerous?

Hi-tech iTBra a breakthrough for Asian women at high risk of breast cancer | South China Morning Post (scmp.com)

AIR Louisville: Addressing Asthma With Technology, Crowdsourcing, Cross-Sector Collaboration, And Policy | Health Affairs
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https://networkhealth.com/grow-in-the-know/2020/05/facts-about-fitness-trackers-and-which-one-is-right-for-you

http://www.clubaac.com/top-ten-reasons-not-to-wear-a-fitness-tracker/

Wearable technology can improve employee performance by 76% (marketingmag.com.au)