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HEALTH AND FITNESS TECHNOLOGY: APPS AND WEARABLE TECHNOLOGY

Position statement (Published July 2020)

This position statement will consider the appropriateness of wearable fitness technology and apps on physical activity for people with diabetes and those at risk of Type 2 diabetes. This does not include technology for general medical use. There is a separate Diabetes UK position statement on DIY closed loop systems.

Why have we produced this position statement?

The use of health and fitness/exercise apps and wearable technology, such as smart watches and fitness trackers has increased in popularity with technology becoming more advanced. This looks set to happen in the future as well as these products add more measurements to their devices and also progress their accuracy. These measurements can include (amongst numerous other things); the tracking of a person's steps completed (pedometer), distance covered, pulse/heart rate, calories burned, blood oxygenation, body temperature, sleep and blood glucose levels.

These scientific developments have led to an increase in the promotion of fitness apps and wearable technology and health statements made by the exercise and fitness industry and technology companies.

How did we develop this position statement?

A review of available literature on fitness apps and wearable technology was carried out. This included the largest behavioural change study on physical activity by RAND Europe[1], which examined the effectiveness of wearable technology and as a 3 year study included 238,422 United Kingdom participants.

Other literature reviewed included research that had completed their own systematic reviews and meta-analysis. These had all been peer-reviewed and in academic journals.

What are we saying about this issue?

- Wearable technology and fitness apps can be useful tools in helping people to become more physically active. This includes people with diabetes, those at risk of Type 2 diabetes, and people without diabetes.

- This is because they offer motivation through using a variety of behaviour change techniques, such as goal setting/targets, encouragement, prompts, notifications, incentives, self-monitoring, persuasive communication, formation of habits and the grading of tasks.

- This motivation to exercise, and therefore increase in physical activity levels can result in several health and fitness benefits.

- However, a direct link between apps, wearable technology and improvements in blood glucose management, as well as other health and fitness benefits cannot be confirmed. These technologies simply act as a means of becoming more active.

- Finally, using apps or wearable technology will not deteriorate your health or make you less motivated to exercise. They will keep either keep you at the same level or help increase your physical activity.

Recommendations

1. As using fitness apps and wearable technology can increase physical activity levels, people with diabetes or those at risk of Type 2 diabetes may want to consider using them, as there are no negative implications apart from the purchase cost.

2. They are a personal choice and research should be done in to which product to purchase, as different devices will measure different things.

3. Using this technology alone will not result in health benefits or act as a 'miracle cure'. You still need to be physically active and ideally technology should complement a general healthy lifestyle.

4. Therefore, these technologies are not a requirement in order to be healthy or to improve health outcomes. However, evidence has shown that they can be a useful tool in helping people to be more physically active and therefore live better and more confident lives.

Evidence and analysis – the reasons why we are saying what we do

All studies analysed showed an overall increase in physical activity levels when apps and wearable tech were used[1,2,3,4,5,6,7,8,9,10,11]. It is also worth noting that a small number of participants in the studies remained at the same level, meaning that using technology does not guarantee an increase in an individual's physical activity level.

There was no literature found that suggested that these technologies had a negative impact. There were improvements suggested for the technology and most research was only for a short period of time. However, the overall consensus was that the more technology (and advancements in technology), the better the chances of getting people more active. This could be smart watches, fitness trackers, pedometers or mobile phone/computer apps.

Further research is needed though, in to technology and its effects on diabetes before direct claims can be made.

References

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