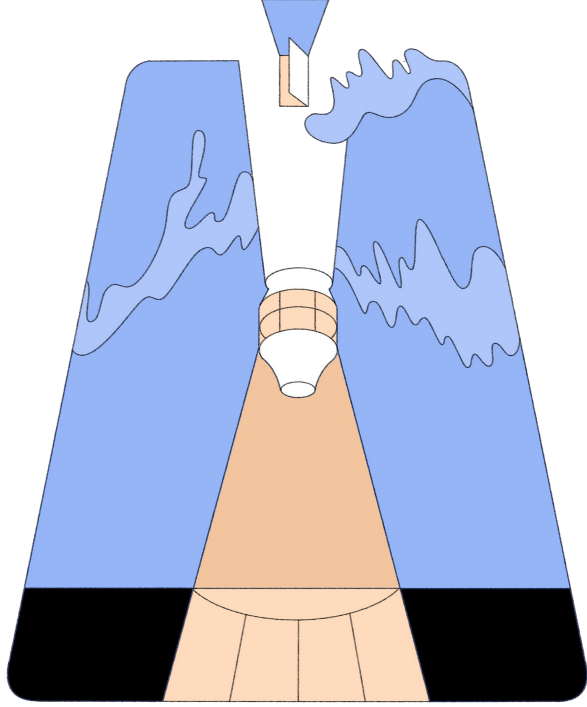


Digital Wellbeing: Thought starters


A set of insights and questions to
explore how product experiences
impact digital wellbeing


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About the thought starters

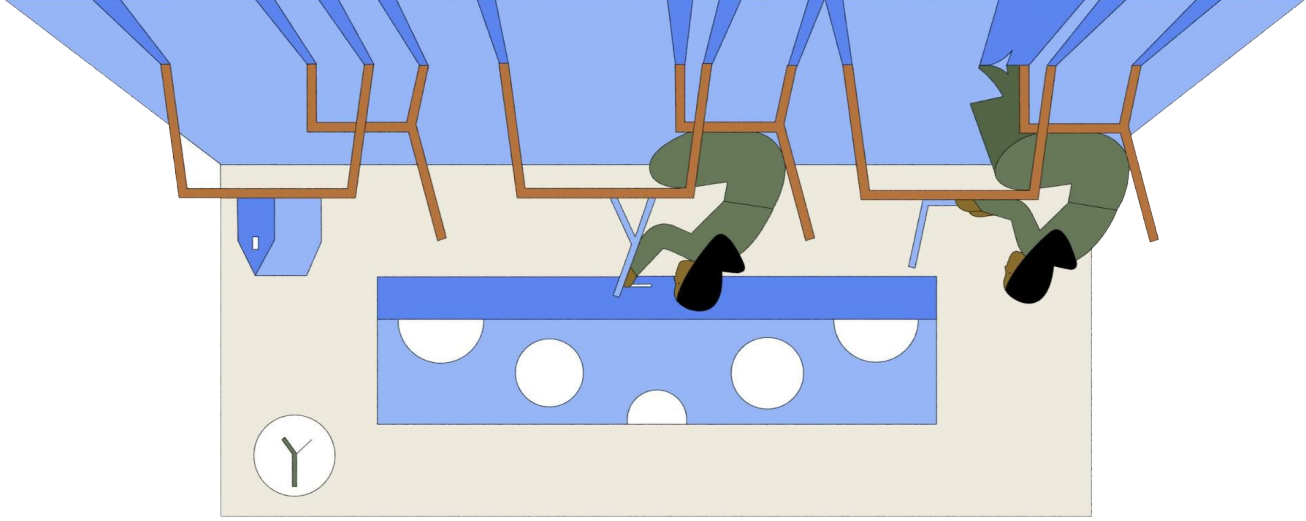
- This set of curated cards helps you quickly gain insights you need to **integrate digital wellbeing into your products**. Separated into 3 thematic areas (intentional use, interpersonal connection, Safe & healthy life), the thought starters include:
- Research findings that define the digital wellbeing landscape
 - 'How might we' questions that explore how product experiences impact wellbeing

 **Best for:** Idea generation, brainstorming

 **How to use:** Bring thought starters to your next workshop or use them in your own brainstorming session. Skip around to focus on the most relevant topics.

 **Go deeper:** Move into action with the [Digital Wellbeing workshop activities](#): *Generate ideas and investigate unintended consequences.*

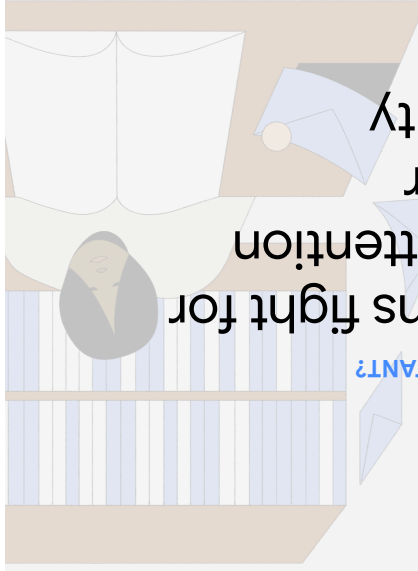
Chapter 1: Intentional use



Distractions

WHY IS THIS IMPORTANT?

Distractions fight for
people's attention
and hinder
productivity



How might we support and protect people's focus from unwanted disruptions?

FOOD FOR THOUGHT

- Interruptions increase stress
Experimental research suggests that interruptions don't increase task completion time, but instead make people compensate for lost time by working faster. This comes at a price: more stress, frustration, time pressure, and effort. [\[1\]](#)
- Ignoring a notification can be just as disruptive as reacting to it
Receiving a phone call notification without responding to it is just as distracting as responding to a message or call. [\[2\]](#)
- Reducing notification frequency is beneficial
Batching notifications to 3 times per day significantly improves attention, stress, perceived productivity, and control of the phone. [\[3\]](#)

[1] Mark, Gloria, Daniela Gudith, and Ulrich Klocke. "The cost of interrupted work: more speed and stress." *Proceedings of the SIGCHI conference on Human Factors in Computing Systems*. 2008. [Link](#)

[2] Stothart, Cary, Ainsley Mitchell, and Courtney Yehert. "The attentional cost of receiving a cell phone notification." *Journal of experimental psychology: human perception and performance* 41.4 (2015): 893. [Link](#)

[3] Fitz, Nicholas, et al. "Batching smartphone notifications can improve well-being." *Computers in Human Behavior* 101 (2019): 84-94. [Link](#)

Multitasking

Multitasking
increases stress and
lowers productivity

WHY IS THIS IMPORTANT?



How might we help people stay
focused on a single task?

① 5-MINUTE BRAINSTORM

FOOD FOR THOUGHT

- Multitasking is a misnomer
In most situations, a person is actually doing something called "rapid toggling between tasks." Chronic media multitasking (concurrent use of multiple digital media streams) is correlated with increased difficulty keeping track of multiple inputs. And rates of chronic media multitasking are increasing in children, teens, and adults. [\[1\]](#)
- Attempted multitasking impacts memory
Light media multitaskers (LMM) remember 20% more information than heavy media multitaskers (HMM). [\[2\]](#)
- Attempted multitasking increases anxiety
When people attempt to complete multiple tasks at the same time, their brain enters an over-excited state, increasing the anxiety they experience. [\[3\]](#)

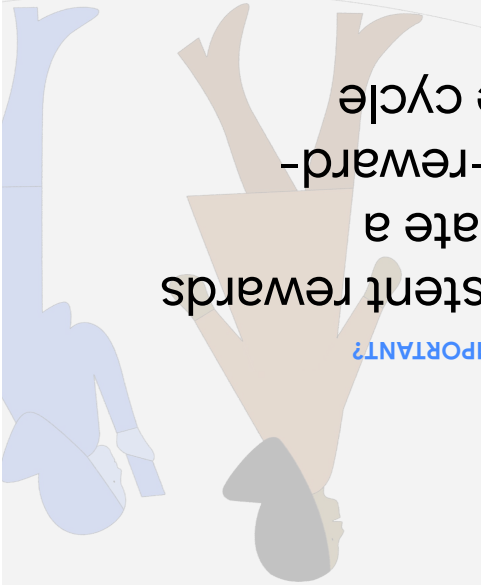
[1], [2] Uncapher, Melina R., Monica K. Thieu, and Anthony D. Wagner. "Media multitasking and memory: Differences in working memory and long-term memory." *Psychonomic bulletin & review* 23.2 (2016): 483-490. [Link](#)

[3] Gloria Mark, "The Cost of Interrupted Work: More Speed and Stress" [Link](#)

Compulsive checking

WHY IS THIS IMPORTANT?

Inconsistent rewards
can create a
trigger-reward-
engage cycle



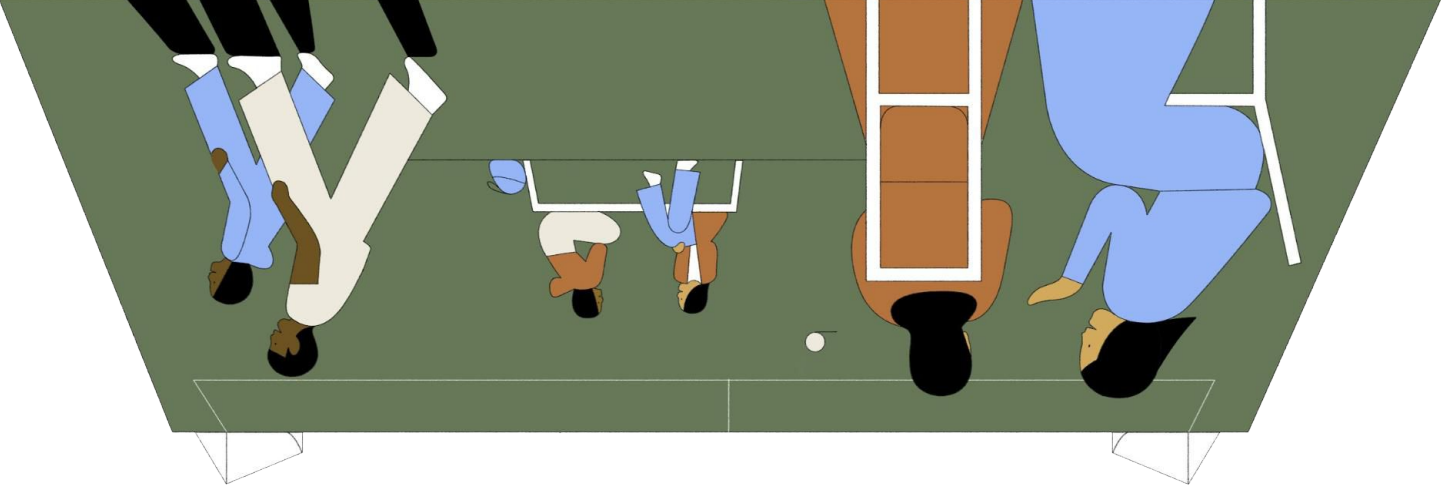
How might we encourage intentional technology use?

FOOD FOR THOUGHT

- Compulsive checking accounts for a majority of hindered intentions in a multi-geo study, 52% of hindered moments involved compulsive checking. [\[1\]](#)
 - Tech-use behaviors can become automatic or difficult to control intention. A number of measures have been created to assess compulsive and problematic use, including the Compulsive Internet Use Scale (CIUS), [\[2\]](#), [\[3\]](#)
 - Approaches to internal and external drivers of hindered intentions differ
- Compulsive checking and social obligation to respond are both internal drivers, whereas endless content and notifications are external drivers. Internal and external drivers can carry the same impact, but may require different solutions. [\[4\]](#)

- [1] Google-commissioned study with third-party vendor, dScout
- [2] Clements, Jeffrey A., and Randall Boyle, "Compulsive technology use: Compulsive use of mobile applications," *Computers in Human Behavior* 87 (2018): 34-48. [Link](#)
- [3] Meeker, G.-J., et al. "The compulsive internet use scale (CIUS): some psychometric properties," *Cyberpsychology & behavior* 12.1 (2009): 1-6. [Link](#)
- [4] Google study

Chapter 2: Interpersonal connection



Presence with others

Technology's
in-person
presence can weaken
connections and
relationships

WHY IS THIS IMPORTANT?



① 5-MINUTE BRAINSTORM

How might we support
in-person presence when it's
called for?

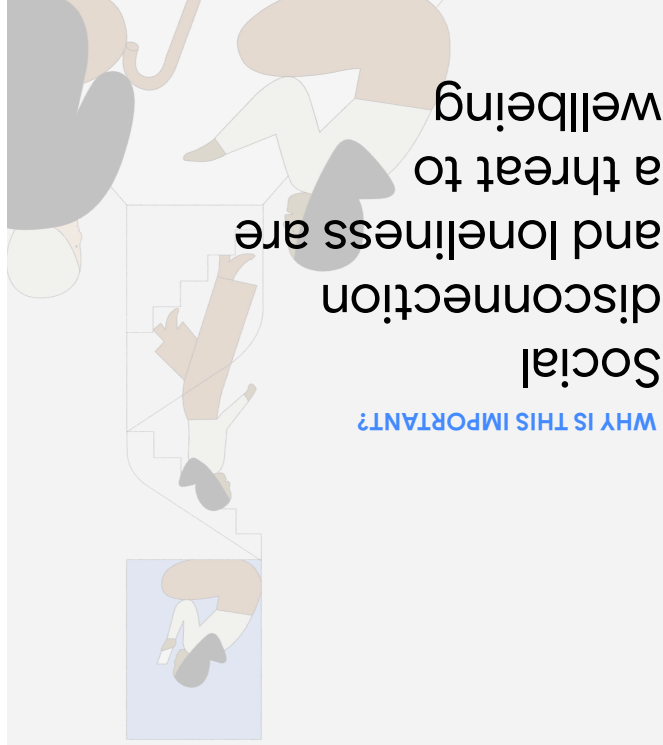
FOOD FOR THOUGHT

- Mobile phones are a major source of disruption
43% of US adults report that they get distracted by their phone when they're with friends or family [\[1\]](#)
- The mere presence of a mobile phone inhibits interpersonal connection
Experimental research shows that this impact is magnified when individuals are discussing a personally meaningful topic. [\[2\]](#), [\[3\]](#)
- While tech use concerns focus on children, parental use is also a problem
36% of UK children ages 11–18 report occasions when they have to ask their parents to put away their phones. [\[4\]](#)

[1] Google-commissioned study with third-party vendor, dScout
[2] Przybylski, Andrew K., and Netta Weinstein. "Can you connect with me now? How the presence of mobile communication technology influences face-to-face conversation quality." *Journal of Social and Personal Relationships* 30.3 (2013): 237–246. [Link](#)
[3] Mishra, Shalini, et al. "The iPhone effect: the quality of in-person social interactions in the presence of mobile devices." *Environment and Behavior* 48.2 (2016): 275–298. [Link](#)
[4] Google-commissioned study with third-party vendor, Fluent

The

Disconnected



WHY IS THIS IMPORTANT?

Social
disconnection
and loneliness are
a threat to
wellbeing

How might we bring people
together online at the right
place and time?

FOOD FOR THOUGHT

- Loneliness is experienced in high numbers across generations
46% of US adults sometimes or always feel alone, with Gen Z experiencing the most loneliness. [\[1\]](#)
- Loneliness can have a major impact on health outcomes
Loneliness is a bigger threat to life span than obesity, with a health impact equivalent to smoking 15 cigarettes a day. [\[2\]](#), [\[3\]](#)
- Tech has the potential to reduce the prevalence of loneliness
Access to the internet decreased loneliness (by 0.5 on a 0–3 scale) in vulnerable elderly populations in an experimental setup, and longitudinal analysis shows a positive correlation between internet use and psychological wellbeing. [\[4\]](#), [\[5\]](#)

① 5-MINUTE BRAINSTORM

[\[1\]](#) Cigna U.S. Loneliness Index 2018. [Link](#)
[\[2\]](#) The Loneliness Epidemic. [Link](#)
[\[3\]](#) Holt-Lunstad, Julianne, Timothy B. Smith, and J. Bradley Layton. "Social relationships and mortality risk: a meta-analytic review." *PLoS med* 7.7 (2010): e1000316. [Link](#)
[\[4\]](#) Billipp, Susan Heyn. "The psychosocial impact of interactive computer use within a vulnerable elderly population: A report on a randomized prospective trial in a home health care setting." *Public Health Nursing* 18.2 (2001): 138-145. [Link](#)
[\[5\]](#) Quintana, David, et al. "Internet use and psychological well-being at advanced age: Evidence from the English longitudinal study of aging." *International journal of environmental research and public health* 15.3 (2018): 480. [Link](#)

Proprietary

Putting work in its place



WHY IS THIS IMPORTANT?

Conflicting
expectations in work
and personal life can
upset the balance
between them

① 5-MINUTE BRAINSTORM

How might we support
boundaries between work and
personal life?

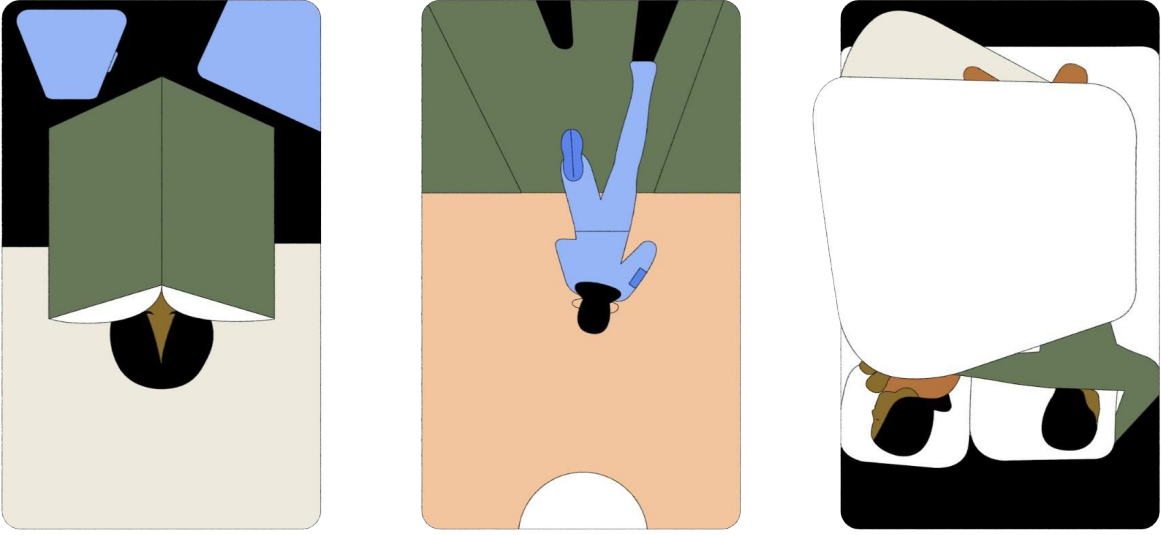
FOOD FOR THOUGHT

- Social pressure to respond quickly to communications disrupts balance
A social obligation to respond is identified in multiple UX research studies, contributing to 20% of disruptive smartphone use in a multi-geo diary study. [\[1\]](#)
- People want to be respectful of others' intentions and personal time
Workplace research shows that people want to support the situational context and needs of the person they wish to contact. [\[2\]](#)
- Tech can mitigate work-to-home conflict in the right situations
For employees who prefer to integrate work and home life, work-related tech use outside of work hours may not complicate—and could even facilitate—work-home compatibility, depending on certain work and environmental factors. [\[3\]](#)

[1] Google-commissioned study with third-party vendor, dScout
[2] Google study

[3] Gadeyne, Niels, et al. "All wired, all tired? Work-related ICT-use outside work hours and work-to-home conflict: The role of integration preference, integration norms and work demands." *Journal of Vocational Behavior* 107 (2018): 86–99. [Link](#)

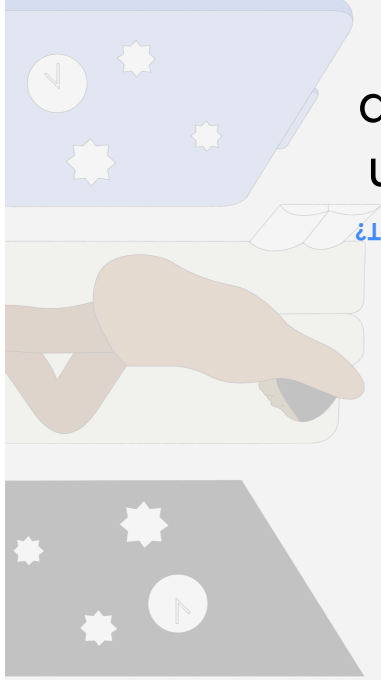
Chapter 3: Safe & healthy life



Sleep

Screens can stymie sleep

WHY IS THIS IMPORTANT?



FOOD FOR THOUGHT

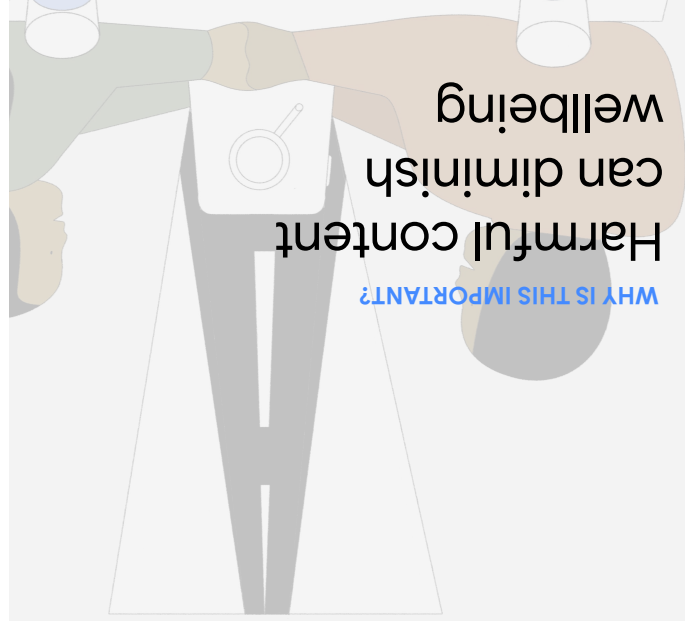
- Medical science unanimously links sleep to health outcomes
While individual sleep requirements vary, a minimum of 7 hours of sleep is recommended to maintain mental and physical health. Nine days of sleeping only 6 hours a night leads to performance impairment similar to a blood alcohol level of 0.1% (a level higher than the legal limit for driving). [\[1\]](#)
- Late-night phone use poses a special concern for teens, who need more sleep
70% of teens check their mobile device within 30 minutes of falling asleep at night, and 36% of teens wake up and check their mobile device for something other than the time at least once a night. [\[2\]](#)

[1] Judgment and Safety. (2008, December 16). [Link](#)
[2] S Robb, M. B. (2019). The new normal: Parents, teens, screens, and sleep in the United States. San Francisco, CA: Common Sense Media. [Link](#)

① 5-MINUTE BRAINSTORM

How might we help people wind
down and get enough sleep?

Harmful content



How might we increase awareness of online spaces?

① 5-MINUTE BRAINSTORM

FOOD FOR THOUGHT

- A majority of parents feel a lack of control over their kids' tech use
- 68% of parents feel a lack of control over the content that their kids see online. [\[1\]](#)
- Online harassment is widespread and impacts basic needs
- 41% of US adults have personally experienced online harassment, with 8% citing particularly severe forms (i.e. stalking, physical threats, sexual harassment, or harassment over a sustained period of time). 64% of students who experienced cyberbullying said it affected their ability to learn and feel safe at school. [\[2\]](#)
- Sentiment of consumed content can impact mood
- Artificially modulating the sentiment of Facebook's feed led feed viewers to share content with similar quality of sentiment. [\[3\]](#)

[1] Google-commissioned study with third-party vendor, dScout

[2] New National Bullying and Cyberbullying Statistics. (2017, July 31). Link

[3] Kramer, Adam DJ, Jamie E. Guillory, and Jeffrey T. Hancock. "Experimental evidence of massive-scale emotional contagion through social networks." *Proceedings of the National Academy of Sciences* 111.24 (2014): 8788-879. Link

Physical activity

Tech can support physical activity

WHY IS THIS IMPORTANT?



How might we promote healthy physical activity with tech?

① 5-MINUTE BRAINSTORM

- Tech is a double-edged sword when it comes to physical activity
We know that tech use can encourage sedentary, leisure-time behaviors. But it can also promote physical activity through apps, wearables, and data visualization. [\[1\]](#)
- Social influence can be a good thing
Social experiences are essential. People learn by observing the actions of others and seeing results. Individualized or at-home services and apps can leverage peer support to improve physical activity through social sharing of their progress. [\[2\]](#)
- Small amounts of physical activity can have big benefits
According to a World Health Organization recommendation, as little as 75 minutes of vigorous aerobic activity *per week* is enough to provide health benefits such as weight control, elevated mood, and better sleep. [\[3\]](#)

FOOD FOR THOUGHT

[1] Samdal, G.B., Eide, G.E., Barth, T. et al. Effective behaviour change techniques for physical activity and healthy eating in overweight and obese adults: systematic review and meta-regression analyses. *Int J Behav Nutr Phys Act* 14, 42 (2017). [Link](#)

[2] Allison R. Webel, Jennifer Okonsky, Joyce Trompeta, William L. Holzemer, "A Systematic Review of the Effectiveness of Peer-Based Interventions on Health-Related Behaviors in Adults", *American Journal of Public Health* 100, no. 2 (February 1, 2010): pp. 247-253. [Link](#)

[3] Physical Activity and Adults. [Link](#)

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