



Personalised physical activity prescription via a digital therapeutic leads to increase in objectively measured activity minutes, and decrease in weight, in users with obesity.

Dr Lou Atkinson (1,2,3) Dr Brendon Stubbs (1,4) Dr Kristina Curtis (1,5)

1. EXI. 2. Aston University. 3. University of Warwick. 4. Kings College London. 5. University College London



BACKGROUND

- ♥ The benefits of physical activity (PA) for people living with obesity are shown to be significant, including improved cardiovascular health and mental health, regardless of weight loss.
- ✕ Barriers to PA behaviour change for people with obesity include having multiple co-morbidities, pain, fatigue, low self-efficacy and experiencing weight stigma.
- ⊕ Clinicians will advise people with obesity to increase PA, but few are able to create personalised PA plans, & exercise specialists are a limited resource.
- ⊕ Digital therapeutics have the potential to provide accessible, scalable PA behaviour change support for people with obesity.

METHODS

Design: Retrospective analysis of routinely collected data from all EXI users who reported having obesity (N=8200).

Aims: To describe EXI users with obesity & their engagement with physical activity.

To explore changes in objectively measured PA and changes in self-reported weight over 12 weeks of using EXI, via paired sample T-tests.

All analyses were conducted in JASP.



EXI

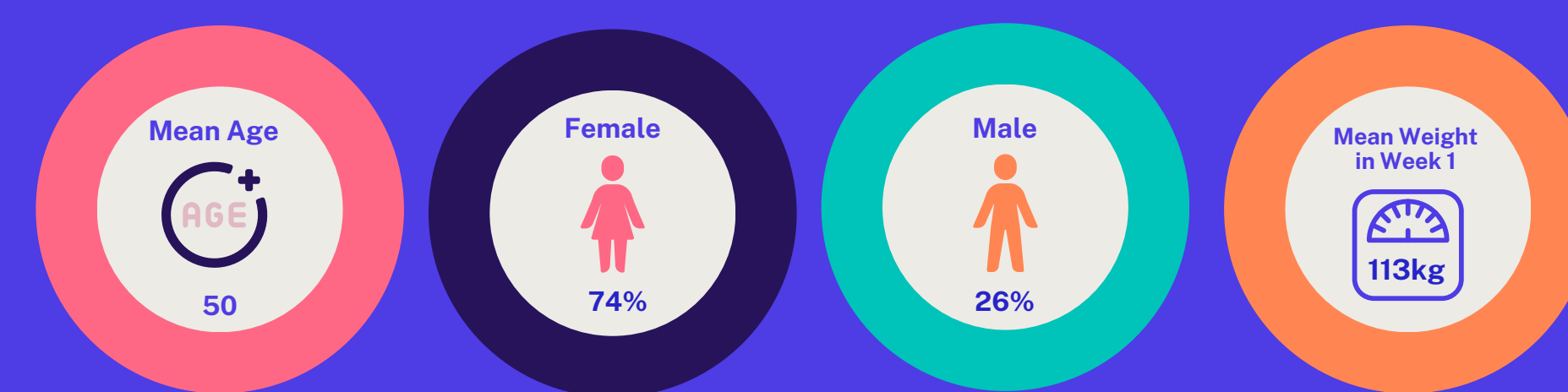
EXERCISE INTELLIGENCE

EXI is a Software As a Medical Device (SaMD) platform delivered through a smartphone app and secure clinician data portal. Created specifically to support people living with long term health conditions, and inactive people at risk of health conditions, to increase their physical activity.

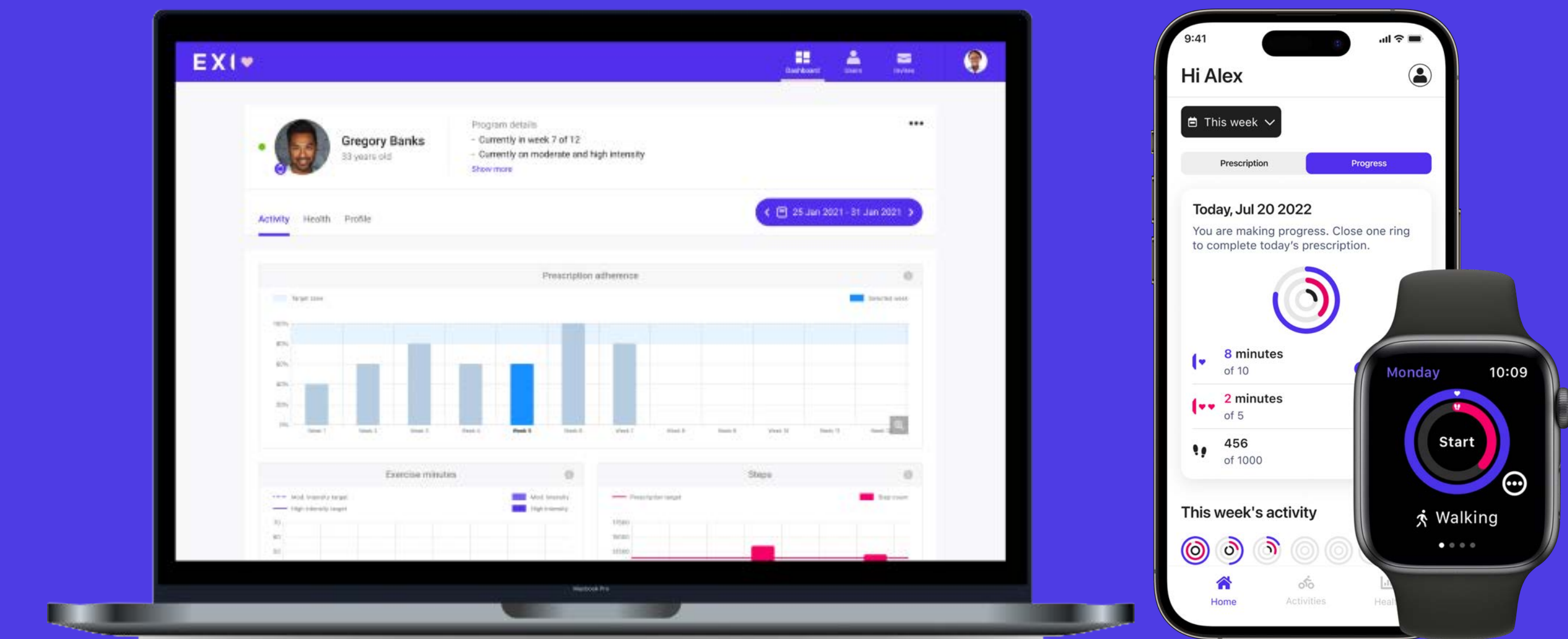
Creates personalised, achievable, progressive PA prescriptions based on current health status & activity levels, starting with as little as 3 x 10 minutes of low intensity per week.

Behavioural science embedded throughout, including goal setting, self-monitoring, social support & rewards.

RESULTS



- ♥ 45% of users were provided EXI as part of a NHS, public health or private health service, including Tier 3 obesity services. 55% independently joined EXI with no clinical referral. 91% had at least one co-morbidity.
- ⌚ For users with wearable devices who recorded data at week 12, weekly activity minutes increased significantly compared to week one (N=246, t= -2.929, p<0.005). The mean increase was 51 minutes (30%).
- ⚖ For users who self-reported weight at week 12, there was a significant decrease in weight compared to week one (N=125, t= 3.841, p<0.001). The mean decrease was 4.67kgs (4.2%).
- 📏 For users who self-reported waist circumference at week 12, there was a significant decrease in waist circumference compared to week one (N=62, t= 2.238, p<0.05). The mean decrease was 6.2cm (5.5%).
- ✓ Mean weekly PA prescription adherence ranged from 49-59% over 12 weeks, with much variance in the data and no discernible trend observed.



DISCUSSION

Most EXI users with obesity are living with additional health conditions, making PA physically and psychologically challenging. Despite this, most users achieved over half of their prescribed weekly PA, and overall the changes in PA and body metrics reached or approached clinical significance after 12 weeks. Improvements to EXI should focus on increasing engagement & prescription adherence.



KEY CONCLUSIONS

People living with obesity may experience a non-linear PA behaviour change journey, and may benefit from additional support during tough times and setbacks.

The digital therapeutic EXI can successfully support people with obesity to increase their PA and reduce their weight and waist circumference at significant levels.

More Information

Email: lou.atkinson@exi.life
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