



## Topic Exploration **Report** <sup>1</sup>

### Digital therapeutic platforms delivering home-based exercise programmes for people with peripheral arterial disease

#### **What is a Topic Exploration Report?**

Topic Exploration Reports are not health technology assessments. These reports provide a high-level briefing on new topics submitted to Health Technology Wales and are not based on exhaustive or systematic literature searches. Instead, they rely on a focussed scan of key resources.

#### **What evidence is used in a Topic Exploration Report?**

Priority is given to summarising the most relevant or useful evidence, rather than covering all possible evidence. Information reported is typically based on abstracts and study authors' own conclusions, rather than detailed scrutiny of full texts.

#### **What are the aims of a Topic Exploration Report?**

Topic Exploration Reports offer an overview of the available evidence on a topic and aim to highlight any uncertainties or gaps in the evidence. These reports outline the quantity and type of evidence found, but no critical appraisal or formal evidence synthesis is conducted.

#### **How should a Topic Exploration Report be used?**

Topic Exploration Reports can be used to indicate what evidence may be available for a topic, and do not provide definitive guidance on how a technology should be used. The evidence presented within the reports should be interpreted with caution.

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<sup>1</sup> [Cyfieithu dogfennau HTW wedi'u cyhoeddi o'r Saesneg i'r Gymraeg](#)  
[Translation of published technical HTW documents from English into Welsh](#)

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| Topic exploration report number | TER668                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Topic                           | Digital therapeutic platforms delivering home-based exercise programmes for people with peripheral arterial disease                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Summary of findings             | <p>Peripheral artery disease (PAD) constitutes a condition that reduces blood flow to the legs, with intermittent claudication representing its most prevalent symptomatic manifestation. It can lead to reduced functional ability and quality of life. Exercise therapy is the recommended first-line treatment for the PAD management; thus, digital interventions incorporating smartphone applications and/or wearable devices have emerged to support patient adherence, exercise activity and functional outcomes.</p> <p>In 2012, NICE published clinical guidelines (CG147) on the diagnosis and management of PAD. CG147 recommends supervised exercise therapy (SET) programmes as first-line treatment for intermittent claudication in PAD, alongside best medical therapy and risk factor modification. The 2019 ESVM and 2024 ACC/AHA guidelines also align with CG147, recommending SET and community-based (including home-based) programmes as a first-line treatment for PAD management.</p> <p>One Cochrane review, including four RCTs of mobile health (mhealth) technologies to improve walking distance in people with intermittent claudication, was identified. The evidence was limited and was low certainty, suggesting no clear benefit of an effect on absolute walking distance between mhealth interventions and usual care. Additionally, a systematic review of tracking-based system technologies for the management of intermittent claudication was found, reporting that mhealth interventions may improve physical activity and walking capability. However, the evidence was heterogenous with moderate certainty and limited long-term follow-up.</p> <p>Emerging evidence from four RCTs suggested that home-based exercise programmes using app-based and/or wearable-based interventions might enhance physical activity and walking capability of people with PAD. However, the evidence remained limited due to small sample sizes, heterogenous interventions, and short follow-ups.</p> <p>Two additional ongoing RCTs were identified.</p> <p>No direct economic evidence was found.</p> <p>Overall, current evidence suggests that app-based and wearable-supported interventions for the management of PAD may improve physical activity, and walking ability (e.g., speed) compared to no intervention or usual care. However, the findings are limited by small, heterogeneous RCTs and short follow-ups. Ongoing RCTs, may help strengthen the evidence base and provide greater certainty regarding their effectiveness. The absence of direct economic evidence leaves the cost-effectiveness of the intervention uncertain.</p> |

## Introduction and aims

Peripheral arterial disease (PAD) is a condition characterised by reduced blood flow to the limbs, predominantly the legs, due to narrowing or blockage of the peripheral arteries, most commonly caused by atherosclerosis (Mureebe 2025). Most people with PAD show no symptoms; however, when present, the symptoms typically involve muscle pain or cramping during walking, climbing or other activities (i.e., intermittent claudication), and leg numbness or weakness, among others (NHS 2026a). PAD is associated with an increased risk of amputation, myocardial infarction, stroke, and death, as well as mobility limitations, changes in functional status, and reduced quality of life (QoL) (Gornik et al. 2024). The prevalence of PAD is similar in men and women (Kim et al. 2025) and increases with age, with approximately 15% to 20% of people aged between 55 to 75 years in the UK showing clinical evidence of PAD (Mureebe 2025, Burns et al. 2003, Fowkes et al. 1991, Kyle et al. 2020). Currently, there is no curative treatment for PAD; however, pharmacotherapy (e.g., statins, antihypertensives, anticoagulants) and life-style changes, such as exercising, following a healthy diet, and stop smoking, may help reduce symptoms (NHS 2026b). If symptoms have failed to respond to these approaches, angioplasty or bypass surgery (i.e., revascularisation) may be recommended (NHS 2026b).

Supervised exercise therapy (SET) for patient with PAD constitutes a structured, start-and-stop walking programme aiming to improve symptoms and functional capacity. At each SET session, lasting from 30 to 60 minutes, the patient alternates intervals of walking with intervals of rest, with the goal of increasing pain-free and total walk time (Khoury et al. 2022). In addition, app-based and other virtual platforms to monitor activity and exercise are becoming increasingly available on the market to promote physical activity and exercise, supporting patients to integrate exercise into their daily lives. These tracking-based technologies may improve accessibility, particularly for those who are unable to travel to access hospital-based SET programmes (Makris et al. 2012). An example of digital therapeutic platform delivering home-based SET for people with PAD is Walk-A-Cise (UK), which has Class I certification and is UKCA-marked. This platform combines GPS-tracked walking therapy, claudication symptom capture, 6-minute walk testing (6MWT), animated exercise programmes, wearable integration and clinician dashboards, enabling the delivery of virtual SET as well as providing real-time feedback directly to the clinician. It is claimed to encourage behavioural changes, promote patient adherence and assist in identifying people who may require invasive procedures, potentially reducing delayed presentations.

Health Technology Wales researchers searched for evidence on digital therapeutic platforms delivering home-based exercise programmes for people with PAD.

## Evidence overview

### Guidance and guidelines

In 2012, the National Institute for the Health and Care Excellence (NICE) produced clinical guidelines (CG147) on the diagnosis and management of PAD in adults (NICE 2012). According to CG147, the management of intermittent claudication involves SET programmes, angioplasty and stenting, bypass and graft types, as well as pharmacological treatment. CG147 recommendations highlighted that SET (alongside best medical therapy and risk factor modification) should be offered to all people with intermittent claudication, involving 2 hours of weekly supervised exercise for a 3-month period and encouraging people to exercise to the point of maximal pain (NICE 2012). Additionally, NICE has published a quality standard (QS52) statement supporting that SET programmes can improve walking distance and QoL for people with intermittent claudication, noting that the provision of services varies across the country and therefore there is a need for both new provision and improvement in existing care (NICE 2014).

## Evidence overview

International guidelines, including the European Society of Vascular Medicine (ESVM) recommendations (Frank et al. 2019) and the American College of Cardiology (ACC) and American Heart Association (AHA) guidelines (Gornik et al. 2024), are broadly aligned with CG147 (NICE 2012), also identifying SET as a core first-line treatment for intermittent claudication, among other management options. Both emphasise structure walking exercise programmes (including SET or home-based exercise programmes) as an effective option in improving walking performance and QoL, alongside optimal medical therapy and cardiovascular risk reduction.

### Secondary evidence

High-level searches identified one relevant Cochrane systematic review (Elfghi et al. 2024), as well as one recent systematic review (Sivagangan et al. 2025).

The Cochrane review evaluated the effectiveness of mobile health (mhealth) technologies to improve walking distance in people with intermittent claudication due to PAD. In the review, four randomised controlled trials (RCTs), involving a total of 614 people with intermittent claudication, were included. All the studies were conducted in the United States (Elfghi et al. 2024). The study size ranged from 19 to 305, with mean age mostly above 65 years. Across the evidence, the intervention duration ranged from three to 12 months. Elfghi et al. (2024) reported that there was no clear evidence of an effect on absolute walking distance between mhealth interventions and usual care (2 studies; mean difference 9.99 metres, 95% confidence interval [CI] -27.96 to 47.93). None of the included studies reported on change in claudication walking distance, amputation-free survival, revascularisation-free survival, major adverse limb events or above-ankle amputations. Only one study reported on major adverse cardiovascular events and found no statistically significant difference between groups (risk ratio [RR] 1.37, 95% CI 0.07 to 28.17). Elfghi et al. (2024) highlighted that evidence focusing on mhealth technologies was limited and was low certainty. Thus, there is a need for larger, well-designed, RCTs to provide more insights on the effects of mhealth technologies on walking distance in people with intermittent claudication due to PAD.

Sivagangan et al. (2025) conducted a systematic review on tracking-based system technologies (TBTs) for the management of intermittent claudication. Eighteen studies were included; of these, 15 were RCTs and three were cohort studies. Most of the studies were conducted in the US (10, 56%), followed by four in the United Kingdom (22%), and one each (6%) in Austria, Belgium, Germany, and the Netherlands. The study size ranged from seven to 252, with the mean age mostly above 65 years. All studies included people clinically diagnosed with PAD, with most patients presenting symptomatic intermittent claudication (16 studies, 89%). Most of the studies involved TBTs (i.e., wearable activity monitors, or mhealth platforms) with home-based exercise therapy, while two studies incorporated TBTs with SET. Of the two studies, one initiated SET then progressed to home-based exercise therapy and the other applied TBT interventions combined with SET sessions. Comparators involved provision of a booklet or brochure, bimonthly video materials, light-resistance band programme, or activity monitors (with feedback disabled for data viewing), while two studies did not describe the type of care provided. Sivagangan et al. (2025) reported that a meta-analysis was not feasible due to study heterogeneity. Across the 18 studies, only a limited number of studies reported on walking performance (i.e., 6MWT, maximum walking distance and time, claudication onset time and distance), functional status and health-related QoL outcomes. Overall, Sivagangan et al. (2025) reported that people who received TBT interventions showed improvements in 6MWT (seven out of 10 studies, 70%), maximum walking time (three out of five studies, 60%), and claudication onset time (four out of five studies, 80%) compared to those in the control group. Additionally, Sivagangan et al. (2025) found that TBT was comparable or superior to SET during the 6MWT. In terms of functional status and health-related QoL outcomes, the evidence generally showed no statistically significant difference between TBT and control groups across

## Evidence overview

the included studies (only one study showed a difference). Sivagangan et al. (2025) highlighted that only four studies have used mhealth platforms, making it difficult to draw reasonable comparisons between the different types of monitoring due to insufficient data. Sivagangan et al. (2025) concluded that further research on adherence and compliance rates, as well as long-term outcomes is essential to assess the effectiveness of TBT in combination with SET since the current available evidence is limited.

### Primary evidence

Four additional primary studies (Fanaroff et al. 2025, Mancuso et al. 2025, Prentis et al. 2025, Rezvani et al. 2024), published after the search cut-off dates of the included secondary evidence, were identified and are reported below.

Fanaroff et al. (2025) conducted a single-centre RCT in the US, comparing gamification alongside automated coaching with no intervention (attention control) in 103 people with PAD. All participants were provided with a wearable fitness tracker (i.e., Fitbit), established a baseline daily step count, and set a step goal increase. The gamification-augmented home-based exercise intervention involved a 16-week game designed using insights from behavioural economics and received educational text messages, while the control group received feedback from the fitness tracker without any intervention. Fanaroff et al. (2025) reported that the gamification with automated coaching demonstrated greater increase in mean daily steps than no intervention during the intervention period (adjusted difference 920 steps, 95% CI -22 to 1861,  $p = 0.06$ ), becoming statistically significant at follow-up period (adjusted difference 1074 steps, 95% CI 133 to 2015,  $p = 0.03$ ). Improvements were similarly observed for Walking Impairment Questionnaire (WIQ) overall score and distance subscale, as well as Short Form (SF)-36 general health and health change subscales at 16 and 24 follow-up weeks, with only SF-36 health change reaching statistical significance (mean difference 11.5, 95% CI 0.4 to 22.7).

Mancuso et al. (2025) conducted a single-centre RCT in the UK, comparing remotely SET with self-directed exercise in 44 people with intermittent claudication. All participants were required to keep an electronic walking log, using the smartphone GPS-tracked app Map MyWalk (Outside, US). The remotely SET intervention involved fortnightly video or telephone calls with a physiotherapist, offering tailored exercise and progress review, aiming for at least 120 minutes of leg exercise per week. Self-directed exercise involved clinician advice on exercise benefits, with people build up to 120 minutes per week of any leg-focused exercise activity, including regular walking. The withdrawal rate was 27% of randomised participants. Mancuso et al. (2025) reported no significant between-group differences in maximum walking distance ( $p = 0.08$ ) and health-related QoL ( $p = 0.10$ ) at 6 months.

Prentis et al. (2025) conducted a pilot single-centre RCT in the UK, comparing a home-based telehealth intervention with usual care in 36 people with PAD from socioeconomically deprived areas of the UK. All participants were provided with a wearable fitness tracker (i.e., Fitbit). The home-based telehealth intervention combined exercise and behaviour change counselling via Zoom (twice per week; up to 5 patients per session), including resistance and aerobic exercises delivered and supervised by trained professionals. Usual care involved general risk factor modification advice and recommendations from the research team for unsupervised walking (30 minutes, 3 to 5 times per week). Prentis et al. (2025) reported significant improvements in the home-based telehealth intervention group compared to usual care in walking speed (mean standard error [SE]: intervention 22.2 (4.6) vs control mean 5.5 (4.9); standardised mean difference [SMD] 1.0,  $p = 0.002$ ), stair-climbing ability (mean SE: intervention 20.0 (7.0) vs control -5.6 (5.3); SMD 1.22,  $p = 0.001$ ) and QoL (mean SE: intervention 3.7 (0.81) vs control 0.41 (0.95); SMD 1.11,  $p < 0.01$ ). However, no significant between-group differences were observed in 6MWT ( $p = 0.38$ ), alcohol intake ( $p = \text{NR}$ ), or dietary habits ( $p =$

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0.16). Prentis et al. (2025) highlighted that the digitally delivered, home-based telehealth intervention demonstrated potential benefits for functional capacity and health behaviours. However, as the study was not powered to evaluate effectiveness, these findings should be interpreted with caution.

Rezvani et al. (2024) conducted a pragmatic, multicentre RCT in Germany, comparing telephone health coaching with remote exercise monitoring (TeGeCoach) with usual care in 1,982 people with symptomatic intermittent claudication. The TeGeCoach intervention used a patient-centred approach integrating motivational interviewing, shared decision-making, and active listening, delivered by trained coaches under primary care physician supervision. It included telephone health coaching, remote walking exercise monitoring via wearable monitors and intensified primary care. Usual care involved information on courses on exercise and lifestyle programmes offered by statutory health insurance, such as SET, physical therapy, nutritional support, smoking cessation, weight management, and patient education. Rezvani et al. (2024) reported a significant between-group difference favouring TeGeCoach ( $p < 0.0001$ ), with a mean difference of 6.30 WIQ points (Bonferroni-corrected 95% CI 4.02 to 8.59; Cohen's  $d = 0.26$ ) at 12 months and 4.55 points (95% CI 2.20 to 6.91,  $d = 0.19$ ) at 24 months compared with usual care. These results were supported by the WIQ subscales of walking distance and speed (12 and 24 months) and by several secondary outcomes that showed at least small effects ( $d > 0.20$ ) in favour of TeGeCoach, including measures of physical health-related QoL and patient activation at 12 months. However, the average daily step count was not higher in the TeGeCoach (Rezvani et al. 2024).

## Ongoing studies

HTW researchers identified two ongoing RCTs (NCT07012070, NCT07550959). NCT07012070 is being conducted in China, and is recruiting participants, comparing a SET with remote monitoring using wearable activity-tracking devices versus SET. Relevant outcomes include walking capacity (i.e., distance, speed, stair climbing), muscle strength, health-related QoL, and cost effectiveness. NCT07550959 is being conducted in Turkey, and is not yet recruiting, comparing an enhanced, app-based, home-based exercise programme with wearable activity monitoring versus SET. Relevant outcomes include muscle strength, walking tolerance, claudication pain severity, and daily activity level.

## Economic evidence

The cost of a typical 3-month SET programme is approximately £288 (£232 to £345) per person, including the cost of physiotherapists, technical personnel, room and equipment rental, and specialist nurses (data from 2010) (Birmingham et al. 2013). Although the cost-effectiveness of TBTs is limited, their app-based delivery may reduce implementation costs and improve affordability, while also potentially increasing accessibility over time (Sivagangan et al. 2025). The costs associated with the devices and mhealth applications need to be considered and calculated (Sivagangan et al. 2025).

## Areas of uncertainty

- Overall, there is currently limited evidence regarding the effectiveness of mhealth technologies for the management of intermittent claudication due to PAD. Thus, the presented findings should be interpreted with caution.
- The secondary evidence included limited studies on mhealth platforms for PAD, with a relatively small sample sizes and low certainty. Thus, the evidence was not sufficient to generate a reasonable comparison between the different types of monitoring. Moreover,

## Areas of uncertainty

most studies were conducted internationally, particularly in the US, which might limit its applicability to the Welsh healthcare system.

- The primary evidence identified evaluated smartphone and wearable-integrated interventions, often incorporating diverse components, such as telehealth coaching, behavioural support, gamification, and remote monitoring, rather than home-based SET alone. In general, these interventions showed improvements in psychical activity, with some RCT demonstrating improvements in functional walking outcomes. However, the evidence remains limited by small sample sizes, heterogenous interventions, lack of standardised PAD-specific digital platforms, and short follow-up durations.
- None of the evidence reports on amputation-free and/or revascularisation-free survival, as well as major adverse events.
- No published economic evidence was identified, leaving uncertainty regarding the cost-effectiveness of mhealth and/or wearable-activity technologies for the management of intermittent claudication due to PAD.

## Literature search results

### Health technology assessments and guidance

NICE. (2012). Peripheral arterial disease: diagnosis and management [Original publication date: 08 August 2012; Last updated: 11 December 2020]. Clinical guideline CG147. National Institute for Health and Care Excellence. Available at: <https://www.nice.org.uk/guidance/cg147> [Accessed 08 June 2026].

NICE. (2014). Peripheral arterial disease. Quality standard QS52. National Institute for Health and Care Excellence. Available at: <https://www.nice.org.uk/guidance/qs52> [Accessed 08 June 2026].

### Evidence reviews and economic evaluations

Elfghi M, Dunne D, Jones J, et al. (2024). Mobile health technologies to improve walking distance in people with intermittent claudication. Cochrane Database Syst Rev. CD014717(2). doi: <https://dx.doi.org/10.1002/14651858.CD014717.pub2>

Frank U, Nikol S, Belch J, et al. (2019). ESVM guideline on peripheral arterial disease. VASA: Zeitschrift für Gefässkrankheiten. Journal for vascular diseases. 48: 1-79. doi: <https://doi.org/10.1024/0301-1526/a000834>

Gornik HL, Aronow HD, Goodney PP, et al. (2024). 2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VESS guideline for the management of lower extremity peripheral artery disease: a report of the American College of Cardiology/American Heart Association Joint Committee on clinical practice guidelines. Journal of the American College of Cardiology. 83(24): 2497-604. doi: <https://doi.org/10.1016/j.jacc.2024.02.013>

### Individual studies

Fanaroff AC, Coratti S, Farraday D, et al. (2025). Effect of gamification plus automated coaching to increase physical activity among patients with peripheral artery disease: The GAMEPAD randomized controlled trial. J Am Heart Assoc. 14(24): e038921. doi: <https://doi.org/10.1161/jaha.124.038921>

Mancuso E, Hayward L, Chan D, et al. (2025). Feasibility randomized controlled trial of remotely supervised exercise versus self-directed exercise for intermittent claudication. Annals of vascular surgery. 119: 46-53. doi: <https://doi.org/10.1016/j.avsg.2025.04.118>

Prentis J, Radhakrishnan A, Kaner E, et al. (2025). Telehealth exercise training in peripheral arterial disease (TEXTPAD) study: a pilot randomised controlled trial in socioeconomically disadvantaged populations. PLoS One. 20(11): e0327633. doi: <https://doi.org/10.1371/journal.pone.0327633>

Rezvani F, Heider D, König HH, et al. (2024). Telephone health coaching and remote exercise monitoring (TeGeCoach) in peripheral arterial occlusive disease—a randomized controlled trial. Dtsch Arztebl Int. 121(10): 323-30. doi: <https://doi.org/10.3238/arztebl.m2024.0008>

### Ongoing research

NCT07012070. Improving walking performance in patients with peripheral artery disease through wearable activity trackers. Trial registry record. Available at: <https://clinicaltrials.gov/ct2/show/NCT07012070> [Accessed 25 Jun 2026].

NCT07550959. Evaluation of the effectiveness of hybrid cardiac rehabilitation in peripheral artery disease. Trial registry record. Available at: <https://clinicaltrials.gov/study/NCT07550959> [Accessed 25 Jun 2026].

### Other

#### Submitted by the topic proposer

Sivagangan P, Mancuso E, Sanders I, et al. (2025). Systematic review of tracking-based technology for patients with claudication. Vasc Med. 30(3): 353-63. doi: <https://dx.doi.org/10.1177/1358863X251316198>

### Evidence cited in the Introduction and aims section

Bermingham SL, Sparrow K, Mullis R, et al. (2013). The cost-effectiveness of supervised exercise for the treatment of intermittent claudication. *European Journal of Vascular and Endovascular Surgery*. 46(6): 707-14. doi: <https://doi.org/10.1016/j.ejvs.2013.09.005>

Burns P, Gough S, Bradbury AW. (2003). Management of peripheral arterial disease in primary care. *Bmj*. 326(7389): 584-8. doi: <https://doi.org/10.1136/bmj.326.7389.584>

Fowkes FGR, Housley E, Cawood EHH, et al. (1991). Edinburgh Artery Study: prevalence of asymptomatic and symptomatic peripheral arterial disease in the general population. *International Journal of Epidemiology*. 20(2): 384-92. doi: <https://doi.org/10.1093/ije/20.2.384>

Khoury SR, Ratchford EV, Stewart KJ. (2022). Supervised exercise therapy for patients with peripheral artery disease: clinical update and pathways forward. *Progress in Cardiovascular Diseases*. 70: 183-9. doi: <https://doi.org/10.1016/j.pcad.2022.01.006>

Kim ESH, Arya S, Bryce Y, et al. (2025). Sex differences in peripheral vascular disease: a scientific statement from the American Heart Association. *Circulation*. 151(14): e877-e904. doi: <https://doi.org/10.1161/CIR.0000000000001310>

Kyle D, Boylan L, Wilson L, et al. (2020). Accuracy of peripheral arterial disease registers in UK general practice: case-control study. *J Prim Care Community Health*. 11: 2150132720946148. doi: <https://doi.org/10.1177/2150132720946148>

Makris GC, Lattimer CR, Lavidia A, et al. (2012). Availability of supervised exercise programs and the role of structured home-based exercise in peripheral arterial disease. *Eur J Vasc Endovasc Surg*. 44(6): 569-75; discussion 76. doi: <https://doi.org/10.1016/j.ejvs.2012.09.009>

Mureebe L. (2025). Peripheral arterial disease. Specialties: Cardiology. *BMJ Best Practice*. Available at: <https://bestpractice.bmj.com/topics/en-gb/431> [Accessed 08 June 2026].

NHS. (2026a). Peripheral arterial disease (PAD): overview. Conditions. National Health Service. Available at: <https://www.nhs.uk/conditions/peripheral-arterial-disease-pad/> [Accessed 06 June 2026].

NHS. (2026b). Peripheral arterial disease (PAD): treatment. Conditions. National Health Service. Available at: <https://www.nhs.uk/conditions/peripheral-arterial-disease-pad/treatment/> [Accessed 06 June 2026].

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|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Date of search | 08 <sup>th</sup> of June 2026                                                                                                                                                              |
| Concepts used  | peripheral arterial disease or peripheral vascular disease; intermittent claudication; supervised exercise therapy or SET; digital or virtual platform; telehealth or remote or home-based |

## Proposed research question and evidence selection criteria (if selected)

|                                   |                                                                                                                                                                                    |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Proposed Research question</b> | <b>What is the clinical and cost effectiveness of digital therapeutic platforms delivering home-based supervised exercise therapy for people with peripheral arterial disease?</b> |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                | <b>Inclusion criteria</b>                                                                                                                                                                                                                                                                                                                                          | <b>Exclusion criteria</b> |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| <b>Population</b>              | Peripheral arterial disease                                                                                                                                                                                                                                                                                                                                        |                           |
| <b>Intervention</b>            | Digital therapeutic platforms delivering home-based supervised exercise therapy (SET)                                                                                                                                                                                                                                                                              |                           |
| <b>Comparison/ Comparators</b> | <ul style="list-style-type: none"> <li>Standard care (i.e., life-style approaches, pharmacotherapy, or revascularisation)</li> <li>No treatment or waiting list</li> <li>Sham treatment alone or in addition to standard care</li> </ul>                                                                                                                           |                           |
| <b>Outcome measures</b>        | <ul style="list-style-type: none"> <li>Pain severity</li> <li>Walking capacity (including walking distance, time, or speed, stair climbing)</li> <li>Pain-free walking distance or time</li> <li>Patient adherence</li> <li>Adverse events</li> <li>Mortality</li> <li>Health -related quality of life</li> <li>Resource use</li> <li>Economic outcomes</li> </ul> |                           |

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| <b>Proposed speciality</b> | <b>Cardiovascular System</b> |
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