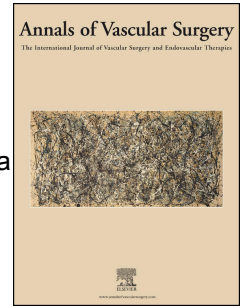


Journal Pre-proof

high INTensity Interval Training In pATiEnts with intermittent claudication (INITIATE): a qualitative acceptability study

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1 **high INTensity Interval Training In pATiEnts with intermittent claudication**
2 **(INITIATE): a qualitative acceptability study**

3 Short title: Acceptability of high-intensity interval training in intermittent claudication

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32

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34

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36 request to the corresponding author.

37

38

Journal Pre-proof

39 **Introduction:** A novel high-intensity interval training (HIIT) programme has demonstrated
40 feasibility for patients with intermittent claudication (IC). The aim of this study was to
41 explore patient perspectives of the HIIT programme to inform refinement and future research.
42

43 **Methods:** All patients screened and eligible for the ‘high intensity interval training in
44 patients with intermittent claudication (INITIATE)’ study, were eligible to take part in a
45 semi-structured interview. A convenience subsample of patients was selected from three
46 distinct groups: 1) those who completed the HIIT programme, 2) those who prematurely
47 discontinued the HIIT programme and 3) those who declined the HIIT programme.
48 Interviews considered patients views of the programme and experiences of undertaking
49 and/or being invited to undertake it. Interviews were audio recorded, transcribed verbatim
50 and analysed via thematic analysis.
51

52 **Results:** Eleven out of 31 participants who completed the programme and twelve out of 38
53 decliners were interviewed. No participants who withdrew from the programme agreed to
54 interview. The three key themes were; personal reflections of the programme; programme
55 facilitators and barriers; and perceived benefits. Completers enjoyed taking part, reported
56 symptomatic improvement and would complete it again. Practical and psychological barriers
57 exist, such as transport and motivation. Changes to the programme were suggested.
58

59 **Conclusion:** Findings support the acceptability of this novel HIIT programme, which in
60 combination with the feasibility findings, suggest that a fully powered randomised controlled
61 trial, comparing HIIT to usual-care supervised exercise programmes is warranted.
62

63 **Study registration:** NCT04042311
64

65 **Study funding:** This study is funded by the NIHR [Research for Patient Benefit programme
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67 those of the NIHR or the Department of Health and Social Care

68 Introduction

69 Uptake and adherence to supervised exercise programmes (SEP), the first-line treatment for
70 intermittent claudication (IC)^{1,2}, is suboptimal³. Time is a key patient barrier⁴⁻⁶. This had led
71 us to develop an alternative, more time-efficient exercise programme, in the form of high-
72 intensity interval training (HIIT)^{7,8}, which has completed the feasibility phase⁹. The Medical
73 Research Council guidance notes that intervention acceptability is a key element to be
74 considered within the feasibility phase¹⁰. Additionally, when complex intervention research
75 transitions from one phase to another, refinements may be required and involving
76 intervention users in this refinement process can improve the feasibility and acceptability of
77 the future, refined intervention¹⁰. Qualitative research provides an opportunity to understand
78 patient acceptability of the intervention by exploring their experiences, whilst also giving
79 them the opportunity to inform potential refinements.

80
81 The evidence base for HIIT in patients with IC is limited⁷, and although this intervention has
82 been considered in patients with coronary artery disease¹¹, it is novel in the IC population, so
83 acceptability testing, and patient led refinement are important development steps.
84 Additionally, although this intervention is designed to be more time-efficient, it may mean
85 that other barriers become more pertinent and these need to be understood and addressed in
86 future iterations. Finally, other patient-level factors such as motivation or enjoyment³ may
87 lead to disengagement with the intervention which could impact on adherence. Therefore, the
88 aim of this qualitative study was to investigate patient perceptions, and therefore
89 acceptability, of our HIIT programme to inform intervention refinement and future research.

90

91

92

93 **Methods**

94 **Study design**

95 This qualitative study, reported in accordance with the COREQ checklist (Appendix 1), was
96 embedded within the ‘high INTensity Interval Training In pATiEnts with intermittent
97 claudication’ (INITIATE) study⁹. This was a single-arm, proof-of-concept study, performed
98 at two UK NHS Trusts, recruiting patients with IC, referred to a usual-care SEP. The study
99 was registered prospectively on clinicaltrials.gov (NCT04042311) and all study procedures
100 were approved by a UK NHS Research Ethics Committee (reference: Bradford Leeds –
101 18/YH/0112). Full details of the patient identification and recruitment processes and the
102 inclusion / exclusion criteria for INITIATE are provided in the study protocol, as is a
103 description of the intervention¹².

104 Briefly, the intervention was a six-week, supervised HIIT programme performed three times
105 per week, using a stationary cycle ergometer. Intensity was set using a baseline
106 cardiopulmonary exercise test.

107 In-depth, semi-structured interviews were conducted with a convenience subsample from
108 three distinct groups:

109 **Group one:** participants who successfully completed the HIIT programme.

110 **Group two:** Those who agreed to participate in the HIIT programme but discontinued after
111 ≥ 1 session.

112 **Group three:** Participants who were eligible for recruitment to INITIATE but declined to
113 participate.

114 **Consent and Data collection**

115 All patients approached for the INITIATE study were eligible for interview, and study
116 consenters were able to opt in or out of the interview whilst consenting to the study. Patients
117 were approached via mail with a follow-up telephone call. Patients who declined to take part

118 in the INITIATE study were asked if they would agree to be interviewed and interview-
119 specific consent was obtained. Participants interviewed via telephone provided verbal
120 consent, which was audio recorded.

121 One-off, semi-structured interviews were undertaken. All interviews were informed by a
122 topic guide, adapted from similar studies previously undertaken by the authors (SP and AEH;
123 Appendix 2). Interviews were flexible to allow exploration of participant responses.
124 Participants were informed that they did not have to answer questions that they felt unable to
125 and that all responses were confidential. All interviews were audio recorded, transcribed
126 verbatim and pseudonymised. Field notes were not made. All interviews were conducted by
127 the lead researcher (SP), a male post-graduate exercise physiologist, who had attended a
128 National Centre for Social Research training course, and was supervised by MT, an
129 experienced qualitative researcher. A PhD student was present for five interviews; all other
130 interviews were conducted with only the researcher and participant present.

131

132 Interviews were conducted face-to-face in a private clinic room or via telephone to
133 accommodate COVID-19 restrictions. Telephone interviews result in a loss of visual cues but
134 there is no evidence that they produce lower quality data¹³, and this option allowed
135 participants to take part without attending the research site.

136

137 **Outcomes of interest**

138 The outcomes of interest were related to patients views of the structure of the HIIT
139 programme and experiences of undertaking and/or being invited to undertake it.

140

141 **Sample size and data analysis**

142 A specific, pre-specified sample size was not set but using informational power as a guide¹⁴,
143 a target of 10 interviews per group was set as the minimum sample size given the focussed
144 topic.

145 NVivo (Lumivero, 2022, release 1.7.1) was used to manage the data and line by line coding
146 was performed by the lead researcher (SP) using an inductive thematic analysis approach,
147 whereby concepts were identified from within the data¹⁵. This involved reading and re-
148 reading the transcripts and creating initial codes for any statements that were related to the
149 research questions. Similar codes and patterns of responses were then merged together into
150 final codes which were grouped and placed into themes, using a coding matrix (Table 1).
151 To ensure that the analysis was robust, the coding matrix and raw data were reviewed by the
152 supervisor (MT). The analysis was further refined through discussion of the initial and final
153 themes. Transcripts were not returned to participants for clarification prior to analysis nor
154 was feedback provided on the findings.

155

156 **Results**

157 Quantitative data regarding screening, eligibility, recruitment, completion, adherence and
158 measures of walking distance and quality of life are available elsewhere⁹. All 31 participants
159 that completed the exercise programme opted into taking part in an interview during the
160 consent process. Eleven were selected for interview, four from one site and seven from the
161 other. Thirteen patients who declined the HIIT programme were interviewed. The first 12
162 decliners contacted from site one agreed to be interviewed. All 26 decliners from site two
163 were contacted for interview; one consented. Four participants commenced the intervention
164 and chose to withdraw but none agreed to an interview. In total, 73 patients were approached
165 for interview, 44 agreed and 24 were selected (11 completers and 13 decliners).

166 Of the 24 interviewees, the mean age was 71 ± 8 years, ranging from 59 to 89 years and 68%
167 were male. For completers, the mean age was 72 ± 4 years and 82% were male. For decliners,
168 the mean age was 70 ± 9 years and 54% were male. The age range of those completing the
169 intervention and participating in an interview was slightly narrower than the overall cohort of
170 participants completing the intervention (66 to 81 years compared to 51 to 88 years).
171 Eight interviews were conducted face-to-face and 16 over the telephone. Interviews lasted
172 between six and 33 minutes.

173

174 Three major themes were identified with several sub-themes (Table 1). These themes are
175 explored below, and quotes are provided with key participant characteristics to aid
176 interpretation.

177

178 **Personal Reflections of the programme**

179 *Gruelling but beneficial*

180 Generally, the programme was well received, with the majority of those who participated in
181 the exercise intervention providing positive feedback such as “*I thought it was really good*”
182 (*Completer, female, 66*) and “*I thoroughly enjoyed it*” (*Completer, male, 72*). Despite this
183 positive feedback, some found the programme very hard, “*quite hard really, yes*” (*Completer,*
184 *male, 81*), but this was not sufficient to prompt them to drop out. Even when they described
185 the programme as good this did not mean participants necessarily enjoyed it, with most
186 finding it hard work, and one person describing it as “*gruelling*” (*Completer, male, 69*). A
187 minority even described it as painful... “*it was extremely painful*” (*Completer, male, 67*).
188 However, completers talked about how that the programme got easier over time. In addition,
189 they felt that the difficulty of the programme was necessary to provide a benefit...
190 “*...sometimes you have got to go that bit further haven't you and just push yourself a bit*

191 *more to get a result*” (Completer, female, 66) and some reported enjoying the challenge of it.
192 It is also likely that the difficulty/challenge of the programme contributed to the sense of
193 achievement reported upon completion of each session “*oh yeah, from start to finish there is*
194 *a sense of achievement*” (Completer, male, 69). Finally, most completers stated that they
195 would be willing to complete the programme again and would also encourage others.

196

197

198

199 ***Exercise programme components***

200 Most participants, including completers and decliners, were happy with the structure of the
201 programme. The HIIT intervention involved 20-minute sessions, plus a warm-up and cool-
202 down. Most participants were happy with the length of each session, although, three
203 participants suggested reducing the warm-up and cool-down to five minutes each, which
204 would reduce the session length to 30 minutes. Additionally, the frequency of three times per
205 week was too burdensome for some, “*I think three times a week would be too much*”
206 (Decliner, male, 78). For others, the challenging time commitment was not
207 insurmountable... “*It was it was tricky at the beginning to start managing it, but it was OK –*
208 *I could do it, yes*” (Completer, male, 67). In contrast, everyone thought the programme
209 duration of six weeks was acceptable and the minimum programme length thought to be
210 worthwhile. For some, as expected, six weeks was more attractive than the 12-week SEP.

211

212 Cycling was the exercise modality used. Some found the saddle uncomfortable, and one
213 interviewee declined the programme as they had been advised not to cycle following
214 orthopaedic surgery. For the majority, cycling was acceptable and several completers stated
215 that they preferred using the bike over the treadmill, although others felt that being offered a

216 variety of exercise formats may have improved the programme... *“perhaps you could do a*
217 *mixture, one session on the bike and one session on the treadmill”* (Completer, male. 68).

218

219 Some sessions were delivered one-to-one, whilst others were delivered in a group-based
220 setting. A large proportion of participants were willing to engage in a group-based
221 programme, and felt that it would add a social or competitive element, which could
222 encourage people to continue... *“I think that would be good because you could communicate*
223 *and say, well how are you getting on?”* (Completer, male. 68). There was some suggestion
224 that a group-based programme may put some people off participating due to the potential for
225 embarrassment or an adverse response to competition, but overall, a group-based programme
226 was viewed as acceptable going forwards.

227

228 **Programme facilitators and barriers**

229 ***Recognising the benefits***

230 Study accepters took part because they recognised the potential benefits of exercise, either for
231 themselves, or for future patients *“If it gives you some guidance... to the programme that you*
232 *are doing... I was pleased to take part for that reason”* (Completer, male. 75) and *“I thought*
233 *well I will go if it does somebody else any good...”* (Completer, male. 81).

234

235 Most participants perceived there to be a personal benefit to their symptoms, health or both.
236 *“I wanted to improve my walking actually... and perhaps improve my health as well”*
237 (Completer, male. 68). The benefits of exercising with little perceived risk was also important
238 *“It is not hurting you in any way is it and I mean exercise, even if it didn’t make your legs*
239 *any better, it’s got to be good for other parts of your body...”* (Completer, female. 66). This
240 was echoed by others who stated that participation was a ‘no lose’ situation.

241

242 ***Practical barriers to taking part***

243 Three key physical barriers were identified, namely: time, location and transport difficulties
244 and cost. These impacted some participants more than others and worked in isolation or in
245 combination. As mentioned above, the time commitment of the programme was still
246 perceived as a barrier for some, despite a reduction in the programme length from 12 to six
247 weeks. Additionally, the programme ran during working hours, and so did not always fit in
248 with participants daily lives... *“it’s just with me working, that’s the problem”* (Decliner,
249 *female. 62*). For retirees, the absence of work was given as a reason why they could attend
250 the programme *“not really, no, because, I am retired now, so don’t have to take time off*
251 *work”* (Completer, *male. 68*), highlighting time, and time of day, as a key challenge for the
252 intervention.

253

254 At one site, exercise sessions were held at a hospital and the distance people had to travel
255 combined with poor transport links were barriers to participation *“well it were too far really,*
256 *to come”* (Decliner, *male. 77*). For those relying on public transport, attending could mean
257 taking multiple buses, adding time and increasing costs. Only one participant mentioned cost
258 as a personal barrier, though others alluded to it, noting the importance of things like free
259 parking or bus travel, often available to those of pension age. This suggests that like time,
260 cost may be a more influential barrier for those of working age.

261 Other physical barriers included severe co-morbidities that were worse than IC and precluded
262 participation.

263

264 **Barriers**265 ***Psychological barriers to taking part***

266 Motivation to exercise acted both as an important barrier, but also facilitator to participation.
267 Some participants acknowledged their own lack of motivation to exercise. For these
268 participants, the structured, centre-based, supervised nature of the intervention was the reason
269 they enrolled on the programme, as these participants were aware that they would not pro-
270 actively exercise at home, due to their lack of motivation “*because it is as I told you before,*
271 *exercise is not something that is at the top of my list, never has been*” (completer, female, 66).
272 However, a lack of motivation was also put forward as a reason why ‘other people’ may not
273 take part... “*people have to put the effort in*”.

274 Another mental barrier was a lack of awareness. It was identified that some patients may lack
275 awareness of their condition, the treatments including exercise, and the benefits of it. One
276 participant described how the symptoms of IC can be misinterpreted, resulting in a delay in
277 diagnosis “*about 12 or 18 months before I tore my Achilles... and that took about 10 months*
278 *to recover and it was not long after that this started and I did not know whether it was*
279 *associated*” (Completer, male. 72). Even with a diagnosis, some participants were unaware
280 of the benefits of exercise as a treatment for IC, and did not understand the need to induce
281 pain to improve symptoms via the growth of collateral circulation “*I am just trying to think,*
282 *how could exercises do anything to your artery, if it is furred up, how does exercise clear it?*”
283 (Decliner, male. 78). Finally, study decliners in particular found it difficult to distinguish
284 between structured exercise (i.e., SEP) and everyday physical activity. This meant the
285 benefits of SEP were not understood and so they rejected the programme as they believed
286 that the general physical activity they did at home was enough “*I am moving about on it, I*
287 *just don't think there's gonna be any more benefits from what I'm actually doing*” (Decliner,
288 *female. 64*).
289

290 It was common for patients to be anxious about taking part and a fear of the unknown, a fear
291 of failure and a belief that they would not be able to complete the programme put some off
292 even attempting it... *“because I think it did like scare me off a little bit thinking it would be a
293 bit too much and I wouldn’t be able to do it” (Decliner, female. 69).*

294

295 ***Reducing barriers or encouraging engagement***

296 Participants identified strategies that could encourage participation. Offering reimbursement
297 to those unable to access free transport and parking *“but if it was covered for them, they
298 would be naff not to take it up” (Completer, male. 69)*, reducing the frequency of exercise
299 sessions to twice per week *“I think if I had to go somewhere it is too much... I could do twice
300 [a week]” (Decliner, female, 59)* and having multiple exercise locations were viewed as key
301 to addressing the practical barriers faced by patients.

302

303 Education to improve understanding was viewed as useful, especially to reduce anxiety
304 related to a fear of the unknown and failure. Some patients who completed the programme
305 highlighted that their apprehension to exercise had been reduced and they had the confidence
306 to continue exercising... *“I almost had a bit of a phobia about going in the gym. I think that
307 has gone now” (Completer, female. 66)*. Patients also mentioned an increased understanding
308 of their condition, exercise and its benefits in terms of symptoms and the development of
309 collateral circulation.

310

311 Information and education materials about HIIT could be written by patients that have
312 participated in the programme, with quotes to show how they benefitted, as this is more likely
313 to resonate with the reader... *“I think perhaps you could give examples... of other people who
314 have done the course and how it has improved them, could maybe give them examples...*

315 *improvements that could happen*” (Completer, male, 68). However, it was acknowledged that
316 each person has their own learning style and a range of formats should be available, with
317 leaflets, videos and taster sessions, all suggested.

318

319 **Perceived benefits of HIIT**

320 Most patients that completed the programme reporting an improvement in their symptoms in
321 terms of their walking ability “*oh yes yeah, before I used to have regular stops to where I was*
322 *going, but now I can walk further and when I do have to stop, I don’t have to stop for as long*
323 *to recuperate*” (Completer, male, 68). Some patients also reported improvements in other
324 aspects of their health... “*I lost a bit of weight which is always good*” (Completer, male. 72).
325 Others reported a lack of improvement... “*not a lot, no, not a lot...[of improvement], I would*
326 *say about the same*” (Completer, female, 76), or felt that they had not improved, but an
327 improvement had been noted by family members “*my wife said I did walk a bit better, yes*”
328 (Completer, male, 81). One patient who did not report an improvement in their symptoms,
329 was able to realise the benefit of exercise for their general health... “*I knew it was doing me*
330 *good, that’s the main thing*” (Completer, male, 81), which may have contributed to them
331 continuing the programme.

332

333 **Discussion**

334 The aim of this study was to gain an understanding of patient perceptions and therefore
335 acceptability of a novel HIIT programme for patients with IC. Most participants (including
336 decliners) were positive about the programme and its structure, with some minor changes,
337 whilst completers reported symptomatic benefits and would complete it again. Overall, this
338 supports its acceptability.

339

340 Three key changes to the programme were suggested. First, some felt that the frequency
341 could be reduced to once or twice per week. Although current evidence suggests that the
342 optimal SEP frequency for improving walking distance is three times per week, RCT
343 evidence is lacking¹⁶⁻¹⁸. In addition, NICE guidance recommends two hours (i.e. two
344 sessions) per week and existing SEPs in the UK are predominantly delivered over 1-2
345 sessions per week^{2,5}. Therefore, reducing HIIT frequency to twice per week appears
346 reasonable and may further improve acceptability.

347

348 Next, some participants felt that offering a variety of exercises would aid acceptability.
349 However, this would involve a circuit-based approach, which would come at the detriment of
350 intensity (due to the need for changing equipment) and time-efficiency. Therefore, keeping a
351 cycle-based approach appears most appropriate, as this was largely acceptable to patients and
352 will allow them to reach the required intensity¹⁹. The final suggested change was to reduce
353 the length of the warm-up and cool-down to five minutes each, which is supported by
354 international guidelines²⁰ and further reduces the time barrier.

355

356 Several barriers were identified, most of which have been noted previously²¹. A reliance on
357 public transport, and the associated prohibitive factors in terms of time and money, has been
358 demonstrated previously^{21,22}. This may be due to the relationship between low socioeconomic
359 status and PAD²³ and can increase health inequalities amongst patients. It is therefore
360 important to address these barriers. In the short-term, as more research will be required prior
361 to implementation of this HIIT programme, it is important that all patients are reimbursed for
362 any expenses that are incurred, this will also help to ensure that the sample is representative
363 and the intervention is acceptable and appropriate for the target population.

364

365 In the longer term, to aid engagement in SEPs, including HIIT, one possible solution would
366 be to make more exercise centres available so that patients could choose to attend the one
367 closest to them. However, this may not be possible given the current funding, staffing and
368 facility constraints that preclude widespread SEP implementation²⁴, though HIIT may reduce
369 these barriers, potentially increasing provision opportunities. An alternative solution would
370 be to allow patients with IC to be referred into established cardiac rehabilitation (CR)
371 programmes, which are more readily available nationwide²⁵. The same HIIT programme has
372 recently been considered and recommended as an adjunct in UK CR services¹¹, suggesting
373 that in future, HIIT could also be provided to patients with IC in this setting. However,
374 uptake rates for CR programmes, despite their wider availability, are also poor at 50%, so
375 addressing other barriers would be required²⁵, though by combing SEP with CR, this service
376 could become more cost-effective.

377
378 A lack of motivation to exercise is a key barrier for patients, but our data suggest that for
379 some patients at least, a recognition of this, may also act as a facilitator, especially if they
380 have access to a structured SEP, as noted previously in previous studies^{26,27}. Importantly, our
381 study demonstrated a clear lack of awareness or understanding about IC. This has been
382 highlighted previously²⁸, and may be due to the poor health literacy reported by the majority
383 of patients with IC²⁹. There is a need to improve patient education and a group-based
384 education programme has been piloted with promising results³⁰. However, it is important that
385 education is individually tailored and other methods developed with patients such as patient
386 feedback in invitation materials, YouTube videos and taster sessions could be used²⁸. The
387 ability of such methods to improve recruitment and retention into SEP/HIIT programmes
388 could be tested via studies embedded within trials^{31,32}, and if found to be beneficial to
389 recruitment, these could be embedded into routine practice.

390

391 Finally, participants found HIIT sessions difficult, though this led to a feeling of satisfaction
392 upon completion. This notion that HIIT is considered less enjoyable during exercise, but
393 more enjoyable after exercise has been demonstrated previously via the quantitative measures
394 of the feeling scale and the physical activity enjoyment scale³³. It is postulated that this is due
395 to a continuous rebound effect that is felt during recovery intervals³⁴⁻³⁶, which amalgamate in
396 conjunction with a final rebound effect upon completion of the session, to create this feeling
397 of post-exercise enjoyment. However, there is limited data to support this, as enjoyment is
398 usually measured during HIIT intervals rather than recovery intervals. In addition, affect has
399 not been considered in patients with IC. Therefore, future work should consider measuring
400 affect over the course of the programme, both during work and recovery intervals.

401

402 **Strengths and limitations**

403 The relatively large sample included in this qualitative analysis is a key strength. No
404 withdrawers agreed to be interviewed, meaning that this group is not represented, but we did
405 gain a rich understanding about the reasons for declining participation, which helps us
406 understand the barriers faced. Next, due to the COVID-19 pandemic, several interviews had
407 to be performed over the telephone, which may have impacted upon the data collected^{13,37}.

408 There is only limited evidence to suggest that telephone interviews produce lower-quality
409 data than face-to-face interviews, but some of our interviews were very short, and the use of
410 telephone interviews may have played a role in that as the population were older adults.

411 Finally, the transcripts were not shared with participants prior to analysis for clarification nor
412 was feedback provided on the findings, so we do not know if our interpretations resonate
413 with patients.

414

415 Conclusion

416 The aim of this study was to consider the acceptability of a novel HIIT programme for
417 patients with IC, designed to maximise patient benefit and reduce the time commitment.

418 Overall, most patients enjoyed the programme and despite finding it difficult would complete
419 it again. In addition, some changes were suggested for the programme structure that will be
420 incorporated in its future development. These findings support the acceptability of this novel
421 HIIT programme, as well as strengthening the need for a fully powered RCT, with embedded
422 recruitment SWATs.

423

424 Author contributions

425 Concept and design: SP, AEH, SI, GM, CH, MT, ARN, LI, JL, MR, ICC,

426 Acquisition of data, analysis and interpretation: SP, MT

427 Drafting or critically revising the article: SP, AEH, SI, GM, CH, MT, ARN, LI, JL, MR, ICC.

428 Final approval: SP, AEH, SI, GM, CH, MT, ARN, LI, JL, MR, ICC.

429 Accountability: SP, AEH, SI, GM, CH, MT, ARN, LI, JL, MR, ICC.

430

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435 and vertebral, mesenteric, renal, upper and lower extremity arteries Endorsed by: the
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541

Table 1 - Coding table

Initial Code	Merged code	Theme
Enjoyment / Difficulty	Gruelling but beneficial	Personal reflections of the programme
Got easier / needs to be difficult		
Willingness to do again and encourage others		
Programme structure	Exercise programme components	
Type of exercise		
Group based vs. 1 to 1		
Took part to help us and others	Recognising the benefits	Programme facilitators and barriers
Took part for own health or symptoms		
Time	Practical barriers	
Location / transport		
Cost		
Health or lifestyle		
Motivation to exercise	Psychological barriers	
Lack of awareness / understanding		
Apprehension / anxiety		
Reimbursement	Encouraging engagement	
Reducing frequency		
More local centres		
Education to increase understanding – supported by patients		
Alternatives – leaflets, videos, taster sessions.		
Improvement in symptoms / walking	Improvement in symptoms, walking and health	
Improvement in health		
Lack of improvement	Lack of improvement	