



University  
of Glasgow

# From Football Fans in Training to EuroFIT, Aussie-FIT and beyond – using professional sports to increase physical activity and reduce inequalities

Cindy Gray, on behalf of Kate Hunt, Sally Wyke and the FFIT Research Team

INSPIRING  
PEOPLE

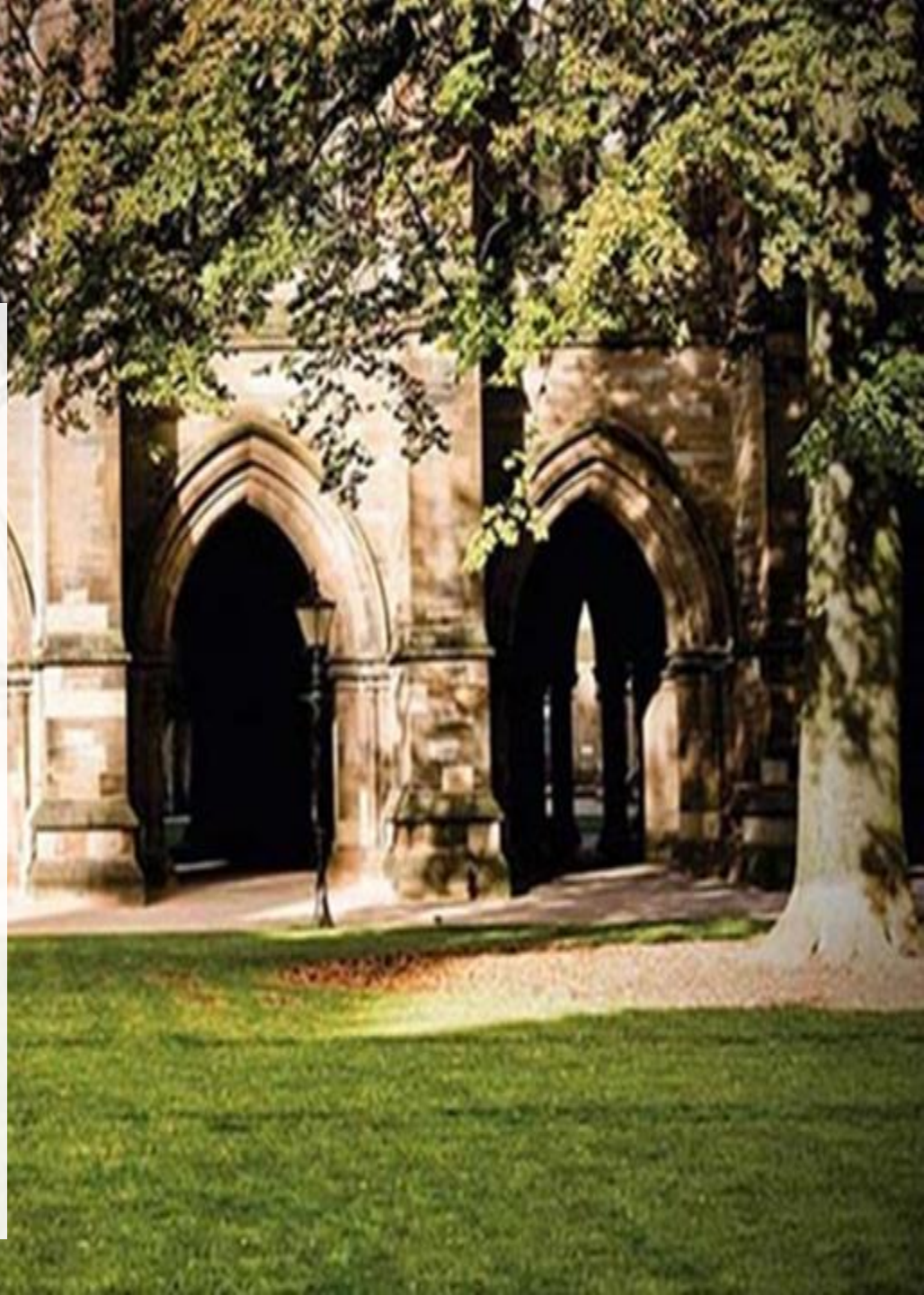






## FFIT: the context for initial development

- Over **75% of men overweight or obese** in Scotland c.f. 68% women
- Men **much less likely to engage with traditional weight loss programmes** than women
- Men more likely to use **physical activity** to control their weight than women
- **Innovation required to engage men** to healthy lifestyle programmes

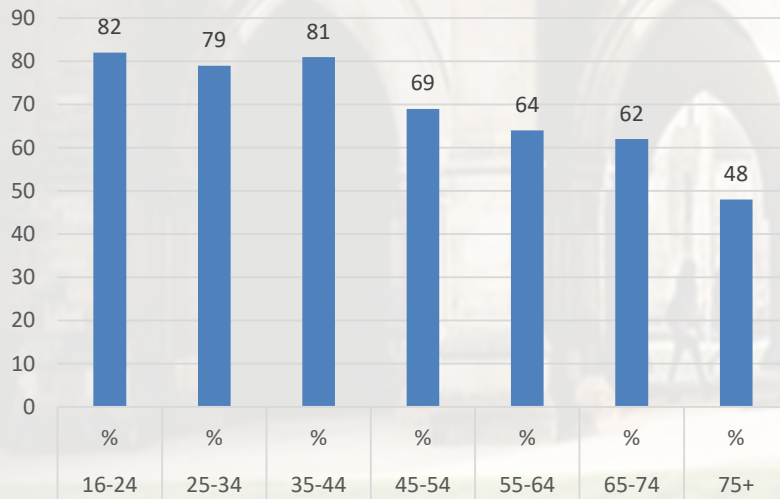




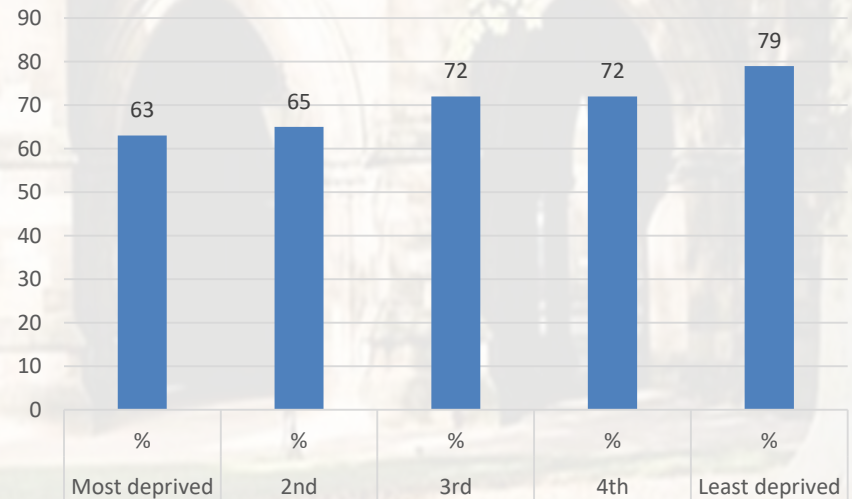


## Addressing inequalities

Percentages of men meeting MVPA guidelines - Scottish Health Survey 2022



Age



Socioeconomic Status

Limiting long-term health condition? YES 53%  
NO 79%

# Innovation needed to engage high risk men: Football fandom?



“supporting a football club is a life-long project that begins at an early age and ends with the life of the fan... the fan's daily and weekly agenda is determined by his relationship with the football club”

Ben Porat *Soccer & Society* 2010

“Soccer is ‘the People’s Game’ par excellence”

Gavin Kitching *History Workshop Journal* 2015



# FFIT: Using the 'draw' of football/club

WELCOME TO THE SCOTTISH PREMIER LEAGUE



## FFIT: the context for initial development

- Growing recognition of **potential of sporting organisations** for public health interventions
- Some examples from the UK and across Europe
- Few were **structured programmes**
- None **had been rigorously developed and evaluated**
- Strong traditional associations between football and UK working classes – **high potential to address inequalities?**

# 12-week group-based weight management programme for overweight/obese men (BMI $\geq 28$ ) aged 35-65yrs

*Delivered via professional football clubs*

Each weekly 90-minute sessions begins with interactive classroom session; then group-based physical activity, with men working at an appropriate level for them

Best evidence  
and practice

Evidence on  
behaviour  
change

Clinical  
experience

Sociological  
understandings

*Men, masculinities and health*

## Football Fans in Training

Gray et al. *BMC Public Health* 2013

developed in partnership with Scottish Professional Football League Trust

# 12 week group-based weight management programme for overweight/obese men (BMI $\geq 28$ ) aged 35-65yrs



Small, incremental, sustainable changes to daily life

Physical activity

Diet

Best evidence  
and practice

Evidence on  
behaviour  
change

Clinical  
experience

Sociological  
understandings

*Men, masculinities and health*

## Football Fans in Training

Gray et al. *BMC Public Health* 2013

Initial aims: Scalable, low-cost, high-quality evidence on effectiveness and cost-effectiveness





## Key challenges in the developmental stage 2009-2010

### SPFLT/Clubs

- Initial **engagement with SPFLT**, building **trust**, mutual **understanding** of needs
- Engaging/building **partnerships with clubs and coaches**
- **Balancing** fidelity and pragmatic constraints
- Working on **each other's terms** (informed both programme and research design)

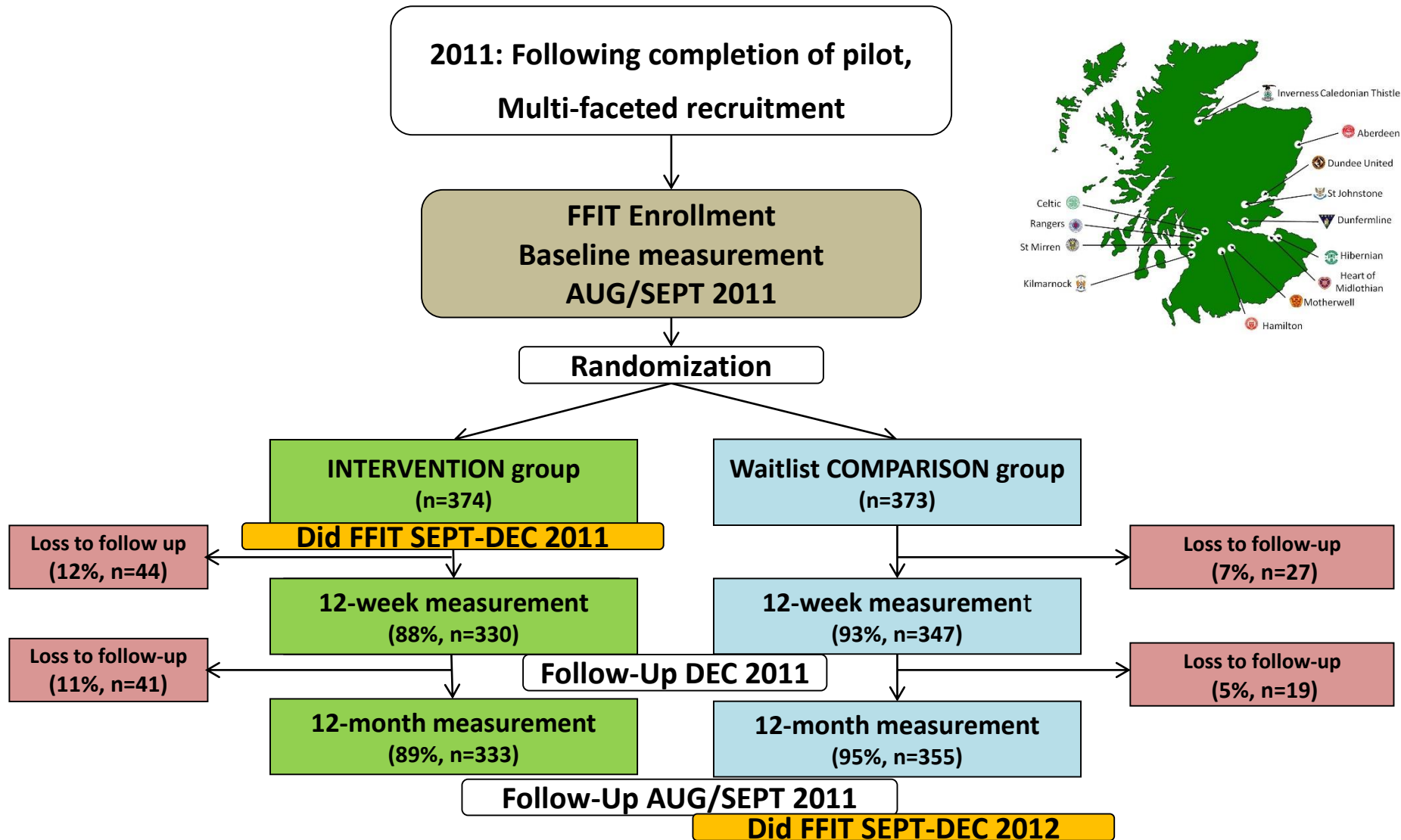






Pilot and full-scale evaluation 2010-2013

# Does FFIT work? – RCT in 13 Scottish clubs 2011/12





# World-leading research

- **Primary outcome:** objectively-measured weight loss at 12 months



## Secondary outcomes

Objective	Self-reported	Cost effectiveness
Waist circumference	<b>Physical Activity (IPAQ)</b>	Resource Use
BMI	Food Frequency (DINE)	
Body Composition (% Body Fat)	Alcohol Intake (7-day diary)	
Resting BP (Systolic/Diastolic)	Self-esteem (Rosenberg)	
	Positive and Negative Affect (PANAS)	
	Health-related Quality of Life (SF-12)	

- **Process evaluation:** session observations, participant focus groups (12wks/12 months)

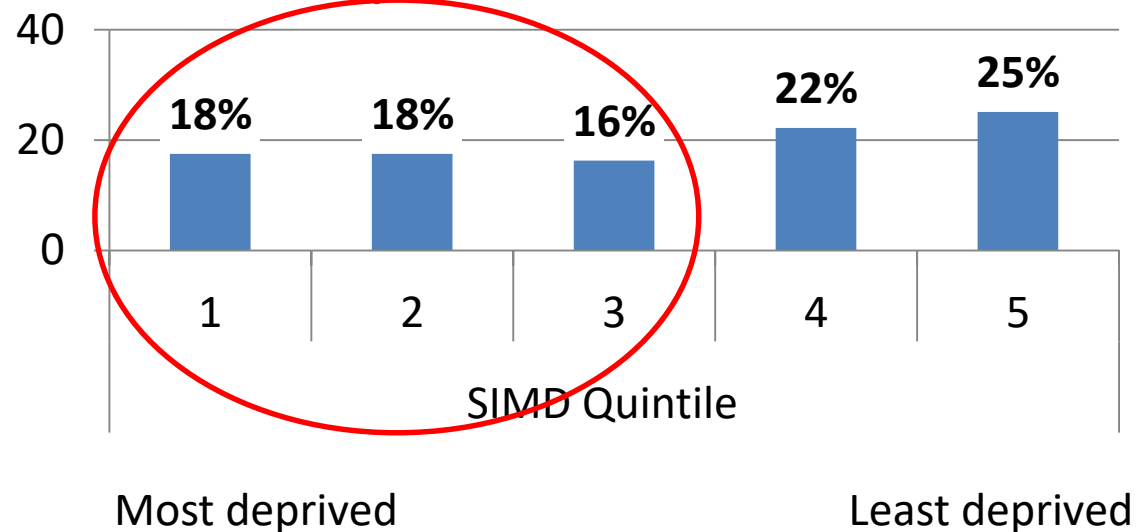
# FFIT attracted high risk men – addressing inequalities

## Over 90% clinically obese

- Mean age: 47.1 ( $\pm 8.0$ ) years
- Mean BMI: 35.3 ( $\pm 4.9$ ) kg/m<sup>2</sup>
- Mean BP: 140/89mmHg

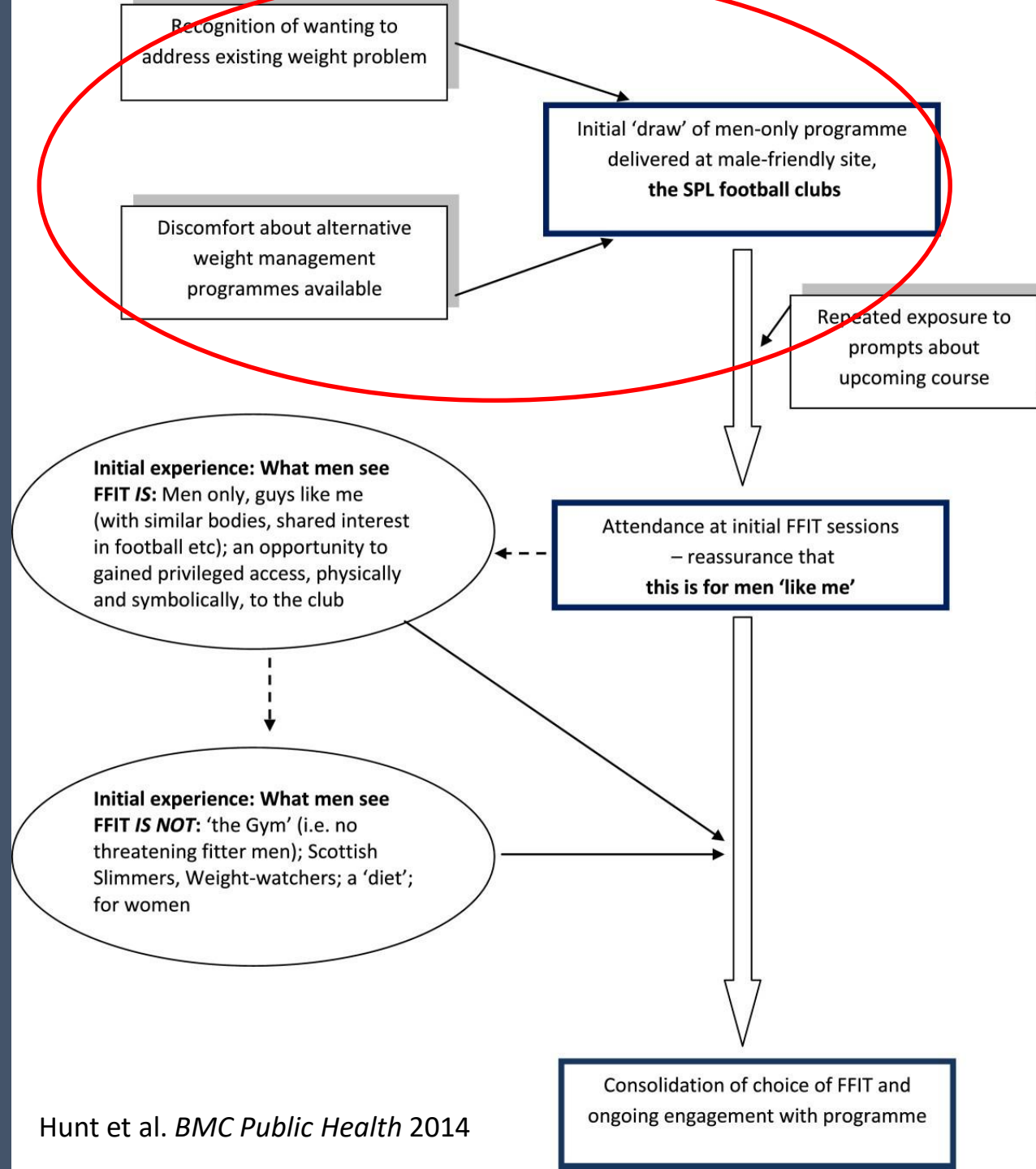
BMI Category	
Overweight (BMI 28-29.9)	8%
Obese I (BMI 30-34.9)	44%
Obese II (BMI 35-39.9)	31%
Obese III (BMI $\geq 40$ )	17%

## Across the socio-economic spectrum

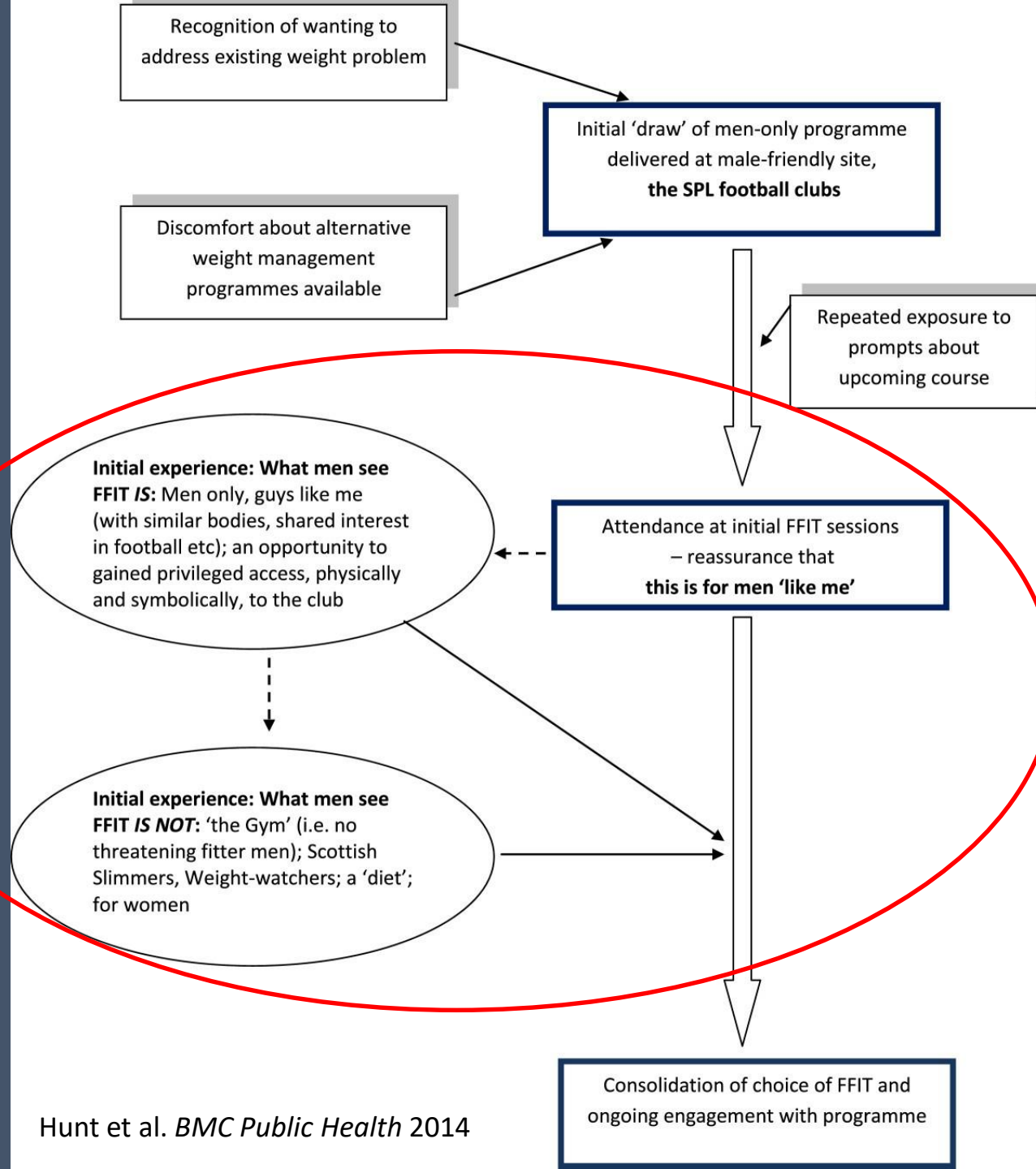




# Initial engagement

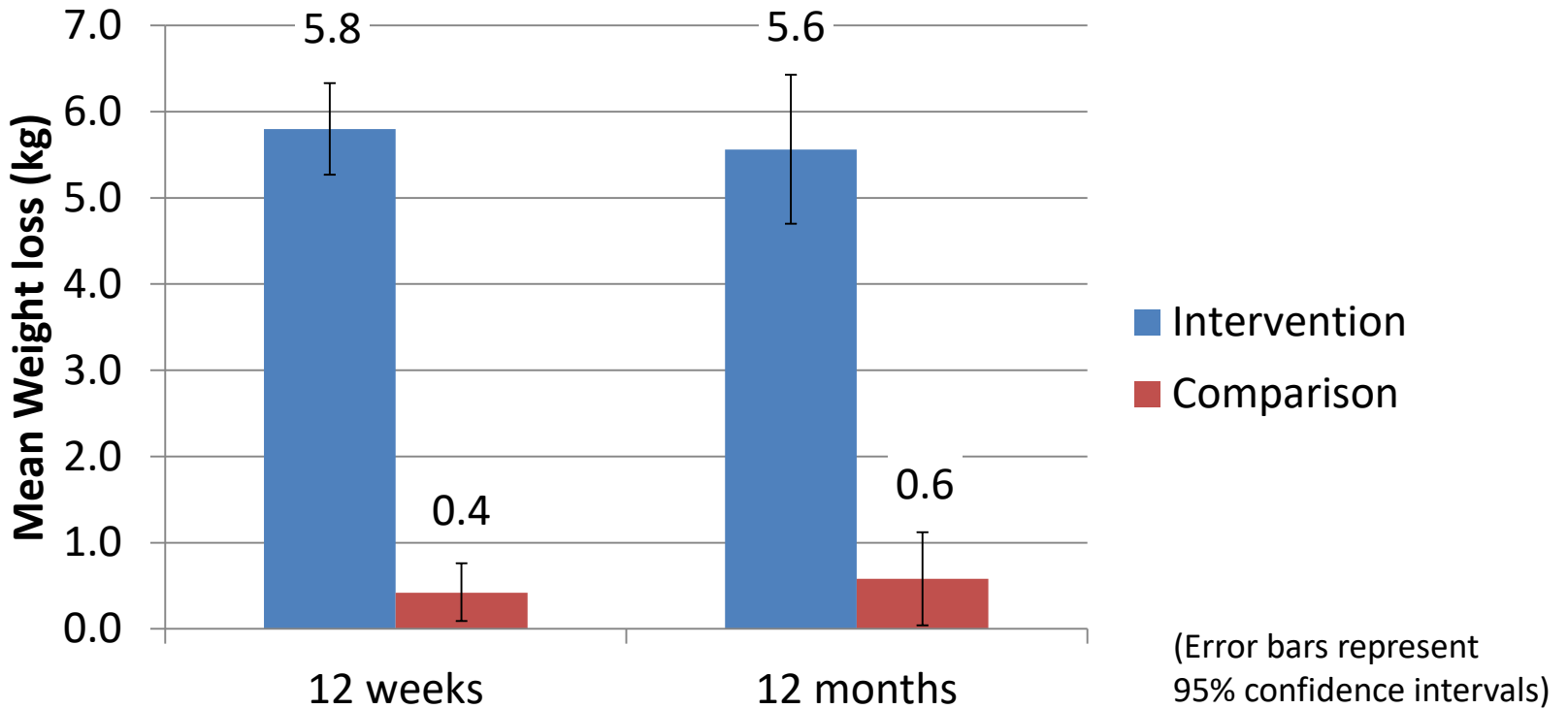


# Ongoing engagement



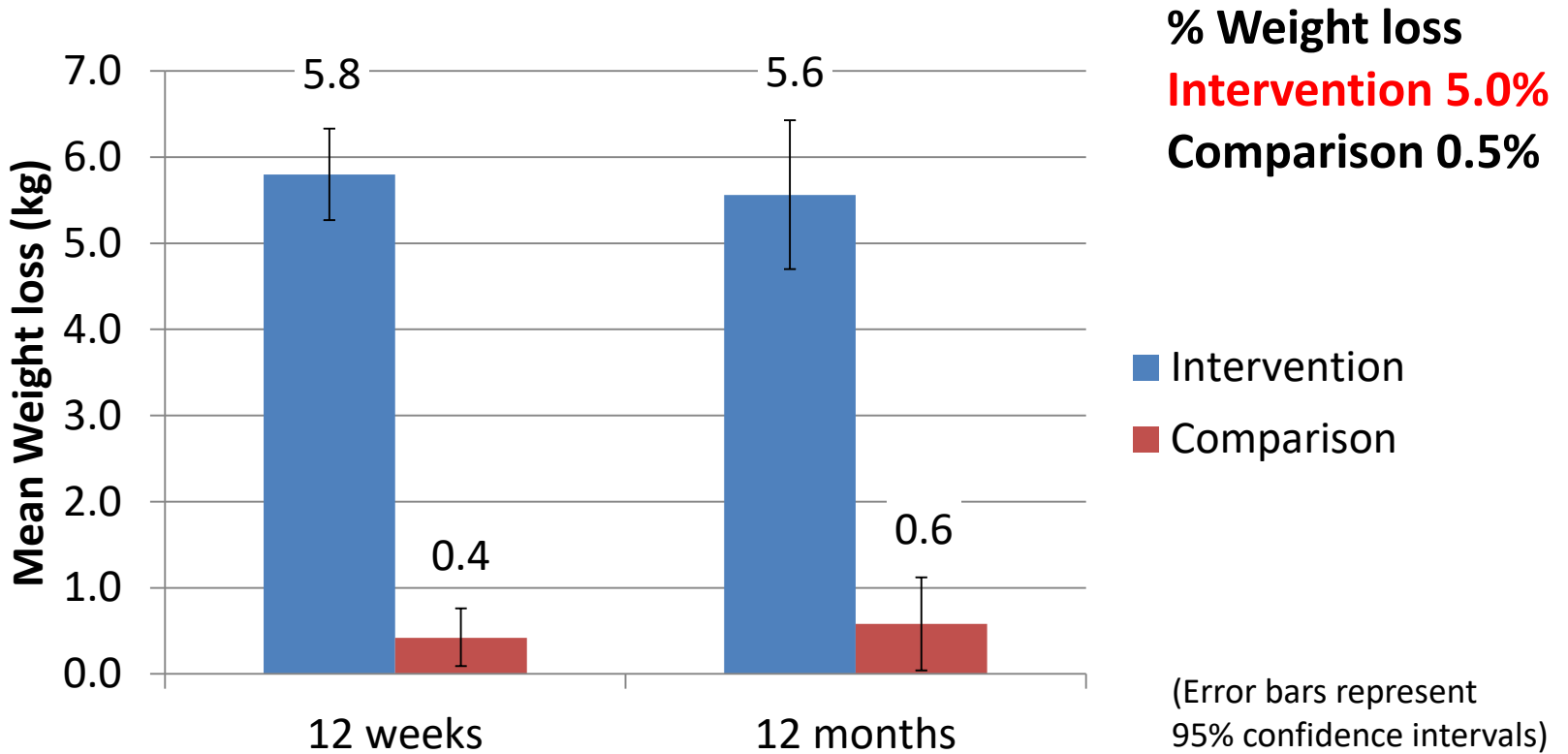


# Primary outcome: Weight loss (kg) at 12 months



Adjusted between-group difference 12 weeks	5.18kg (CI 6.00, 4.35)	p<.0001
Adjusted between-group difference 12 months	4.94kg (CI 3.95,5.94)	p<.0001

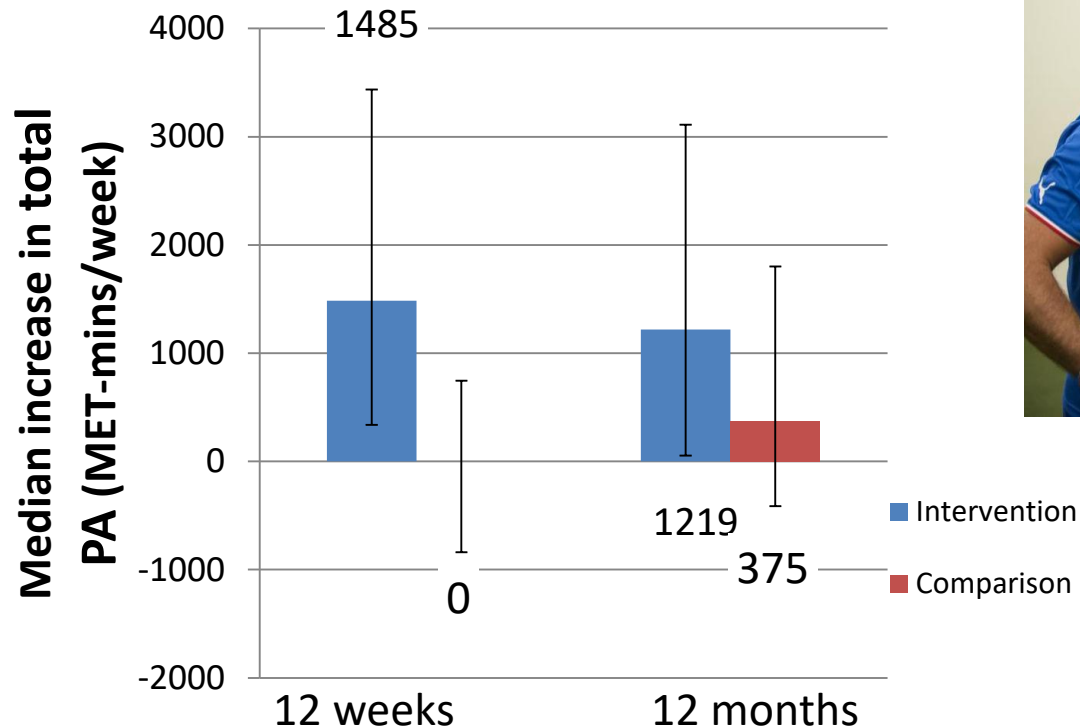
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# Increase in self-reported physical activity



(Error bars represent IQ range)



Adjusted ratio geometric means 12 weeks

2.38 (CI 1.90, 2.98)

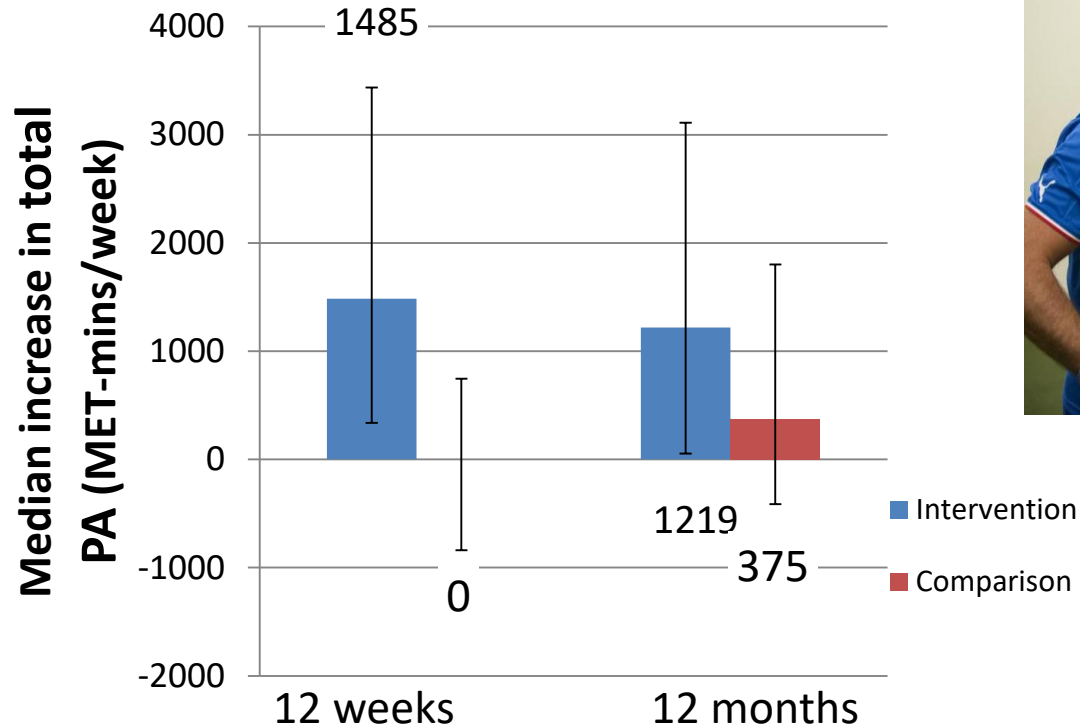
p<.0001

Adjusted ratio geometric means 12 months

1.49 (CI 1.11, 1.99)

p=.008

# Increase in self-reported physical activity



## Moderate PA - Intervention

371 mins/week at 12 weeks

305 mins/week at 12 months

Adjusted ratio geometric means 12 weeks

2.38 (CI 1.90, 2.98)

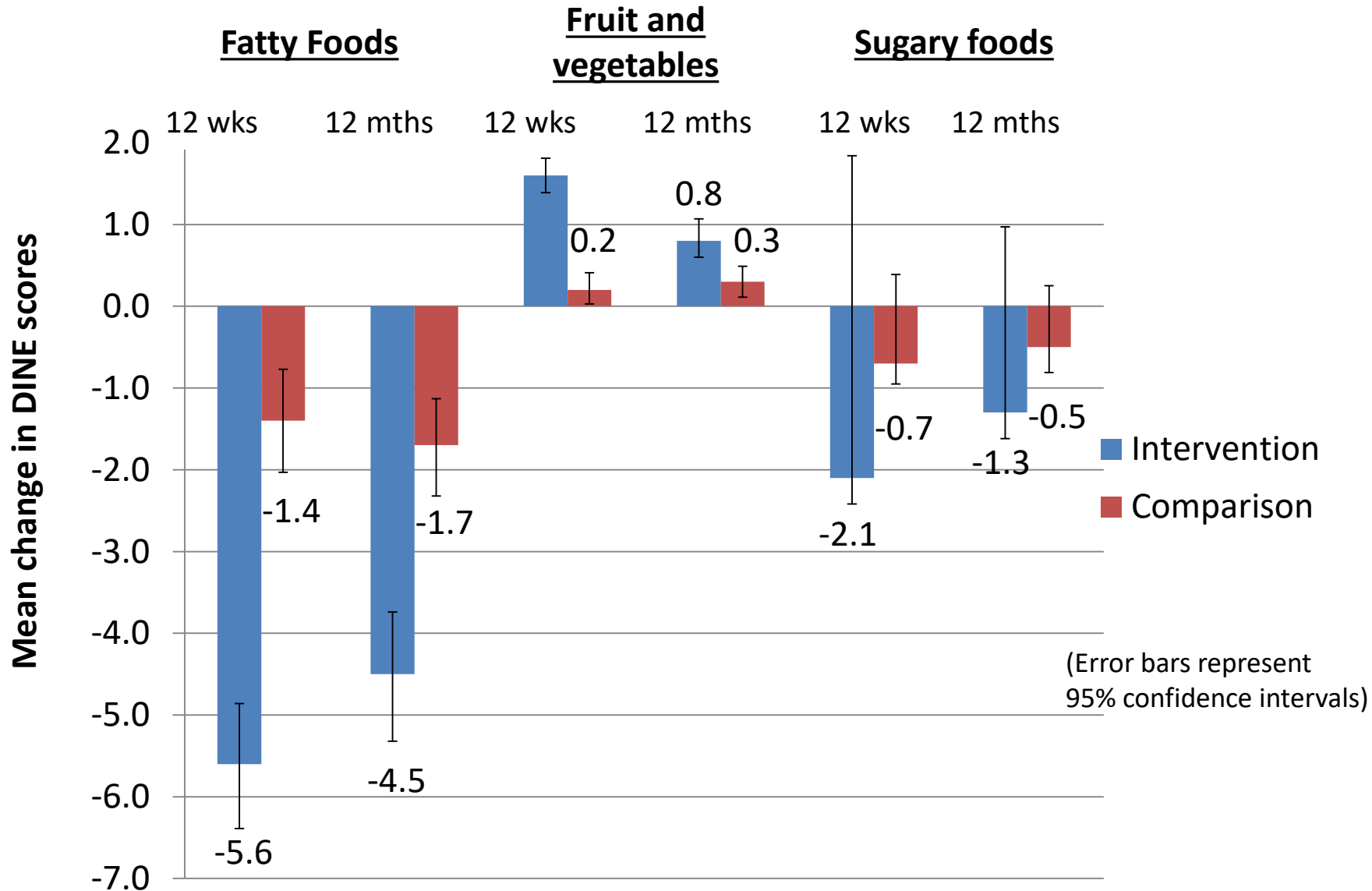
p<.0001

Adjusted ratio geometric means 12 months

1.49 (CI 1.11, 1.99)

p=.008

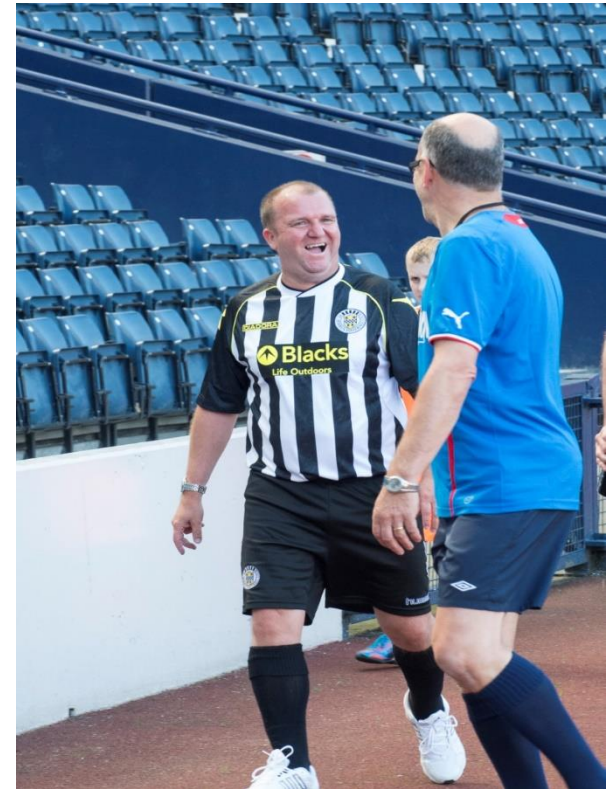
# Dietary improvements





# Good value for money

- **FFIT is not expensive to deliver:** in 2011, it cost the funders around £165 per man
- Incremental cost-effectiveness: £13,847 per QALY gained
- **Likelihood of cost-effectiveness:** 72-89%

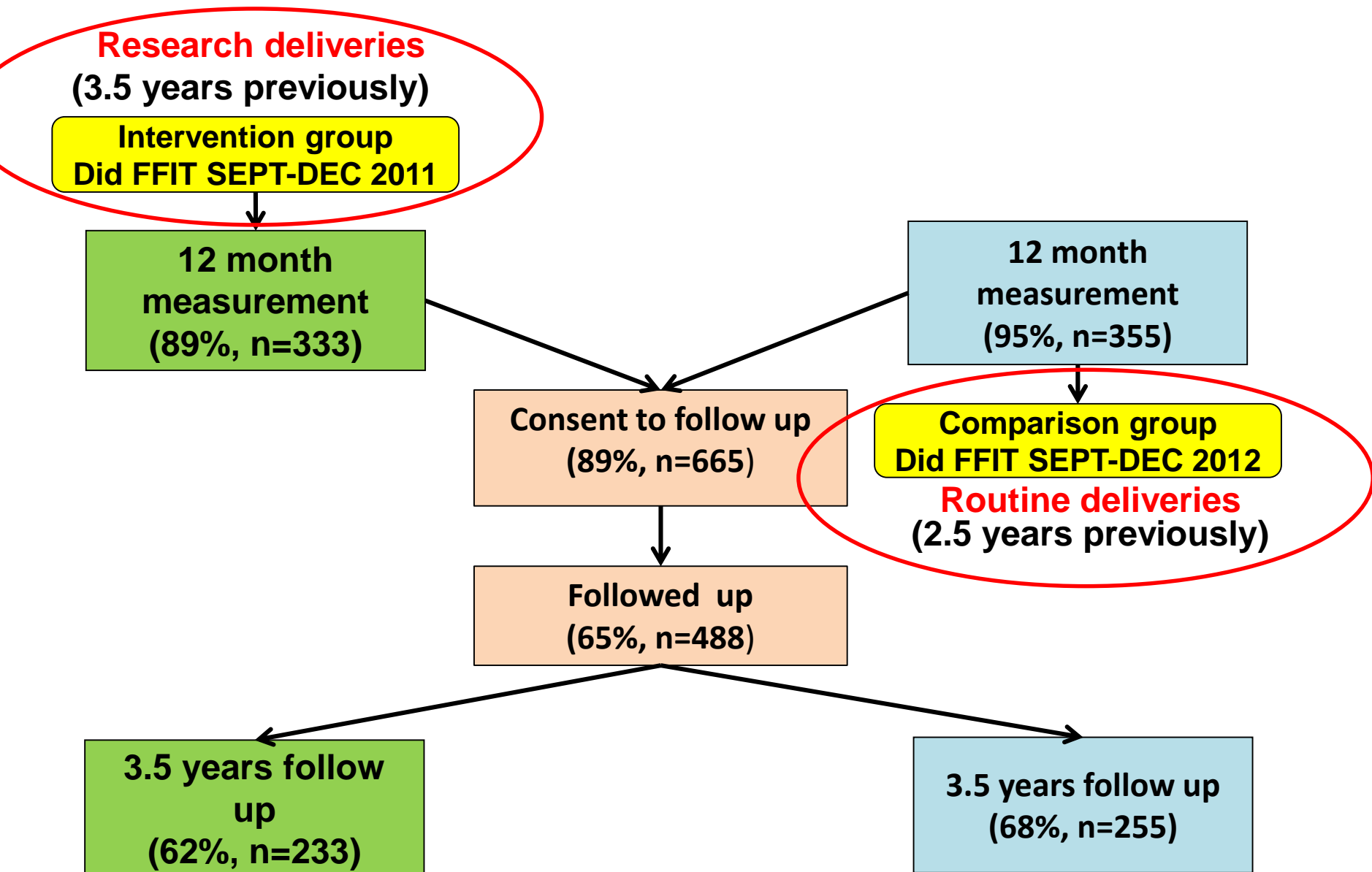


# Long-term results

Did men keep weight off and remain active?

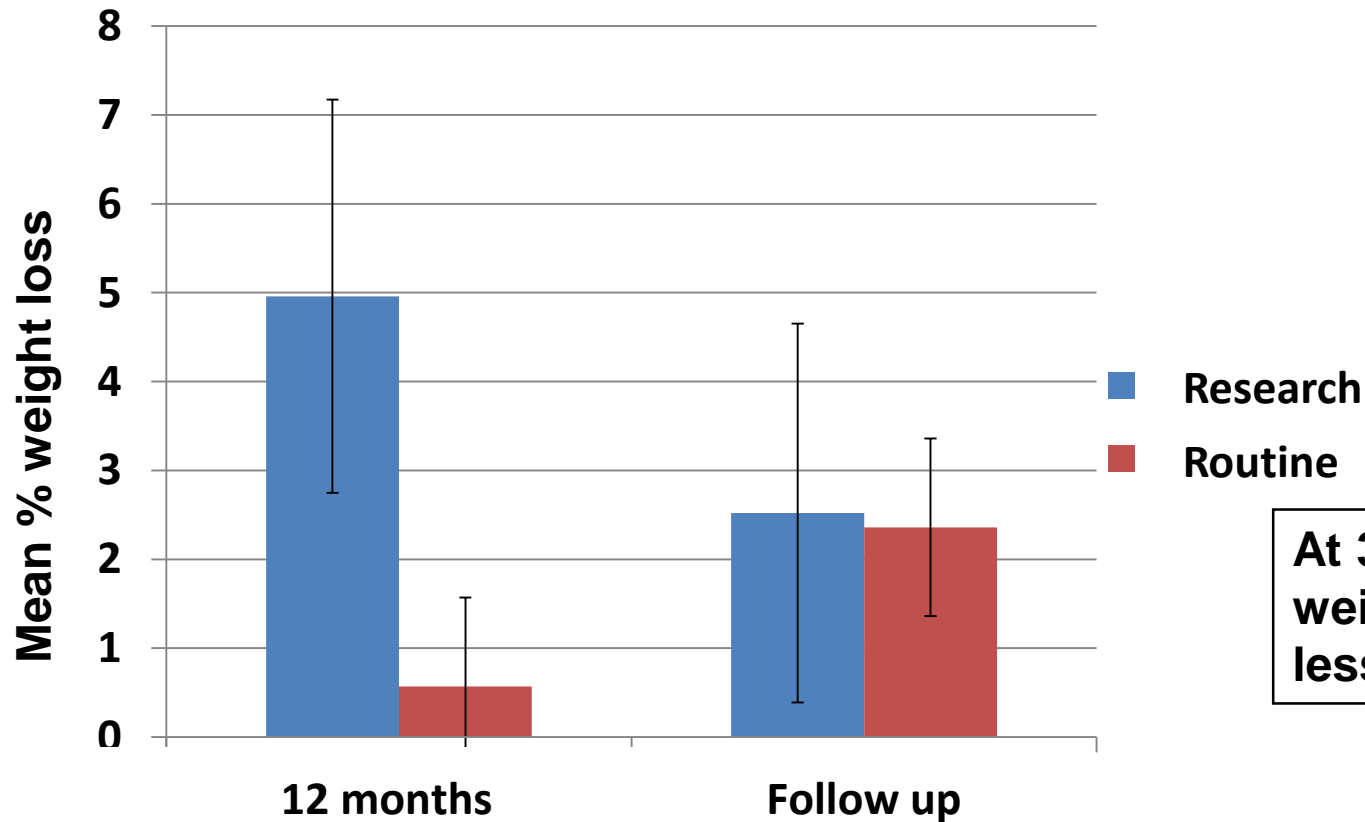


# Follow up in 13 RCT clubs - 2015





# Primary outcome - % Weight loss



**At 3.5 years, men weighed around 2.5% less than at baseline**

Error bars represent standard error of mean

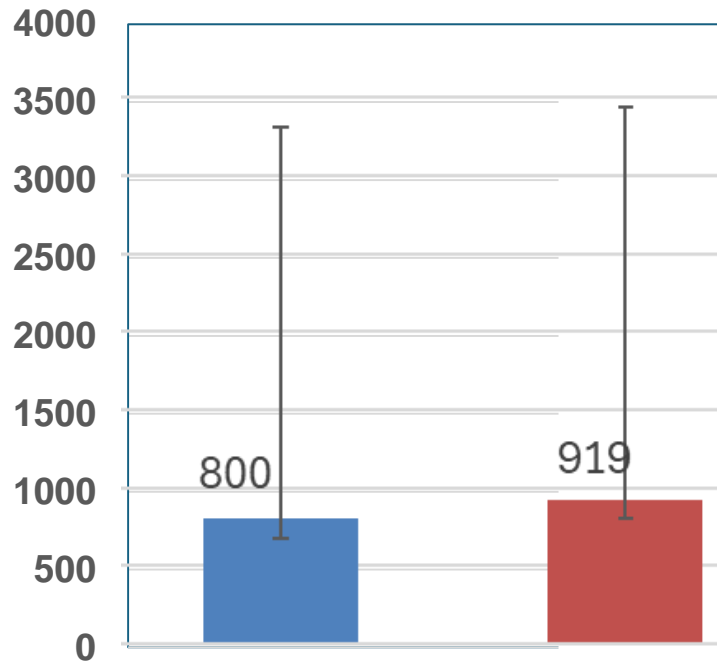
From baseline – FU Intervention group:  $p=0.0005$

From baseline – FU Comparison group:  $p=0.0100$

Between group diff  
ns

# Self-reported PA

Median increase in total PA  
(MET-mins/week)



■ Research  
■ Routine



**At 3.5 years, men were doing ~200 mins more moderate PA per week than at baseline**

Error bars represent IQR

From baseline – FU Intervention group:  $p=0.0001$

From baseline – FU Comparison group:  $p=0.0001$

Between group diff  
ns



## High potential for scale-up 2013→:

- **Effective and cost-effective programme:** short, medium and long-term

### **Process evaluation demonstrated that**

- **Club setting** was a powerful draw – men liked increased symbolic & physical proximity, and building relationships with ‘men like them’
- **‘Team’ spirit** engaged men in adopting new healthier identities and new physical activity and dietary practices



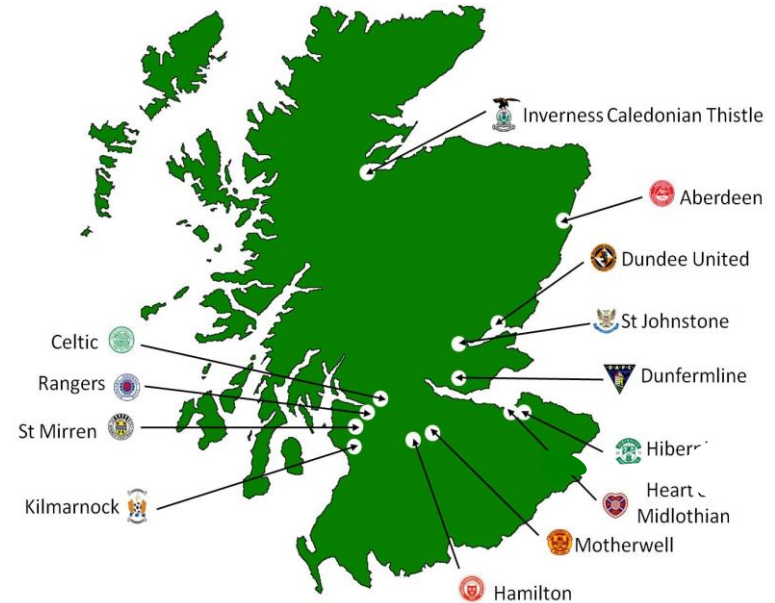


## Scale up of routine deliveries

- Jointly-developed **‘Train the Trainers’** programme with SPFLT in 2014
- University granted SPFLT an **exclusive franchise model licence** to oversee FFIT deliveries worldwide in 2016
- Partnership working to develop app for **robust monitoring and evaluation** in 2019

# Routine deliveries: continued positive results

- By 2019, FFIT delivered at 34/42 SPFL clubs across Scotland (from 13 in RCT)
- 3,665 men took part 2013-19
- Mean weight loss at 12 weeks 4.6%
- Funder: Scottish Government





# FFIT scaled out to women



- FFIT for Women launched in 2014 (also funded by Scottish Government)
- By 2019, FFIT for Women delivered at 33 clubs across Scotland
- 1,567 women took part 2014-17
- Mean weight loss at 12 weeks 3.7%



# Good recovery post-COVID

## What next?

The culture and structure of FFIT has consistently engaged men and women to become fitter, healthier and happier. We know when men lose weight, it stays off and that women, through the programme, will increase their physical activity.

The launch of Prostate FFIT last year was an important development allowing us to support men living with cancer to be as healthy and as well as possible.

We're using this learning to explore other versions of FFIT that can support positive proactive health interventions.

For example, we're piloting the launch of targeted messaging for people with diabetes in the NHS Tayside area.

Access is through the normal FFIT programme, but specific recruitment engages people through the NHS Tayside healthcare system. Arbroath Community Trust, Dundee United Community Trust, Montrose Community Trust and Saints in the Community Trust are all taking part.

## Who delivered FFIT in 2022-2023?

### Women and Men



### Men Only



## FFIT in numbers

	Men	Women
Starters	570	421
Completers	366	241
Retention	64.21%	57.24%
Total weight lost	1604.30kg	772.70kg
Average weight lost	4.38kg	3.21kg
Average age	49.33	46.95
Reduction in alcohol consumption	22.34%	19.50%
Reduction in fizzy drinks	51.62%	48.73%
Reduction in chocolate intake	46.70%	46.76%
Reduction in units of alcohol	17.03%	22.84%
Increase in fruit consumption	52.07%	52.27%
Increase in vegetable consumption	23.45%	41.15%
Reduction in take-away consumption	28.89%	32.45%
Reduction in sedentary minutes	22.05%	18.74%
Increase in physical activity	52.57%	50.68%

## 2022-2023 SPFLT Report

FITT delivered in 22 clubs

570 men and 421 women showing important weight loss and physical activity gains

# FFIT scaled up to England

## **FIT FANS**

**Are you ready to make positive changes to your lifestyle?  
Join 1000's of football fans who've already kick started their  
way to a healthier lifestyle.**



- Between 2014-2019, FFIT delivered to 510 men and women in 8 English clubs
- In 2019, funding secured for deliveries of 'FIT Fans' to 10,000 men and women at 42 clubs across England from 2020
- Franchisee: EFLT, Funder: Sport England

# FFIT scaled up to Germany



- In 2017-18, 15 Bundesliga clubs delivered FFIT to 477 men
- By 2020, FFIT had been delivered to 1,597 men in 21 Bundesliga clubs
- Mean weight loss at 12 weeks 6.1%
- Franchisee: Institute for Therapy and Health Research, Funder: German Cancer Aid



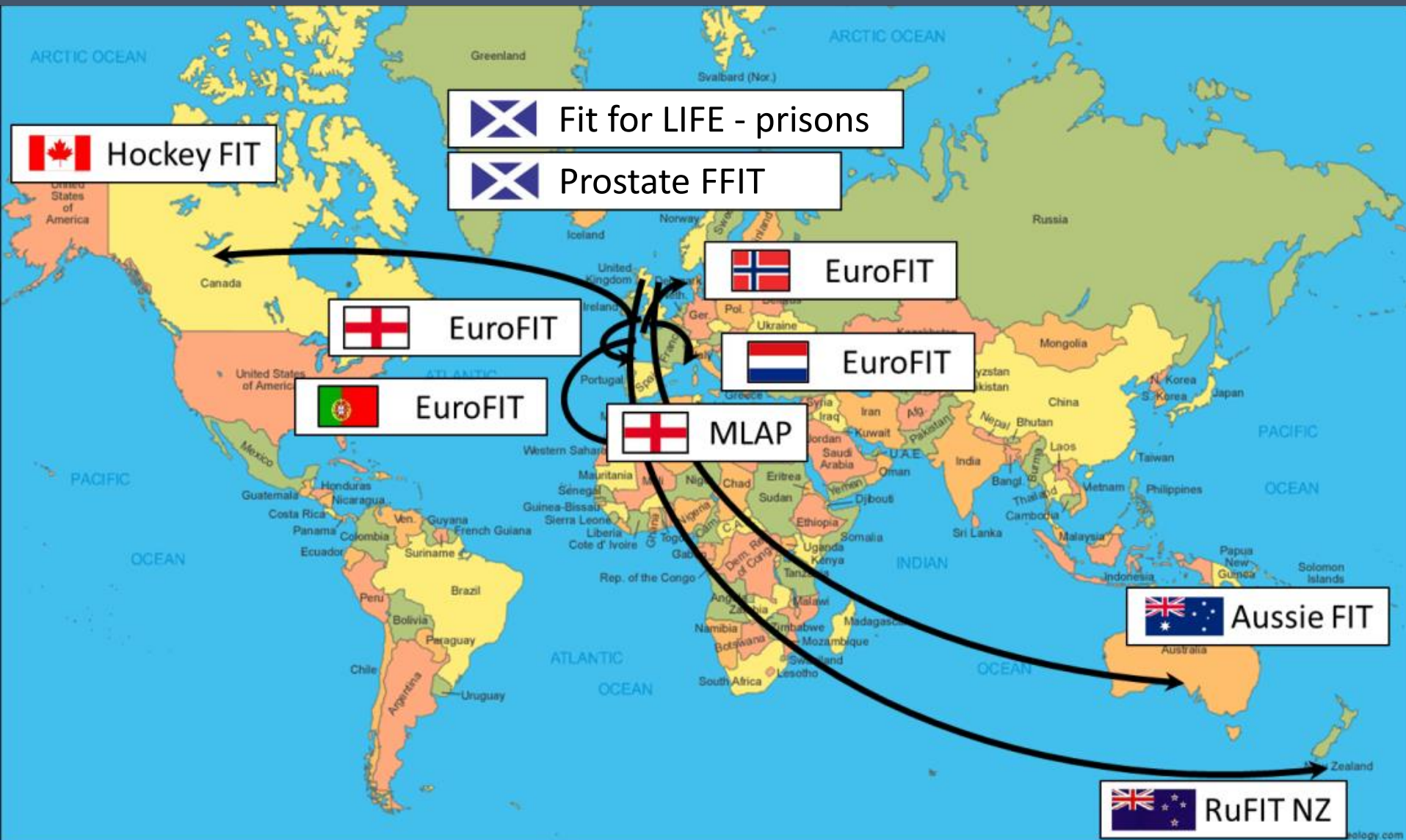
# FFIT scaled up to Europe



## ACTIVE FANS

- Between 2018-19, 'Active Fans' was delivered to 418 men and women at eight clubs in the Netherlands, Hungary, Belgium, Norway, UK and Germany
- Franchisee: European Football for Development Network, Funder: Erasmus+ Sport

# FFIT model international research



RESEARCH

# Fit for LIFE: the development and optimization of an intervention through prison gymnasias to support incarcerated men in making positive changes

OPEN

## Hockey Fans in Training: A Pilot Pragmatic Randomized Controlled Trial

ROBERT J. PETRELLA<sup>1,2,3</sup>, DAWN P. GILL<sup>1,2,4</sup>, GUANGYONG ZOU<sup>5,6</sup>, ASHLEIGH DE CRUZ<sup>1,2</sup>, BRENDAN RIGGIN<sup>3</sup>, CASSANDRA BARTOL<sup>1,2</sup>, KAREN DANYLCHUK<sup>3</sup>, KATE HUNT<sup>7</sup>, SALLY WYKE<sup>8</sup>, CINDY M. GRAY<sup>8</sup>, CHRISTOPHER BUNN<sup>8</sup>, and MERRICK ZWARENSTEIN<sup>1,2,5</sup>

PLOS MEDICINE

RESEARCH ARTICLE

A gender-sensitised weight-loss and healthy living program for men with overweight and obesity in Australian Football League settings (Aussie-FIT): A pilot randomised controlled trial



Psychology & Health



ISSN: (Print) (Online) Journal homepage: [www.tandfonline.com/journals/gpsh20](http://www.tandfonline.com/journals/gpsh20)

The Aussie-FIT process evaluation: feasibility and acceptability of a weight loss intervention for men, delivered in Australian Football League settings

RESEARCH ARTICLE

The effect of a programme to improve men's sedentary time and physical activity: The European Fans in Training (EuroFIT) randomised controlled trial

Bunn et al. *BMC Public Health* (2023) 23:526  
https://doi.org/10.1186/s12889-023-15419-y

BMC Public Health

RESEARCH

Open Access

How European Fans in Training (EuroFIT), a lifestyle change program for men delivered in football clubs, achieved its effect: a mixed methods process evaluation embedded in a randomised controlled trial



Maddison et al. *Int J Behav Nutr Phys Act* (2023) 20:37  
https://doi.org/10.1186/s12966-022-01395-w

International Journal of Behavioral Nutrition and Physical Activity

RESEARCH

Open Access

Rugby Fans in Training New Zealand (RUFIT NZ): a randomized controlled trial to assess the effectiveness of a healthy lifestyle program for overweight men delivered through professional rugby clubs



# Prostate FFIT – men living with long term conditions

- Feasibility study – Rangers and Hearts 2023
- FFIT carefully adapted for men with Prostate Cancer
  - Delivery supported by expert in cancer rehabilitation exercises
  - More focus on exercise (including home strength/resistance, pelvic floor, flexibility/mobility and balance exercises)
  - Weight loss de-emphasised
  - Prostate cancer specific dietary advice
  - Coping (including emotionally) with prostate cancer





# Prostate FFIT – men living with long term conditions

- Engagement was excellent:
  - 32 men started, 29 (90%) attended  $\geq 7/12$  sessions\*
- Improvement in PA post-programme
  - Men increased their weekly step count by 10,000 steps\*
  - They reported  $\geq 30$  minutes PA on 6 days of the week\*
- Weight loss
  - Average 1.4kg\*
- Mental health benefits
  - Men reported sleeping better
  - Their wellbeing (WEMWEBS) increased\*

*It made me more positive to do a lot more walking, because I kind of fell away from my golf a bit, you know, and obviously I've got back into that now, because I'm in a different frame of mind, you see. (Hearts participant 03)*

\*Data obtained from SPFLT FFIT app

# Take home messages

- The FFIT model engages high risk men (and women) from across socioeconomic spectrum
- Draw of club and reassurance that the programme is for people like me important for engagement
- FFIT model can produce sustained improvements in weight, physical activity and diet in research and routine deliveries
- Close partnership working with SPFL Trust at all stages of programme development and research
  - Highly scalable product
- The FFIT model has now engaged thousands of men (and women) facing inequalities across Scotland, UK and internationally
- Impact of FFIT continues to grow

