



laterLife  
training.



# The Functional Fitness MOT programme

Impact  
assessment

July 2014



## Summary of learning so far...

The Functional Fitness MOT training programme has to-date reached over 350 physical activity, health, exercise and fitness and active ageing professionals across the UK in its first year (Summer 2013 – Summer 2014).

A follow-up evaluation survey amongst 135 professionals indicates that 27% have since organised an MOT event with the public (reach of over 600 older people), and 32% are planning to hold an MOT event in the next six months. Most MOT events attract up to 20 people, but some local agencies have been successful in holding events with as many as 90 participants in one day.

The findings and materials for the day's training are also being used for CPD amongst Active Ageing teams. Fifty-four per cent of those attending report using the functional fitness messages for inclusion/redesign of local programmes and 28% report changes to public facing materials (eg, leaflets, posters, and programme fliers). Professionals are using the training to deliver Functional Fitness assessments in a variety of settings, including sheltered and supported accommodation, GP practices, hospitals, universities and community and leisure centres.

Although no detailed statistical analysis has been possible, it is very clear from these events that there is a lack of awareness of the UK CMO (Chief Medical Officers') physical activity guidelines for older adults (65+ years), even amongst exercise and fitness professionals. It has become clear how few professionals fully understand the concepts of strength, balance and minimising sedentary behaviour or indeed which activities actually make a difference to the different components of fitness (or which do not). Many of those who attend Functional Fitness MOT training events rarely indulge in strength or balance activities themselves as evidenced by their own poor strength and balance abilities when they were assessed using the MOT.

Some local programmes are using their local Functional Fitness MOT events and activities to attract additional funding to initiate both research activities and new physical activity programmes. Contrary to guidance offered to participants, the assessments are being used to measure improvement in functional fitness. This indicates the need for professionals to be trained to use validated tools to measure functional fitness programmes and interventions.

Follow up enquiries have identified the need for an adapted version of the Functional Fitness MOT for use in residential and nursing homes and with disabled people.

## Introduction

Since 2011, Glasgow Caledonian University (GCU), the BHF National Centre for Physical Activity and Health (BHFNC) at Loughborough University and Later Life Training (LLT) have been collaborating to promote the use of the Functional Fitness MOT.

This tool was designed at GCU in 2011 to highlight the different components of fitness necessary for older people to maintain independent living. It was also created to help highlight the importance of physical and mental health and raises awareness of the 2011 CMO physical activity guidelines for older adults (65+ years).

### What is an MOT for older people?

The framework of the Functional Fitness MOT was established as a means of translating research into practice. The MOT meets the reported needs of older people in the following ways:

- personal attention through one-to-one interviewing
- time to understand different components of fitness
- time to discuss barriers, motivators and solutions to initiate behaviour change
- using normal data sets from large studies for comparison to peers
- personalised (tailored) information to take away, digest and take action
- follow-up information (local) on how they can find out more.

### What a Functional Fitness MOT is not

- A research tool
- An evaluation tool
- An alternative for a pre-exercise assessment or PARQ
- An alternative to offering a tailored exercise programme.

The Functional Fitness MOT training programme was initiated in June 2011 at the Glasgow Science Festival, run in Govan Shopping Centre and the ARC Leisure Centre with GCU physiotherapy students and lecturers. It ran again at the Science Festival in June 2011 and then was fully launched in August 2012 at the 8<sup>th</sup> World Congress on Active Ageing, jointly hosted in Glasgow by GCU and the BHFNC.

The BHFNC has identified the MOTs as priority training aligned with its role of disseminating the key components of the UK 2011 CMO guidelines on physical activity for older adults (65+ years) to the active ageing professional audience.

## The Functional Fitness MOT

The Functional Fitness MOT is a person-centered tool that uses a number of different physical function assessments to give older people an idea of how their physical function compares to that of their peers. A Function Fitness MOT takes approximately 60 minutes to complete per older person and contains the following nine elements:

Table 1 – Functional Fitness MOT components

	An assessment of...	Indicator of...
30 second chair rise	Lower limb strength and power	Independent living, morbidity and mortality
Timed 8ft up and go	Mobility, agility related to walking ability and balance	Risk of falls
Six minute timed walk	Mobility	Aerobic Endurance
Single leg stance	Balance	Risk of fall
Hand grip strength	Wrist strength	Risk of fall
Chair sit and reach	Hamstring flexibility	Walking ability
Back scratch	Shoulder flexibility	Everyday tasks
Physical activity questionnaire	Current physical activity participation	Current levels and type of physical activity
Height and weight	Optional	

The results of these assessments are used to discuss the different components of fitness and highlight individuals' strengths and weaknesses. It can also be used to:

- highlight the key components of strength and balance and their importance in the maintenance of health and independence to older people
- provide a means of assisting professionals with opportunities to engage older people in a personalised physical function assessment
- disseminate the UK 2011 CMO guidelines on physical activity for older adults 65+ to professionals working with older people.

The Functional Fitness MOT has also been promoted as a potential community Active Ageing engagement event as part of the annual Department for Work and Pensions annual UK Day for Older People (October 1<sup>st</sup>).



Bespoke Functional Fitness Training event in Dingwall, Highlands, Scotland

## The training day

Following the initial launch in August 2012, the BHFNC and LLT developed a one-day hands-on training course for professionals on how to run Functional Fitness MOTs for older adults.

Each training event provides:

- an introduction to functional fitness and the UK CMO physical activity guidelines for older adults (65+ years)
- a practical session where participants take part in the Functional Fitness MOT
- guidance on interpreting the results and how to encourage the individual to take action
- advice on organising and promoting Functional Fitness MOT events.

As part of the training event, participants are provided with a course handbook and have access to the Functional Fitness MOT Toolkit, containing the following items:

- a presentation on the Functional Fitness MOT for use as an awareness raising tool
- a template hand-out that can be personalised with local opportunities and programmes in a local area
- a set of protocols for the assessments that can be used
- a set of circuit cards for use to set up your awareness raising event
- an example of a poster to advertise a local event.

Since June 2013, 90 Active Ageing professionals in Scotland and a further 242 across the UK have undergone this training. Training is organised by the BHFNC on an open basis or offered as closed bespoke training to individual organisations.

For more details on upcoming events or how to book a bespoke course, visit [www.bhfactive.org.uk/older-adults-training-and-events](http://www.bhfactive.org.uk/older-adults-training-and-events)

Table 2 - Functional Fitness MOT training events summer 2013 - spring 2014

Location	Date	Attendance	Type
London	June 2013	25	Open
Glasgow, Scotland	June 2013	35	Open
Nottingham	June 2013	33	Open
Sale	July 2013	32	Open
Dingwall, Scotland	August 2013	30	Bespoke
Cambridge	October 2013	18	Open
Perth, Scotland	October 2013	15	Open
South Oxfordshire	December 2013	32	Bespoke
Greenwich, South London	January 2014	25	Bespoke
Lisburn, Northern Ireland	March 2014	35	Bespoke
Stroud	February 2014	22	Open
Newport, Wales	March 2014	25	Open

## End of training day evaluation

The Functional Fitness MOT training days attracted a variety of professionals, including:

- active ageing professionals (18%)
- health promotion/wellbeing (12%)
- exercise teachers and instructors (23%)
- local authority physical activity/sports development (26%)
- adult/social care worker (7%)
- exercise referral specialist (5%)
- health trainers (4%)
- physiotherapists and assistants (5%).

All participants who attended one of the 12 Functional Fitness MOT training days were asked to complete end of day evaluation forms. Responses indicated that:

- 94% would recommend this course to a colleague
- 90% said after the training day they felt confident to use the information presented in the training
- 85% rated this course as useful or very useful to their professional role

### Impact on knowledge and understanding

As part of the training, attendees were asked to record their individual key learning at three points during the day. The following prompt was provided: *what's the most important new learning for you during this session?*

Responses to this question suggest that there is a lack of awareness of the UK CMO guidelines for physical activity in older adults, even amongst exercise and fitness professionals.

The following comments are just a few examples of the new learning that professionals said they were taking away from the Functional Fitness MOT training day:

- the importance of strength and balance for older people
- significance of breaking up sedentary behaviour
- loss of muscle strength over time
- standing activity instead of seated exercise
- three months to replace 20 years lost strength and function
- the importance of grip strength
- other benefits of muscle strength, body temperature, resistance to infection, cognition
- UK 2011 CMO physical activity guidelines.

### Reflections for local delivering

Participants also highlighted a number of key learnings to think about when delivering Functional Fitness MOTs locally, including:

- the need to quality assure local physical activity opportunities
- need to review quality and content of our own local public facing materials
- ease of application and accessibility of MOT, eg, no PARQ required
- the flexibility of the MOT and how it can be used/adapted/applied in different situations
- use of Functional MOT to generate 'the conversation' rather than being a stand-alone test, a starting point to engage older people in physical activity
- the importance of treating each person as an individual and taking time to build a rapport rather than just treating older people as though they're all the same.



Functional Fitness Training event in London

## Follow-up survey

Participants from the first cohort of open training sessions (summer 2013) were offered the chance to give feedback on what they had done with their learning since the training event. This opportunity was offered to the 120 participants who attended training events in London, Glasgow, Nottingham and Sale.

Participants were provided with a link to an online survey via email five months after their initial training day. This survey was used to capture information on subsequent activities undertaken by participants after the training day. About a quarter of participants (26%) responded to the survey.

### Key findings

Ninety-three per cent of respondents shared the information learned during the day either during meetings with other staff members (52%) or during informal conversations (48%)

Sixty-two per cent of respondents indicated sharing the information contained in the UK CMO physical activity guidelines:

- 14% used the information to help inform design and content of local promotional materials
- 57% used the information to change content of local programmes or interventions
- 32% included the information in education or training events with other professionals.

Twenty-seven per cent indicated they had organised a Functional Fitness MOT event since attending the training day. MOT events were most frequently held in town halls or sports centres. Table 3 provides information on the attendance and structure of the events hosted. Of those who hadn't organised an event, 81% were still considering this as an option.



Table 3 – Number and duration of Functional Fitness MOT events

Number of reported participants at MOT events	% reporting
1-20	36
21-30	36
40+	28
Length of MOT event	
60 - 120 minutes	42
120 - 180 minutes	49
180+	9

Fifty per cent of respondents highlighted that they were using the information and MOT activities in other areas of their work. Examples of how respondents were using the information and activities included:

- inclusion of the activities as part of an exercise class
- within a GP referral consultation activity
- on a one-to-one basis with individual patients
- within university exercise and sports science courses.

A number of respondents also reported greater use of motivational activities or techniques with older people.

## Case studies

The following case studies illustrate the different ways in which Functional Fitness MOTs activities can be used to suit local programmes and partnerships.

### Case Study - Glasgow Caledonian University students delivering Awareness Raising, Glasgow

In Scotland, over the past three years, 420 older people participated in a Functional Fitness MOT, provided by Glasgow Caledonian University staff and students. MOTs have been hosted in a variety of settings and have been aimed to reach those hardest to reach (sheltered housing, shopping centres in socioeconomically deprived areas).



Photos from the ARC Leisure Centre, Glasgow.



Photos from Govan Shopping Centre, Glasgow and the 8th World Congress on Active Ageing, Glasgow.

### Case study - Link4Life Rochdale

Link4Life has used the Functional Fitness MOT as a guideline and starting point for participants aged 60+, attending one of three ten-week functional fitness exercise courses funded by the local Clinical Commissioning Group.

#### Examples of impact on participants

- **Participant 1** – female, walked 195m on 6 minute walk test using her walking stick, follow up she walked 226m without using her stick at all.
- **Participant 2** – female, walked 105m on 6 minute walk test with 2 rest stops, follow up she walked 225m without any stop or rest.
- **Participant 3** – male, managed 3 sit to stands (with the help of a member of staff) on 30 second sit to stand, follow up he managed 10 without any support
- **Participant 4** – female, managed only 1 second on balance test and said she could not do that as it was too painful, follow up she managed 42 seconds on the same leg.
- **Participant 5** – female, can now change her duvet cover herself, something she hadn't done for ten years without her son's help.

Using the MOT as a guideline and providing personal scores brings home to participants how they can improve, how much more they can do and encourages them to keep trying and working harder to improve. Participants from this course now attend aqua aerobics, yoga and Zumba Gold sessions on a regular basis.

### Case Study – Reaching Older Adults in Renfrewshire, Paisley, Scotland

Twenty-seven older volunteers within the Reaching Older Adults in Renfrewshire (ROAR) project underwent a Functional Fitness MOT facilitated by physiotherapy students from Glasgow Caledonian University, in conjunction with a motivational interview. Participants were followed-up three months after their original MOT and showed improvements in the following functional tests:

- **Chair Sit to Stand** - average 1 extra chair rise in 30 seconds
- **Timed Up and Go** - average 2 seconds quicker
- **Walking distance in 6 minutes** - average extra 30 yards
- **One leg stand** - average extra 15 seconds on each leg
- **Self-reported physical activity** - this varied from individual to individual with some suggesting they were doing more moderate activity (ie, walking) and others concentrating on home-based balance exercises or tai chi groups. This is to be expected as the advice was tailored to suggest activities that would improve upon the needs of a participant's particular area of weakness as highlighted by the Functional Fitness MOT.
- **Sharing information** – participants reported sharing their new knowledge with their peers, their family and the sheltered housing residents they worked as volunteers with.



Photos from Functional Fitness MOTs delivered at ROAR (Reaching Older People in Renfrewshire), Paisley

## Case study Aberdeen City Council, Scotland

Aberdeen City Council has used the Town and County Hall to host a one day prevention event to target those aged 60+, who are relatively fit, active and want to remain as independent as possible. This Functional Fitness MOT event reached 40 people.

The Functional Fitness MOTs were included within a programme where participants were invited to come and get advice about:

- keeping eyes, feet and mind healthy
- preventing falls
- how technology can help keep independence
- suitable exercise classes, social activities and events.

The event used two rooms - the Functional Fitness tests/health MOTs performed in one room and exhibitors in the connecting room.

Once people had had a health check, they were passed onto the Functional Fitness tests. After the assessment, the individual was signposted to exhibitors in the next room who were promoting their local services and classes.

NHS Healthpoint carried out the health checks – (height, weight, blood pressure). Wellbeing Co-ordinators (a qualified Occupational Therapist and a Personal Trainer) carried out the functional fitness assessments.

Exhibitors included Sport Aberdeen (promoting their OTAGO, Zumba, Aqua Zumba and health walks), City Moves (a dance organisation promoting dance and arts classes), NHS Falls Team, Alzheimer's Scotland (promoting how diet and exercise can help prevent dementia), NHS Healthpoint (promoting nutrition and weight management), Podiatry services (promoting foot care), Aberdeen Sports Village (promoting their Evergreens programme) and Telecare (promoting how to use technology to help maintain independence).

Aberdeen City Council has decided to make this a bi-annual event - spring and autumn.

## Sheffield Hallam University

Using their Functional Fitness laboratory and including the assessments from the MOT programme, final year students studying the 'Physical Activity Referral Schemes' module, undergo a Functional Fitness Assessment. However, the assessment is undertaken wearing an age simulation suit GERT, which offers students the opportunity to experience the potential impairments related to ageing such as:

- opacity of the eye lens
- the narrowing of the visual field
- high-frequency hearing loss
- head mobility restrictions
- joint stiffness, loss of strength, reduced grip ability
- reduced co-ordination skills



Age related simulation suits

## South Oxfordshire District Council

South Oxfordshire District Council has organised nine successful Functional Fitness MOTs events, following up each MOT event with taster sessions to engage those who currently do no physical activity. Each event has been arranged in partnership with an existing community group, to aid promotion and provide local knowledge. The nine events have attracted a total of 96 participants who were all introduced to follow up taster days with local events including Pilates, Yoga, Nordic Walking, table tennis, keep fit, Zumba, New Age Kurling and tai chi.

A Pilates teacher and walk leader has now incorporated strength and balance work into group activities. The majority of those who attended the Functional Fitness MOTs were either Health Walkers or attended Pilates classes. Feedback has been

very positive and many have indicated that they would welcome the opportunity to repeat the assessments at a later date to see if there has been an improvement.

This encouraged one lady, another health walker, who had just started to have problems getting up off the floor to do these exercises on a daily basis – the result, after three weeks was able to get up off the floor without difficulty.

Another lady in her late 60s, discovered that her flexibility was low and she was recommended to take up Pilates or Yoga. Having joined a Pilates class, she is finding her range of movement improving especially in the arms and shoulders.

Saturn Fitness club have incorporated Functional Fitness MOTs into their induction programme with new senior members.

### Case study – Aberystwyth University

A joint collaboration between Age Cymru Ceredigion and the Department of Sport and Exercise Science, Aberystwyth University.

An inaugural Functional Fitness Testing workshop, organised to raise awareness of the benefits of physical exercise and activity amongst the over 60s attracted eighty people (aged 60 to 95) from the Ceredigion area.

Planning included:

- eighteen students from the University who were trained to undertake the Functional Fitness assessments and also benefited from the intergenerational opportunity of practical working with older people.
- recruiting five volunteers from Age Cymru, Ceredigion who provided assistance throughout the day.
- the inclusion of scientific measurements of strength and balance including body composition measurements in state of the art facilities at the University.

In order to follow up progress of individuals, participants agreed to complete an additional record sheet with personal details.

## Recognition and testimonials

### 20 new ideas from UK universities that will change the world

The theme of Universities week, (June 9<sup>th</sup> – 14<sup>th</sup> 2014) is Ideas for Life and the relevance of university research and its everyday impact on our lives. To this end, a survey commissioned for the annual event, which is run by Universities UK with Research Councils UK, the Higher Education Funding Council for England and the National Coordinating Centre for Public Engagement, asked the general public about the issues that they want university research to address.



Thirty per cent said they wanted improved wellbeing in old age; just under half (47 per cent) wanted better treatments for the UK's most deadly diseases; a quarter wanted technology that would improve people's quality of life; and 38 per cent said they cared about living in cities that are safe, enjoyable places.



With this in mind, 20 UK university research projects that hope to tackle these issues have been highlighted as part of the celebrations.

The Function Fitness MOT was included as one of the 20 new ideas from UK universities that will change

### Scotland Physical Activity and Health Alliance Awards (PAHA)

The Functional Fitness MOT programme was short listed in the final three programmes under the category "Raising Community Awareness" in the 2014 PAHA Annual Awards.



"I feel the course has made me feel more confident with my mobility and ability and that I am healthier and have stronger joints. I have now joined the gym and attend the yoga and aqua aerobics sessions which I would not have done before going on this course"



“I think functional fitness is an excellent idea, wish there were more like it, it was fun and interesting and I certainly enjoyed the MOT... I found the session very useful.”

“You spend more time with us than the doctor does and a really nice atmosphere to get this done in, loved the 50s and 60s music throughout the day”.

Male participant 72 Aberdeen

“We have decided to make this a bi-annual event in the spring and autumn. We will also be hosting smaller events in which we signpost the activities rather than having exhibitors on-site. One is scheduled for a much deprived area in Aberdeen next month with the community centre hosting the event and will put on a healthy lunch for participants following the events. Thank you for providing the skills to help get people active again.”

Co-ordinator, Aberdeen City Council

“The majority of those who attended the functional fitness MOT's were either Health Walkers or members of a Pilates classes. I have spoken to the majority of those who attended and the feedback has been very, very positive. Many have said that they would welcome the opportunity to repeat the tests at a later date to see if they have improved their physical function.”

Walk Leader, Sonning Common, Oxfordshire

## Looking forward – shape of things to come

### UK Day for Older People

The BHFNC and its partners Glasgow Caledonian University and Later Life Training will again be promoting the use of the Functional Fitness MOT events as a contribution to the 2014 October 1<sup>st</sup> UK Day for Older People.

### Applications to other population groups

In the summer of 2014, new work is beginning to look at the potential of the Functional Fitness MOT model and its application to both frailer, older people (as a model for use within residential care settings) and with disabled people. Older people living within care settings are known to have far more functional limitations, an increased risk of falls, sensory impairments and other conditions including lower levels of cognition. However, the principles of the Functional Fitness MOT (including awareness raising amongst staff and residents, person-centred individual assessment and planning and the promotion of independence and activities of daily living) still apply to this population group.

### Research into the use of the Functional Fitness MOTs

Lothian NHS has been successful in applying to the Edinburgh & Lothians Health Foundation for a feasibility study to look at the effect of the Functional Fitness MOT in engaging older patients of a physiotherapy service in increasing levels of physical activity. The study will investigate whether the MOT is appealing to older physiotherapy patients and can be delivered efficiently in a health centre setting. Patient recruitment and retention rates and the extent to which outcome data will be collected and will be measured with a view to planning a future pilot trial of the MOT compared to the usual treatment provided. The study will start in September 2014 and run for ten months. Gathering data on uptake, use and change in behaviour after three months, the study will also involve interviews with staff and older people involved to further understand its potential to measure and change physical activity behaviour amongst older people. This may change the advice given so far and suggest that the assessments can be used to measure improvement in functional fitness.

### Inclusion of functional fitness within Intergenerational activities

There is emerging interest from universities and FE colleges in the way in which younger and older people can be given opportunities for Intergenerational learning and activities linked to functional fitness and physical activity promotion.

## Further information

For more details of the Functional Fitness MOT resources visit  
[www.laterlifetraining.co.uk/functional-fitness-mots-for-awareness-raising](http://www.laterlifetraining.co.uk/functional-fitness-mots-for-awareness-raising)

For details of current courses visit  
[www.bhfactive.org.uk/older-adults-training-and-events](http://www.bhfactive.org.uk/older-adults-training-and-events)

For details of UK CMO Guidelines on Physical Activity visit  
[www.bhfactive.org.uk/older-adults-guidelines](http://www.bhfactive.org.uk/older-adults-guidelines)

For further details about sedentary behavior and older people visit  
<http://www.gcu.ac.uk/seniorsusp>

For details of the DWP Full of Life and UK Day for Older People visit  
[www.olderpeoplesday.co.uk](http://www.olderpeoplesday.co.uk)

