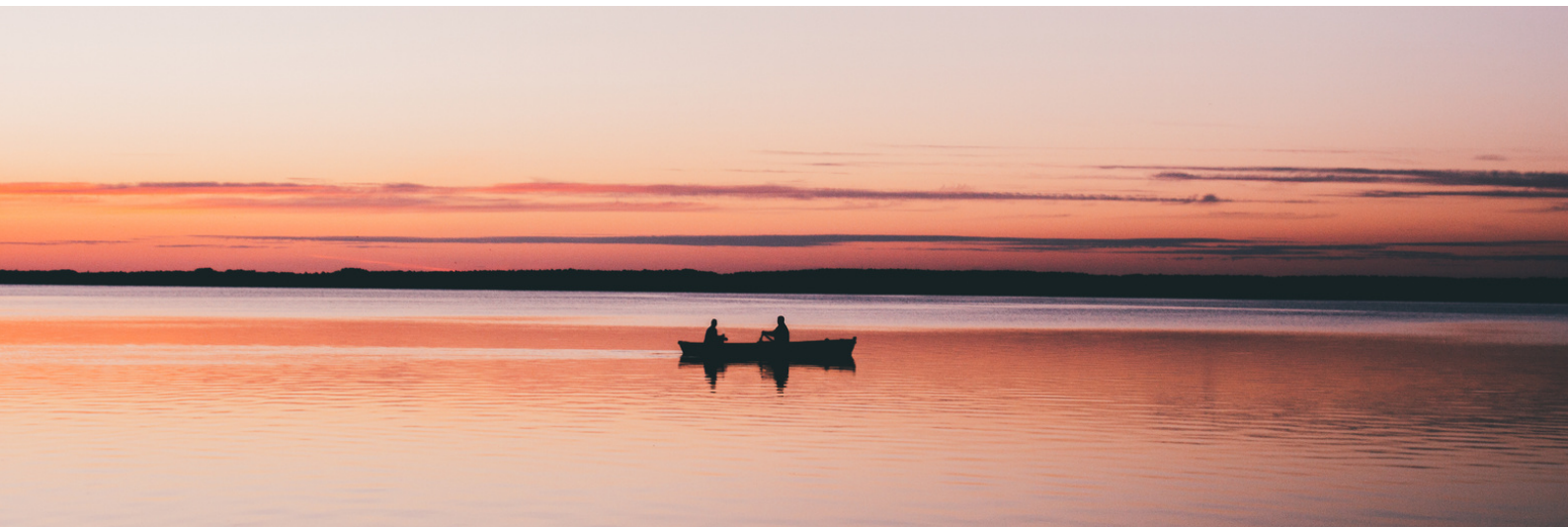


# THE FIRST ADVANCE MENTAL HEALTH FINDINGS ARE NOW OUT



## THE FIRST ADVANCE MENTAL HEALTH FINDINGS GET PUBLISHED

Exciting news from the ADVANCE HQ - the baseline mental health findings from the study have just been published in the scientific journal *Lancet Psychiatry*. Scroll down to page 2 to read more about the findings. This is the second ADVANCE scientific publication from the baseline data, and we look forward to sharing many more with you, as the data analysis progresses. Thank you to all our participants for giving us your time and making ADVANCE possible.

## SECOND FOLLOW-UP VISITS STARTING SOON

As you know, all of our 1,145 participants have completed their baseline assessments, and we have now seen 765 participants for their first follow-up. The second follow-ups are due to start in the autumn, so you can expect a call from the ADVANCE team if your second follow-up is due. All participants are now offered the chance to take part in the ADVANCE TBI (traumatic brain injury) assessments when they come to Stanford Hall for their ADVANCE day. You can find out more about what the TBI tests involve on page 5.

## CIARAN'S STORY

We recently had the pleasure of chatting to ADVANCE participant Ciaran about his experience with the study and how ADVANCE has had an impact on his life. His story is interesting and inspiring in equal measure. You can read what he had to say on page 3, where you will also find a short video clip of the interview.

## IN OTHER NEWS...

In this newsletter we also introduce another ADVANCE supplementary study - Bio-Mil-OA (Biomarkers and Joint Pain in Military Osteoarthritis). The study looks at changes in the ADVANCE participants' joints, mainly knees in the first instance. Scroll down to page 6 to find out more.

As always, thank you to all our participants for making ADVANCE the stellar research study it is today. It's been a wonderful journey so far, and we look forward to seeing what we can achieve together going forward.

Find us on  
social media!



E-mail us at:

[dmrc-advancestudyteam@mod.gov.uk](mailto:dmrc-advancestudyteam@mod.gov.uk)

Call us on:

+44 (0)1509 251 500 extension 3408

Visit our website:

[advancestudydmrc.org.uk](http://advancestudydmrc.org.uk)

# ADVANCE mental health findings in short



Watch the brief video on the left for a summary of the recently published ADVANCE baseline mental health findings.

The aim of this piece of ADVANCE research was to find out whether the injured group and the uninjured comparison group have differences in terms of their mental health outcomes. We looked at depression, anxiety, PTSD and mental health multimorbidity (PTSD with depression and/or anxiety).

In short, the findings showed that the injured group had greater rates of depression, anxiety and PTSD compared to the uninjured group. However, the type of

injury seemed to have a significant impact. Participants with amputation-related injuries had very similar rates of mental health problems compared to the uninjured group, whereas those with non-amputation injuries had significantly higher rates of mental health problems.

One of the main questions that arises from these early findings is around the differences in outcomes between the amputees and the injured non-amputees. Why do amputees seem to have better mental health compared to injured non-amputees? We are working on finding out the reasons for this, and we might ask you some additional questions related to this on your next ADVANCE visit.

If you feel that you are having problems that affect your daily mental health and wellbeing, please see our [signposting booklet](#).

**You can read more about the mental health findings in our blog post [here](#).**

## ADVANCE around the world

The ADVANCE team has been lucky to have the chance to spread the word about ADVANCE at various recent conferences. ADVANCE Chief Investigator

Group Captain Alex Bennett (pictured on the left, doing his best 007 impression) took some of the ADVANCE team to the Israel Veteran Games, where they presented the early findings from the study.



ADVANCE researcher Dr Fearghal Behan presented his work on mechanical loading in amputees at the recent European Society of Biomechanics Congress in Porto in June (pictured above). He also gave a virtual presentation for the 9th World Congress of Biomechanics in July.



And finally, Anna Verey from ADVANCE presented the ADVANCE-INVEST study at the Military Families Day Symposium 2022. You can read more about ADVANCE-INVEST [here](#).

## Family BBQ at Stanford Hall

The ADVANCE team attended the DMRC (Defence Medical Rehabilitation Centre) Family BBQ at Stanford Hall on 9th of July. The aim was to share the research done within the ADVANCE Study with the wider community (and to have a fun day out in the sun, of course). The event was a great success, with around 300 people attending and raising funds for the DMRC Benevolent Fund.



## Have your contact details changed?

Let us know by contacting us directly or by completing our online Contact Form via this QR code:





# PARTICIPANT VIEW: Ciaran Muir

**When and where were you deployed?** I joined the army in 2007 and was deployed to Afghanistan in 2009. Towards the end of that tour I was injured and lost my leg. This led to about 18 months of rehabilitation at Headley Court. Even though my military career was brief, I enjoyed being in the army - it was what I'd always wanted to do.

**How did you hear about ADVANCE?** Through my unit welfare officer, but it was a good while before I actually decided to take part.

**Why did you choose to take part in ADVANCE?** One reason was curiosity. The level of tests you get with ADVANCE - it's like a private health check people would normally have to pay a lot of money for.

**How did you find your first ADVANCE visit?** It was very informative, as all the tests were explained well. And I was well looked after - almost felt like a VIP, with people bringing me drinks and food all day! Particularly the results from the DEXA scan were a massive eye opener. I was in a really bad shape at the time, but I didn't quite realise how bad it was before I had my ADVANCE visit. On the drive home I decided that I had to get myself sorted.

**What impact has ADVANCE had on your life?** Joining ADVANCE was probably the single most important moment that got me where I am now, although obviously there were other factors too. It made me realise that I wasn't doing very well and had to make some changes. I've since lost 11 st, I am now a better dad, I have my own business, and I also got divorced - which might sound like a bad thing, but it was for the best.

“

*The level of tests you get with ADVANCE - it's like a private health check people would normally have to pay a lot of money for.*

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**What have you been up to since you left active service?** Initially things were quite difficult; my social circles were very military, and the transition to civilian life was not always easy. I bounced around jobs for a while, but eventually I found my path, and things are now going pretty well. I run my own business - an alternative education provision called UK Military Mentors. We work with young people who are at risk of exclusion from mainstream education, using the skills we gained in the armed forces to help them with behaviour management, self reflection and conflict management, among other things.

**Is there anything more you would like to see from ADVANCE?** In terms of the tests done, I don't think so. But the mental health questionnaire didn't leave me in the best place, after all the reflection you needed to do. So some feedback on that and support would have been good. [\[See our signposting booklet for mental health resources.\]](#)

**What's your favourite way to spend your weekends?** I spend most of my weekends walking or camping, and I have my son most weekends. He's 6 and has just discovered YouTube, so I'm trying to get him out as much as possible.

**What three words would you use to describe ADVANCE?** Interesting, insightful and worthwhile.

**What are your top film and book of all time?** Forrest Gump - it's like four movies in one, as it covers all different genres. I'm not going to pretend that I read books, but The Bodybuilder's Kitchen is the closest to a book I've read.

**Have you got any words of wisdom for your fellow ADVANCE participants?** Eat well the night before, as you have to do fasted bloods at the start of your ADVANCE day. The breakfast menu at the B&B I stayed at for my ADVANCE day was absolutely gorgeous, and I couldn't have anything!



Watch the video above to find out what impact ADVANCE has had on Ciaran's life. The full interview can be found [here](#).



# MEET THE TEAM - NICOLA GOODMAN

**What is your role within ADVANCE?** I work with the clinical team performing the assessments on the participants when they come for their ADVANCE visits. This involves recording data and generally helping with the smooth running of the clinical processes.

**What jobs have you had before joining ADVANCE?** I worked in the NHS as a clinical physiologist for 24 years, 22 of them in respiratory research. I ran commercial clinical trials for new treatments for respiratory diseases, then when the pandemic hit, the focus shifted to COVID research. After that, I decided it was time for a change, and I moved to ADVANCE. My first job out of uni was at Pedigree Petfoods where I worked on dietary research trials and looked after 70 cats and 40 dogs!

**What do you enjoy most about your job?** I love meeting the participants and hearing their stories – they usually have some entertaining tales to tell. It's also quite humbling to hear how they've put their lives on the line for their country. The ADVANCE team are lovely and have made me feel very welcome. And of course, Stanford Hall is a beautiful place to work.

**What are the biggest challenges of your job?** It can be quite fast-paced, and you have to keep your eye on lots of things happening simultaneously.

**If you could see all our participants together, what would you say to them?** Thank you for giving us your time to help others in the future, and thank you for your service.

**What's the weirdest habit you developed during the COVID lockdowns?** As I was working in COVID research at the time, everyday life didn't really change for me as it was 'business as usual'. I did become quite obsessed with the daily COVID figures though – so I guess checking the news websites became a bad habit.



**What's the last book you read?** I've just started reading 'Man Down' by Mark Ormrod – I'm counting it as a CPD activity!

**What's your favourite meal?** Indian food – my favourite has to be chicken tikka rogan josh and a huge naan bread.

**What's your favourite drink?** At work, tea - after work, gin.

**What was no. 1 in the UK charts on the day you were born?** I think it was 'Tiger Feet' by Mud.

**What three words would your friends or partner use to describe you?** Outdoorsy, creative and organised.

## Hello and goodbye

We recently said goodbye to our fantastic ADVANCE senior research nurse Seamus Wilson. Good luck to Seamus in his future endeavours, and thank you for all your hard work over the years!

But once again, the ADVANCE team is growing. We welcomed PhD student Angelos Manolias (pictured on the right) in April. He is working on the ADVANCE Omics study at Imperial College, looking at biomarkers in blood that could be predictive of cardiometabolic risk in response to combat injuries in the ADVANCE cohort.

A very warm welcome also to Nikki Goodman who joined ADVANCE as a clinical project assistant in April. You can find out more about her role and interests in the interview on the previous page.



HELLO



# YOUR ADVANCE DAY EXPLAINED: Neuropsychological Assessment

As you might remember, we recently introduced new ADVANCE tests looking into the prevalence and long-term outcomes of traumatic brain injury (TBI). Below we explain what these tests are all about and why we are interested in TBI.



## What is TBI and why are we interested in it?

Traumatic brain injury (TBI) is estimated to affect 69 million people each year worldwide. Military personnel are at increased risk of brain injury due to repetitive exposure to combat environments, e.g. blasts, shrapnel and bullet related injuries, falls and blunt impacts. TBI outcomes can range from concussion symptoms, which may resolve in a few weeks, to ongoing symptoms affecting cognition, sleep and quality of life. The long-term outcomes of TBI are not well understood but have been linked to increased risk of neurodegenerative diseases, such as dementia. The ADVANCE TBI study is looking into the long-term neurological and functional outcomes of TBI in the ADVANCE cohort.

## How are we assessing TBI in the ADVANCE participants and how can I take part?

TBI will be assessed using an MRI scan (if participants are eligible), blood biomarker analysis and some neuropsychological assessments. We will also look at information already collected in the ADVANCE Study, such as past medical history, sleep and quality of life questionnaires. If you would like to take part, you can do so as part of your next follow-up visit.

## What do the neuropsychological tests involve and what happens to the information collected?

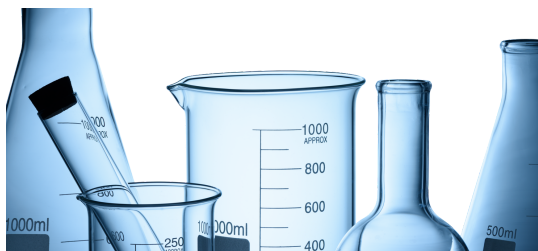
Participants will take part in five neuropsychological assessments and two reaction speed tests. These assessments give us information on a range of areas including cognition, attention and both working and delayed memory. In total, the tests take around 45-60 minutes.



## What does the TBI study aim to achieve?

A few participants have already taken part, and some of them are anxious coming in, while others are very competitive with themselves. But the neuropsych tests are nothing to worry about. Findings from these assessments will help investigate how patterns and type of injury affect cognition. As these are purely research assessments and not a diagnostic tool, we will not routinely return the results to the participants. The hope is that findings from the ADVANCE TBI study will inform treatment pathways to improve long-term care of both military and civilian trauma casualties and further our understanding of the long-term outcomes of head injury.

# RESEARCH EXCELLENCE FRAMEWORK (REF)



Let's talk about science. In the UK, the quality of research in higher education providers, such as universities, is assessed by a system called the Research Excellence Framework (REF).

The main university partners involved in the ADVANCE Study are Imperial College London and King's College London, both world-class research institutions. In the 2021 REF assessment, Imperial ranked top in the UK overall, while King's College ranked 9th - out of 157 institutions!

So, as a participant, you are in good hands when it comes to ADVANCE research - top scientists from world leading institutions doing research that will benefit the wounded veterans from Afghanistan.

# ADVANCE bolt-on study: Biomarkers and Joint Pain in Military Osteoarthritis (Bio-Mil-OA)

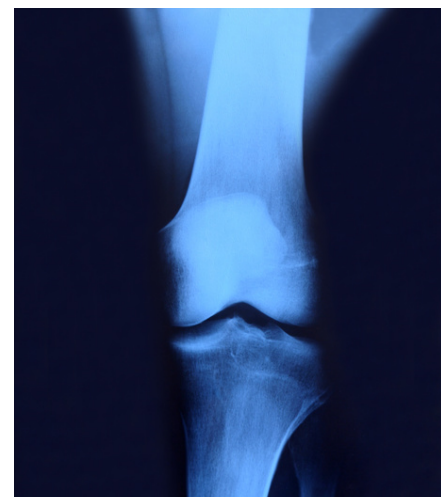
The latest ADVANCE sub-study – Bio-Mil-OA – formally began earlier this year. The study looks at changes in the ADVANCE participants' joints, mainly knees in the first instance. These changes – which result in pain and reduced use of the joints – are called osteoarthritis. Osteoarthritis can be more common both in military people and in people who have been exposed to trauma.

The Bio-Mil-OA study uses X-rays and blood tests to investigate joints and osteoarthritis. The aim is to understand how changes in X-rays and blood tests are related to how individuals feel about their joints, how much pain they are in and how they use their joints.

Bio-Mil-OA receives funding from Versus Arthritis, a dedicated arthritis charity, and is a collaboration with the University of Nottingham. The study is military doctor Major Oliver O'Sullivan's PhD research project. He works between Nottingham University and ADMR at DMRC Stanford Hall.

The study uses specific biomarkers and other tests from the ADVANCE baseline and first follow-up visits. Biomarkers are compounds found in your blood, for example, proteins and metabolites.

Major O'Sullivan commented: 'We hope that looking at these bio-markers will help us understand the progression of osteoarthritis and see if any of the markers can predict joint changes. We are hoping to find specific markers in blood that could be used to identify changes in the joints before they become an issue.'



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**VERSUS  
ARTHRITIS**

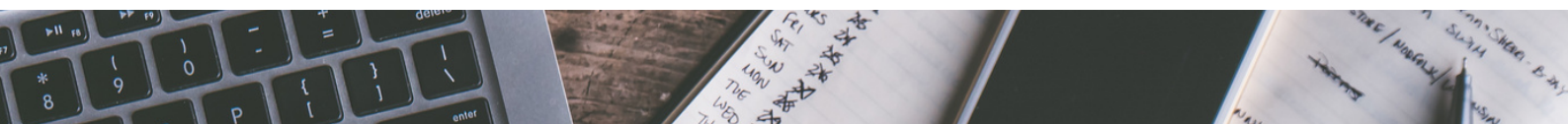
The Bio-Mil-OA does not involve any additional tests for the ADVANCE participants but aims to use existing collected data, e.g. X-rays. The study will build on the work done by teams led by Prof Marc Dumas in biomarkers and Prof Anthony Bull in osteoarthritis, both from Imperial College London.

Alongside Major O'Sullivan, there is a wealth of knowledge in biomarkers and osteoarthritis from Professor Ana Valdes, Professor Stefan Kluzek and Dr Joanne Stocks from Nottingham University. They are supported by the ADVANCE Chief Investigator Group Captain Alex Bennett.



**HEADLEY COURT  
CHARITY**

## We look forward to speaking to you soon!



**E-mail us at:**

[dmrc-advancestudyteam@mod.gov.uk](mailto:dmrc-advancestudyteam@mod.gov.uk)

**Call us on:**

+44 (0)1509 251 500 extension 3408

**Visit our website:**

[advancestudydmrc.org.uk](http://advancestudydmrc.org.uk)