

CLOSING IN ON FOLLOW-UP 1 COMPLETION



WE HAVE - NEARLY - COMPLETED FOLLOW-UP ONE!

Thanks to our committed participants, ADVANCE is nearing another important milestone - we have almost completed the first follow-up visits, with fewer than 100 participants left to see. (If you are one of them, please get in touch and book in your visit!) The second of the five follow-ups is in full swing, and even the British summer can't seem to stop our participants from coming to see us at Stanford Hall.

THE FIRST BONE MINERAL DENSITY FINDINGS ARE NOW OUT

That's right - we have published yet another paper on the ADVANCE baseline data (and there is more to come). This most recent paper looks at bone health - more specifically bone mineral density - in the ADVANCE cohort. Scroll down to page 5 to find out what the findings were. There you will also find a video of one of our researchers explaining why the ADVANCE cohort is so unique when it comes to bone health research.

On page 2 you can read about how the ADVANCE findings are shared with relevant third parties to help maximise the impact from the study. The study findings gain strength with each follow-up, and in the long term we aim to help improve the care provided for serving and ex-military personnel.

ADVANCE HEARING TESTS EXPLAINED

People who serve are more likely to develop problems with their hearing, and hearing tests are an important part of ADVANCE. Find out more about why we test our participants' hearing and what the tests tell us on page 6.

IN OTHER NEWS...

In this newsletter you will also find an interview with ADVANCE participant Ryan Beardall, the 1000th participant to attend their follow-up one visit (page 2). On page 5 you can read about the charity HighGround which operates at Stanford Hall. On page 4 you can find out about an excellent exhibition - 'Road to Recovery' - at the National Army Museum in London. The free exhibition is on until 28th of August, and you might spot some familiar faces if you go see it...

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PARTICIPANT VIEW: Ryan Beardall

When and where were you deployed? Afghanistan in 2011-2015. I was medically discharged due to IED blast on my left hand.

How did you hear about ADVANCE? I received an e-mail from someone at Headley Court to ask if I would like to take part.

Why did you choose to take part in the Study? There were a few reasons. Firstly, with ADVANCE you get a full health MOT - something you are not offered by the NHS. It is also useful to get all the tests done every few years, to see any changes. Another reason to take part is that I get to help veterans of the future with their rehabilitation.

How did you find your ADVANCE visits? I had a study visit during COVID, so it was nice to have interaction with the lovely ADVANCE staff! The study tests are very interesting, and it was nice to see photos on the wall of the other lads that are taking part. It's hard when you leave the military - having this connection through ADVANCE has really helped me.

What impact has ADVANCE had on your life? Mainly health benefits and becoming aware of how important it is to look after yourself.

Is there anything more you would like to see from the Study? I think the findings need to be made more public and accessible to us, for us to see what the outcomes are and how the Study is helping future generations. More data and information on the ADVANCE website might be useful. The results booklet you get after your study visit is great for you individually, but it would be good to see something about the overall results and findings.

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Keep coming back for your ADVANCE visits, so that the ADVANCE team can collect enough data over the longest period possible.

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What three words would you use to describe your experience with ADVANCE? Comforting, informative and contributing.

What have you been up to since you left active service? When first discharged, I did a lot of charity work for Troop Aid. I raised over £3k doing bush tucker trails, blind dates, chest waxing... ha! The Evening Post local newspaper printed a story about it. I also took part in the Route 66 Bike Tour for the Wounded, as well as golf fundraising days. I then started seasonal work with Morley Hayes and finally became an electrician and settled down with my wife and daughter.

Have you got any words of wisdom for your fellow participants? Keep coming back for your ADVANCE visits, so that the ADVANCE team can collect enough data over the longest period possible.

What's your favourite way to spend your weekends? Family time, hiking and golf.

What are your top film and book of all time? I read a lot of stuff on Dan Bilzerian - he's a hero of mine. And it's got to be Shawshank Redemption.



Ryan attending his first follow-up at Stanford Hall, as the 1000th participant to do so - hence the giant cookie.



ADVANCE making a difference

One of the long-term aims of the ADVANCE Study is to use the knowledge gained from the Study to help improve the care provided for serving and ex-military personnel. With every follow-up round we are in a better position to do this, as more and more findings emerge from the Study.

We keep in regular contact with third parties such as NHS England, the Armed Forces Covenant Fund Trust, the Office for Veterans' Affairs (OVA), the CASEVAC Club and military charities such as Help for Heroes. We share with them all the latest ADVANCE findings and, where appropriate, discuss what these findings mean in terms of care and service provision for serving and ex-military personnel. We also present study findings at research and military conferences where the audience includes MoD and government policy makers.



MEET THE TEAM - FRAJE WATSON

What is your role within ADVANCE? I am a researcher based at Imperial College London. I analyse the musculoskeletal data from ADVANCE, which includes knee and pelvis x-rays and the full-body DEXA scan, as well as some of the questionnaires. We are currently using this data to investigate knee osteoarthritis, bone density, and upper limb disability in the ADVANCE cohort. Once the first follow-up data is processed, it will be extremely interesting to see how these things have changed over time.

What jobs have you had before joining ADVANCE? I originally trained to be a veterinary nurse, where I worked at a veterinary orthopaedic hospital mostly doing anaesthesia or collecting lameness data to help report surgical outcome. This kicked off my interest in musculoskeletal research and eventually sent me back to university to do a PhD in walking balance in (human!) children with scoliosis, where the spine becomes curved during the teenage growth-spurt. I'm also a sailing instructor, so I did that working in France and Greece before university as a way to travel a bit.

What do you enjoy most about your job? I love patient-focused research, and at ADVANCE I really enjoy working with such a big team with so many skills and areas of expertise. We recently had a networking event for all the junior researchers, and it was fascinating to hear about everyone else's work and think of interesting ways to collaborate within ADVANCE. I'm also really excited to be presenting some of our ADVANCE work in Japan and the US this summer!

What are the biggest challenges of your ADVANCE role? The knee x-ray data has been pretty challenging but really rewarding to get to the bottom of! Most of the time the challenge is focusing on the most important research questions, when there are so many extra ideas and questions buzzing around at the same time.

If you could see all our participants together, what would you say to them? I love meeting new people, so I'd want to chat and see what their answers to these questions would be. But that would take quite a long time for 1145 participants! Mostly I'd want to thank them for their service and for participating in ADVANCE.

What is your favourite meal? I love Mexican food and would have to choose nachos with ALL the toppings.

What is your favourite drink? Embarrassingly it's probably hot chocolate, even in the summer. If I'm feeling slightly more sophisticated, then my favourite cocktails would be margarita and whisky sour.

What's the last book you read? I'm currently reading 'The Seven Moons of Maali Almeida' by Shehan Karunatilaka. It's about a photojournalist who was killed in the Sri Lankan civil war of the 90's. The book is about his afterlife, where he has seven moons to find out who killed him and to get some incriminating photos of major political leaders he took released to the authorities before he moves on.

What three words would your friends or partner use to describe you? Adventurous, considerate, sporty.

What's your favourite way to spend your weekends? I enjoy being active and outdoors, so a run along the river with my spaniel, racing an RS200 with my boyfriend at the coast, or a cycle in the Surrey Hills would be perfect. All that activity would need to be fuelled by a delicious meal before crashing out on the sofa to watch season 2 of The Bear.

You are going to be stuck on a desert island - who are you taking with you? My boyfriend Max. He's my best friend, and I think he'll be thrilled to be chosen over our dog - he's a much better conversationalist.

What was no. 1 in the UK charts on the day you were born? He's got way better songs and it didn't make the set list for his Glastonbury headline slot, but "Sacrifice/Healing Hands" by Elton John was number 1 when I was born.



Fraje in Macedonia.



Thanksgiving service for Admiral of the Fleet Lord Boyce

Representatives from the ADVANCE Study were privileged to attend a thanksgiving service for the late Lord Boyce at Westminster Abbey in July. Among his many charitable roles, Lord Boyce was the first ever Chairman of the ADVANCE Charity. The service paid tribute to his remarkable life and career, and his many great achievements.



You come to us from all over the UK and beyond!

Thank you to all our participants for taking the time to travel to us from all over the UK and beyond! The map on the left shows where ADVANCE participants are from in the UK. Stanford Hall is shown with the red pin.

Special thanks to everyone who travels to Stanford Hall for their ADVANCE visits from abroad - we commend your commitment to the Study. For example, we have participants traveling to us from Spain, Sweden and Dubai. And currently we are trying to arrange a follow-up visit for a participant more than 8,000 km away... Now that's what we call commitment.



Hello and goodbye

In May we sadly said goodbye to our brilliant database manager Stefan Sprinckmöller. He's moved on to a new exciting data role elsewhere, and we wish him all the best.

But you win some, you lose some. In July we were excited to welcome Lydia Orton to the ADVANCE team. Lydia joined as a research assistant and will be working on the ADVANCE TBI (traumatic brain injury) study.

You might see Lydia at your next ADVANCE visit if you take part in the TBI study. Part of her role is carrying out neuropsychological tests on the study participants.



Lydia



'Road to Recovery' exhibition

If you happen to be in London before the 28th of August, we recommend the brilliant (and free) **'Road to Recovery'** exhibition at the National Army Museum. If you look closely, you will find a mention of the ADVANCE Study, and you might even spot a few familiar faces from Headley Court.

The exhibition explores the rehabilitation and recovery journeys of soldiers who have suffered life-changing physical or mental injuries in service. They talk about how they have overcome challenges brought on by their injuries and the transition back to civilian life, the resilience they have required and gained as a result, and also at times the positive impact their injuries have had on their lives, such as post-traumatic growth.



"Rehabilitation for me has been about learning to find new meaning, learning to find new purpose to my life and finding a tribe if you like that I belong to again"

Gemma Morgan

"Without hope there is no recovery"

"Resilience is the thing that I learned from all of those processes. If someone's gonna fix me it's gonna be me"

Quotes from veterans whose journeys the exhibition follows.

Have your contact details changed?

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



First Findings on Bone Mineral Density

How do combat injuries impact bone health in the ADVANCE cohort? The most recent ADVANCE publication found that changes in bone health in those with combat-related trauma injury appear to be local to injury rather than widespread throughout the body.



Many lower limb amputees have low bone mineral density, but not much is known about bone health in those with combat injury. Having low bone mineral density increases risk of fracture. But does combat-related traumatic injury result in lower bone mineral density in the ADVANCE cohort? Along with answering this question, we also wanted to test whether traumatic lower limb amputees have reduced localised bone mineral density on their amputated side, or whether this reduction was widespread across the skeleton.

Watch the video on the left to find out what makes the ADVANCE cohort so special in terms of bone mineral density research.

What were the key findings?

- Bone mineral density of the hip was lower in the injured compared to the uninjured group. However, this reduction in bone mineral density was significant only at the hip of the amputated limb of amputees, but not on the other - unamputated - side.
- The reduction in bone mineral density was greater for those with an above knee amputation compared to those with a below knee amputation.
- There were no differences in bone mineral density of the spine between those with an amputation and the uninjured.
- Those who suffered an amputation were no less active than those who were uninjured. This is important as lower activity levels are linked to reduced bone mineral density. This shows that the reduction in bone mineral density on the amputated side was not due to reduced activity levels.

What do the findings mean?

Our findings indicate that changes in bone health in those with combat-related trauma injury appear to be local to injury rather than widespread and are only evident in those with lower limb amputations. This may be because of altered loading to the joint and muscle, creating a reduced mechanical signal to the hip on the amputated side, resulting in localised reductions in bone mineral density. But what can be done to mitigate reduced bone mineral density? Interventions to stimulate bone, such as certain exercise interventions, may be helpful. Some of the ADVANCE researchers have already begun a series of studies to investigate whether certain exercise programmes may be effective at reversing this reduction in localised bone mineral density. This work aims to reduce lifetime fracture risk in those who have experienced a lower limb amputation.



Charity spotlight: HighGround

We interviewed Jane Taylor from HighGround, a charity that works with injured veterans during rehab and helps veterans figure out how they can use their military skills to obtain jobs in the land-based sector. This includes everything related to land and the environment, such as horticulture, forestry and landscaping.

HighGround's work includes horticultural therapy as part of rehab at Stanford Hall, where Jane is based. Veterans can come to Jane for help with mental health or building physical strength. Working in the greenhouse or outdoors can do wonders to your mood; and digging and composting can help re-grain muscle strength, for example, after arm or hand injuries.

Another initiative of HighGround is the Rural Weeks Programme. It is a 5-day residential programme at an agricultural college and provides an introduction to careers in the land-based sector, covering areas such as land management, environmental design and animal care. And after taking part in the Rural Week, you can work with one of the charity's careers managers to make a plan for going forward.

More information on HighGround can be found on the charity's website: <https://highground-uk.org/>.



YOUR ADVANCE DAY EXPLAINED:

Hearing tests

As part of the ADVANCE Study, participants are asked to complete a hearing test and a short questionnaire about their hearing.

It is widely recognised that people who serve are more likely to develop problems with their hearing compared to those who do not serve. We know from the Royal British Legion's Lost Voices report that veterans under the age of 75 are three and a half times more likely to report difficulties hearing compared to the general population. The report also tells us that this may have a significant impact on these veterans' career prospects, earning potential and quality of life.

What do the hearing tests tell us?

Hearing is unique amongst the ADVANCE tests, as information about hearing is available for most participants prior to their deployment. This allows the study team to compare the hearing tests done before and after deployment. The tests tell us about participants' ability to hear sounds of different frequencies in either ear and how loud they need to be to be heard. Patterns can be compared between the injured and uninjured participants and also between those injured in different ways.

Perhaps most interestingly, because ADVANCE is both a large study and a long one, we can monitor what happens to participants' hearing as they age. We are keen to understand whether the ears of people who have been exposed to blast 'age' faster than the ears of those who have not been exposed to blast. And if so, do these changes happen alongside changes in the rest of the body?

We will continue to monitor changes in hearing results over the lifetime of the study and link these findings to other areas investigated within ADVANCE.



HEADLEY COURT CHARITY

Facilitated by the ADVANCE Charity.

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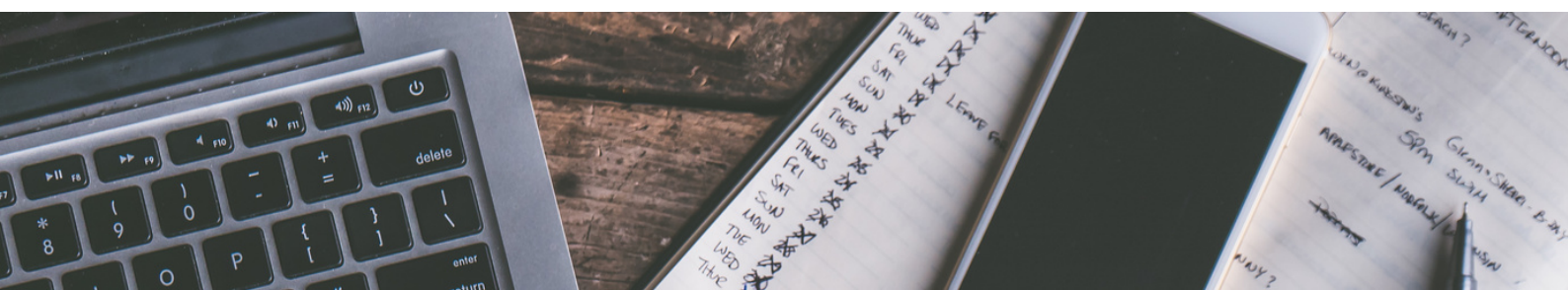


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We look forward to speaking to you soon!



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