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## The High Bone Mass Study Newsletter

Hello and welcome to the 8<sup>th</sup> edition of the annual High Bone Mass study newsletter, coming to you from the University of Bristol at Southmead Hospital in Bristol. We have had a very busy year, arranging our follow-up data collection at our study centres across England and Wales.

First of all, we would like to thank you for your continued support of our study. Follow-up bone density scans and joint X-rays are currently underway in Bath, Hull and Sheffield and

we are hoping to start at our other sites early in the New Year. So, if you haven't heard from us yet, we will be in contact soon. We have received a good response to the invitations we have sent out, but we are still missing a few replies from people with whom we have lost contact. If you have a relative who was originally involved in the study, but has not heard from us, please ask them to get in contact using the contact details at the top of this letter. Every member of our study is very important, whether they have High Bone Mass or not, as this allows us to make comparisons of changes in the bones and joints between people with and without High Bone Mass. Every part of our follow-up study is optional, you are more than welcome to fill in the questionnaire without having the DXA scans and Xrays, and vice versa. We kindly ask, if you have received the



questionnaire and invitation for scans and have not yet had time to return it, that you return the consent form, even if you do not want to take part. In the past year, we have also published a new scientific paper including the work of our medical student, Aaron Murphy, as part of his intercalated BSc in Health Science. Aaron



found that individuals with High Bone Mass are more likely to develop bony spurs (called osteophytes) in the joints of their hand, suggesting that individuals with High Bone Mass have a generalised tendency to form new bone. We are hoping to use the new hand X-rays, collected as part of our follow-up studies, to determine if these osteophytes are more likely to worsen over time in people with High Bone Mass. If you would like to receive a copy of this paper, please contact us using the contact details at the top of page one.

We have also had another 3<sup>rd</sup> year medical student, George Slade, working with us over the past year. George was using specialist software, designed by our collaborators at the University of Aberdeen, to measure knee shape using original knee X-rays. George was investigating if individuals with High Bone Mass have differences in their knee shapes and how these differences might relate to features of osteoarthritis. He found that people with osteoarthritic osteophytes tend to have larger knee joints. George presented his work at the British Orthopaedic Association Annual Congress in Liverpool in September.



Dr Celia Gregson is continuing her work to determine the genetic changes underlying High Bone Mass, working with our collaborators at the University of Queensland in Brisbane, who have the genetic facilities to search for changes in genes not currently identified as causing High Bone Mass. Dr Gregson is currently analysing new sequence data so this work is still ongoing.

April Hartley is also continuing her PhD studentship, investigating whether people with High Bone Mass are more likely to have osteoarthritis that changes over time compared to people with normal bone density. This work relies on the follow-up X-rays and questionnaires, so we would like to say a huge thank you to everyone who has given up their time to help us so far. She is also currently aiming to identify risk factors for osteoarthritis and particular features of osteoarthritis (such as osteophytes) using metabolic data collected from the blood samples you have already provided. We hope to have some results to present in next year's newsletter!

We would like to express again our sincere thanks to all our study members for your time and interest, without our participants, none of our exciting work would be possible. We are also grateful for our generous financial support from Arthritis Research UK, The Wellcome Trust, the National Institute for Health Research (NIHR) and Osteoporosis Research in East Yorkshire (OSPREY). We would finally like to thank all our collaborators from the NHS.

If you have any questions about the follow-up data collection, or your contact details have changed, please let us know using the contact details at the top of this letter. From all of the team, Season's greetings and all the best for the New Year.

With thanks and best wishes Yours sincerely

Dr Celia L Gregson Study Co-ordinator

On behalf of:

Prof Jon Tobias, Chief Investigator Dr Sarah A Hardcastle, Clinical Research Fellow Miss April Hartley, PhD Student Mrs Karen Ireland, Study Administrator University of Bristol, website: http://www.bristol.ac.uk/clinicalsciencenorth/musculo/