



# Newsletter

2021/2022

## Message from Professor Cyrus Cooper, Centre Director

Welcome to this year's newsletter. Although it has of course been another difficult year with the ongoing COVID-19 pandemic, I am delighted to report that we have been able to advance a number of exciting studies, and here we update you on research that is ongoing.

The pandemic has taught us an important lesson on digital connectivity and as we have gotten used to zoom calls, we have realised that this might be a fantastic way to give an update on the work you have so generously helped us with, without you even having to leave the comfort of your living rooms!



Please register interest on any future virtual events by providing an email address on our dedicated website page <https://www.mrc.soton.ac.uk/herts/contact/register-your-email-for-virtual-events-and-electronic-newsletters/> – if you would like to suggest topics that you would like to hear about, there is also a chance to do this on this page.



Finally, as we move to a more paperless way of working, for reasons of environmental sustainability and cost, we have made the decision to send future editions of this newsletter as digital e-copies. **If you would like to receive these in the future, please register interest (on the same website). If for any reason you prefer a paper copy, you can let us by contacting us by phone**

**on 02380777624 or email at [hcs@mrc.soton.ac.uk](mailto:hcs@mrc.soton.ac.uk).**

Once again, thank you for all your support of our work. We hope you enjoy reading about the work that has only been possible through your support.

## How did the COVID-19 pandemic impact the lifestyle of NAPA participants?



As some of you might remember, back in summer 2020, we began to investigate how our cohort members had been affected by the pandemic, both practically and emotionally. We were also interested to know how your lifestyle may have changed compared to before the pandemic.

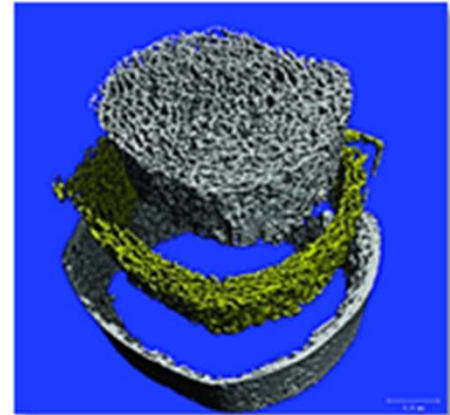
We have spoken with 125 of you over the phone, and we found that about 47% of our study members said they were less physically active than before the pandemic. Only 5% of you said you became more active. Interestingly, many of you (27%) said that you are drinking less alcohol. We also asked about changes in diet, and we found that, although 18% of you said that you were eating more than you used to before COVID-19, almost all of you said that the healthiness of your diets remained largely unchanged. Our next step will be comparing these findings with similar reports

from younger cohorts to see whether the impact of the pandemic was different in different age groups. By doing so, we hope to better understand the challenges people faced and are still facing as we emerge from the pandemic. We would like to extend a big thank you for helping us with this study.

---

### **Use of artificial intelligence to improve fracture prediction**

Many of you will recall attending the Elsie Widdowson Laboratory in Cambridge in 2011-2012. Several measurements are produced from the scans which not only provide information on bone density as a whole but also information about the inner (trabecular) bone and outer (cortical) bone shell. An exciting new project that represents a collaboration between us and Southampton University engineering department uses artificial intelligence to predict fractures directly from computed tomography (CT) images. We have found that this approach can improve the identification of fractures, compared to the use of current methods, suggesting that this technology could improve fracture prediction and osteoporosis care. Many thanks to all our cohort members who helped us with this work.



---

### **The Hertfordshire Cohort Study Nutrition and Physical Activity (NAPA) Study – what did we find?**



From November 2019 until March 2020, we visited almost 180 of you at home as part of the Hertfordshire Cohort Study Nutrition and Physical Activity Study (or NAPA Study). In this study we wanted to find out more about how your diets, physical activity habits and lifestyle can affect your musculoskeletal health, and how might we be able to support people to make beneficial lifestyle changes.

These visits included asking you some questions about your lifestyle and health. We also performed some physical measurements. Around half of those of you we visited at home had an initial chat with us focusing on your lifestyle; we followed this up with regular telephone calls over the following 9 months. One year later we sent all those of you who we initially visited a questionnaire in the post.

We have now analysed some of the information that we collected. We compared those who had these targeted conversations about lifestyle, to those who did not. Women who received phone calls tended to show a greater improvement in their diets, while men showed improvements in their physical capability.

This study contributes to our understanding of how to support people in keeping active and having a healthy diet which is vital for maintaining musculoskeletal health. This will be important for future strategies to promote good muscle and bone health in later life, and overall healthy ageing. We would like to once again thank all of you who have taken part in the study.