



The PIPAH Study Newsletter

January 2022



Introduction

The year began with Britain still in lockdown because of the on-going COVID-19 pandemic but there was some hope that the vaccination campaign, which started in December 2020, could help to return our lives to some form of normality. At the time of writing this, many of the restrictions imposed on us during lockdown had been removed, although we were all still advised to be careful. We were able to send you the January 2021 newsletter and questionnaire, but we suspended the 2021 annual recruitment programme. Usually, we would have invited new members of NRoSO who joined during 2020 to take part in the PIPAH study. With the help of City & Guilds who contact the new members of NRoSO on our behalf, we are resuming the annual recruitment this January and are inviting people who joined NRoSO in 2020 or 2021 to take part in the PIPAH study.

Why are we interested in pesticides?

The PIPAH study is trying to better understand if health problems are associated with regular pesticide use, and how to keep people who use them safe and healthy at work. The use of pesticides is very important to our lives in many ways, and we are keen to make sure that when they are used, they are used safely.

Our ninth year...

Over the past nine years we have collected a wealth of data that you have been willing to share with us. In the past year we have made big steps towards publishing findings from the data that we have analysed. Our first scientific journal publication back in 2017 was a profile of the PIPAH study when it first started. This included the reasons for setting up the study, how we recruited people into the study, a description of the data we collected, and a summary of the characteristics of our participants and their work (<https://bmjopen.bmj.com/content/7/10/e018212.info>). During the last year, we began working on the 5-year update to this paper using the information we collected in the 2019 follow-up general questionnaire.

We also began collecting data in a shorter format two-section questionnaire in 2018. The first of these questionnaires asked about your respiratory health in some detail. We provided you with early findings from this questionnaire in the 2019 newsletter. We have now formally written up the findings relating to asthma and a scientific paper is in the process of being published. We are still writing a second paper that covers other respiratory conditions, such as farmers' lung and chronic obstructive pulmonary disease (COPD). In 2020, the health section in the short questionnaire asked about any musculoskeletal problems. We included a summary of the data in our 2021 newsletter but we are now working with an international expert in musculoskeletal health on the detailed analysis and write-up of the findings. In future newsletters, we will be able to give you the links to these scientific papers after they have been published.

In January 2021 we invited you to complete a short questionnaire that included a section on skin health. A variety of substances and environments in the workplace or home have the potential to irritate the skin, and the aim of the 2021 questionnaire was to investigate the occurrence of skin cancer and two relatively common skin conditions namely eczema and urticaria (or nettle rash). Altogether 2,305 of you completed and returned the questionnaire. This is a wonderful response to our invitation and we must thank you again for taking the time to complete it. You will find a summary of some of the data collected on skin health at the end of the newsletter.



The HSE Science and Research Centre, Buxton

Cereals

For the second year running the study team did not attend Cereals. Although Cereals went ahead as usual in Boothby Graffoe, because of the ongoing pandemic the decision was made that we would focus on attending Cereals in 2022. We have missed the discussions we usually have with you and with the general public and we are looking forward to returning to Cereals in 2022.



International collaborations

The IMPRESS project (<http://www.impress-project.org/>) is a collaboration between HSE, the University of Manchester, the Institute of Risk Assessment Science (Utrecht, the Netherlands) and the project lead for this collaboration, the Institute of Occupational Medicine (Edinburgh). Five studies were involved in the data collection for the project. There were three British studies (the PIPAH study, The Pesticide Users' Health Study, and the SHAW study), a Malaysian farmers study, and a Ugandan farm workers study. The main aim of the project is to better understand the methods used to assess pesticide exposure in epidemiological studies, such as the PIPAH study. The project started in 2017 and is now entering its final stage. As we prepare this newsletter, the team is writing the last few publications, including the final report, and presenting the work of the project at conferences. In 2020 the project team published a major review of the existing methods of assessing pesticide exposure that have been reported in the scientific literature (<https://oem.bmj.com/content/77/6/357>).

Some of you contributed to the IMPRESS project by filling in questionnaires and providing biological samples. The focus of the questionnaires was to investigate how reliable the recall of past use of pesticides and related activities is. This is a really important research question because recall of past activities underlies many of the commonly used methods for assessing pesticide exposure. During 2021, the last year of the IMPRESS project, the team was busy completing the analysis of the laboratory samples, carrying out statistical analysis of the data collected, and writing up the findings in scientific papers. Two papers were written about recall, one covered the British cohorts and the other reported on the Ugandan cohort. In two further scientific papers, we compare mathematical equations used to estimate exposure to pesticides with the actual measurements of exposure in the biological samples, and we examine the performance of the main methods of assessment in a statistical analysis of health data. Once published, these papers will be available online and we will be able to send you links to them in the next newsletter.

AGRICOH is a consortium of 29 agricultural cohort studies from 13 countries and is managed by a group based at

the World Health Organisation's International Agency for Research on Cancer (IARC) in France. It was set up in 2010 to support collaborations between the members of the consortium who wish to work together on a specific project by sharing their anonymised data. Early in 2021 the consortium held a virtual meeting for all consortium members. It was an inspiring meeting where we had updates from all the participating cohorts and discussions on current and future projects. We were especially grateful that consortium members in New Zealand were prepared to take part in this meeting which, for them, took place in the middle of the night.



Behind the scenes

The pandemic continued to affect the study team's ways of working for most of 2021. As office-based staff, we were all working at home until government guidance recommended a gradual return to workplaces over the summer. Some members of the study team went into the office in Buxton as and when necessary throughout the pandemic, but others worked at home continuously from March 2020 until autumn 2021. Despite this, and only because we could function at home, work on the PIPAH study continued uninterrupted. We all became experts at online meetings but were pleased when we could go back into the office and actually speak to one another in person.



What's next?

This year we are inviting you to complete a short questionnaire again. This questionnaire usually has two sections, one covering a health topic in some detail and the other covering your main areas of pesticide use. For this year, we have added a third section that covers your experience with COVID-19. All the data we collect for the PIPAH study is unique and not available from other sources; the questions we are asking about COVID-19 are similarly unique and valuable. Surveys have been carried out in workplaces to investigate how COVID-19 has affected individuals, but these workplaces tend to be sites with a substantial workforce such as factories, distribution centres and large offices. The members of the PIPAH study represent an occupational group – professional users of pesticides – and many of you will have quite different work patterns to other occupational groups. The questions in this year's survey will provide insight into whether the COVID-19 experience of the PIPAH study participants has been similar, or perhaps different, to that of other occupational groups and the general population. The information we collect will contribute to the knowledge base about COVID-19.

The main health topic for January 2022 is about your hearing. Many workplaces, including farms and other outdoor spaces, can involve activities or exposures that may affect your hearing. As with the COVID-19 questions, the information collected will provide valuable data that will increase our understanding about hearing in the occupational group that you represent.



Analysis of the January 2021 Short Questionnaire on Skin Health

Skin health is often overlooked and its impact on the individual underestimated even though skin is the largest organ in the body and skin diseases affect nearly a third of the world's population. Skin disease is the second most common occupational disease, behind musculoskeletal disease.

Skin cancer

Skin cancer was the first skin disease covered in the questionnaire. Non-melanoma skin cancer is the most common type of cancer in the UK and it accounts for approximately 90% of all skin cancers (<https://www.cancerresearchuk.org/health-professional/cancer-statistics-for-the-uk> and <https://www.rcpjournals.org/content/clinmedicine/16/1/62>) and (<https://www.britishskinfoundation.org.uk/s>). It is probable that the solar radiation, which outdoor workers are exposed to, increases the risk of non-melanoma skin cancer. There were 144 PIPAH study participants who reported having a doctor's diagnosis of skin cancer at some point in their lifetime. Of these, 67% reported having non-melanoma skin cancer, 18% reported malignant melanoma and 15% reported having another kind of skin cancer such as actinic keratosis. This is similar to the general population where the majority of skin cancers are non-melanoma skin cancers. The percentages are not identical, but we would not expect them to be. We are comparing a select group with the general population, which has a different age distribution and we have not made any adjustments for the differences in age.

Eczema and urticaria

Eczema and urticaria were the other two skin diseases covered in the questionnaire. Eczema (also known as dermatitis) is the commonest of the skin diseases in the UK but for both eczema and urticaria, severe disease can have profound effects on the sufferer's quality of life. At any point in time approximately one in five people in the UK have eczema and the majority of these have atopic eczema, which is a type of eczema or dermatitis. Up to one in ten people will have had atopic eczema at some point in their adult life.

Urticaria (also known as nettle rash or hives) affects approximately one in ten people at some point in their lives. As in the general population, more PIPAH study participants reported having a doctor's diagnosis of eczema than urticaria; 315 (14%) have had eczema and 180 (9%) have had urticaria during their lifetime.

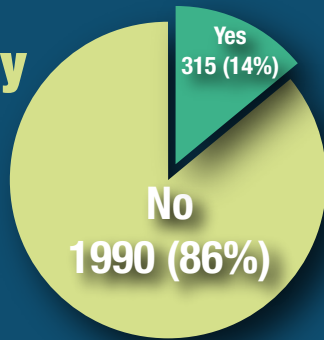
People who develop atopic eczema often have allergic tendencies, so the questionnaire also included questions about allergies and allergic tendencies. Altogether, 46% of participants responded 'yes' to one or more of these questions. This is very similar to the general population in the UK where an estimated 44% of adults suffer from at least one allergy.



ECZEMA among PIPAH participants



**How many
people
have had
eczema**



**Where did they
have eczema**

Hands only.....	44%
Wrists/Forearms only.....	31%
Hands + Wrists/Forearms.....	25%



**How often
have they had
eczema**

Just once.....	25%
More than once.....	55%
All of the time.....	20%




**When did they
last have
eczema**

Have it now.....	29%
Not now, within the last 3 months..	16%
3 to 12 months ago.....	10%
More than 12 months ago.....	45%




**Age first
had eczema**

Below 6 years.....	22%
6 to 14 years.....	19%
15 to 18 years.....	12%
Above 18 years.....	49%




Altogether **40%** of those with eczema stated that contact with certain substances made their eczema worse. This **40%** can be split into those only affected by substances at work (**16%**), those only affected by substances outside of work (**6%**), and those affected by substances at work and outside of work (**18%**).




Seasons affected some of those who have had eczema – the seasons most commonly reported to make eczema worse were winter and to a lesser extent summer.

When away from work, eczema improved for **66%** of those with hand eczema and for **59%** with wrist or forearm eczema. For a small number (less than **5%**), eczema affected their normal activities.



38% have visited a doctor about their eczema

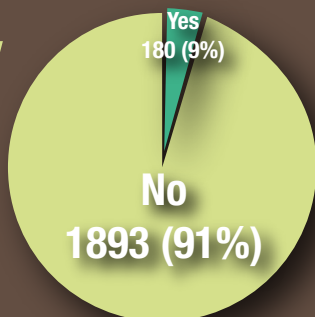


60% who reported having a doctor's diagnosis of eczema also indicated that they have allergic tendencies.



URTICARIA (OR NETTLE RASH) among PIPAH participants

**How many
people
have had
urticaria**



**(i)
How often
have they had
urticaria**

Just once.....	7%
2 to 5 times.....	37%
More than 5 times.....	56%

**(ii)
When did they
last have
urticaria**

In the past 7 days.....	10%
7 days to 3 months ago.....	16%
More than 3 months to 12 months ago....	29%
More than 12 months ago.....	45%

**(iii)
Age first
had urticaria**

Below 6 years.....	7%
6 to 14 years.....	15%
15 to 18 years.....	10%
Above 18 years.....	68%

20%

have visited a doctor
about their urticaria

Nearly **60%** stated
that their urticaria was
caused by contact with
substances



Reported Causes of Eczema



Reported Causes of Urticaria (or nettle rash)





If you think you may have a skin problem related to work, you might want to have a chat with your health care provider; such as your practice nurse, GP or occupational health provider. If you think your skin problem is linked to exposure at work let them know this when you speak to them.

In addition, the HSE website has a number of resources that may help you. The main skin section is found at; <https://www.hse.gov.uk/skin/information.htm>

In addition, there is a detailed website by the British Association of Dermatologists, that gives a lot of information about skin conditions; it is found at*; <https://www.skinhealthinfo.org.uk/>

Other External Links that might be helpful*

Skin cancer - Non-melanoma skin cancer

<https://www.nhs.uk/conditions/non-melanoma-skin-cancer/>

Melanoma skin cancer

<https://www.nhs.uk/conditions/melanoma-skin-cancer/>

Eczema - Contact dermatitis

<https://www.nhs.uk/conditions/contact-dermatitis/>

Atopic eczema

<https://www.nhs.uk/conditions/atopic-eczema/>

Urticaria – Hives

<https://www.nhs.uk/conditions/hives/>

*These links are in the public domain. HSE is not responsible for their content.

Once again, we would like to thank you for taking part in the PIPAH study and hope you continue to remain members of it. We certainly can't do without you and we look forward to sending you another update. In the meantime, please don't hesitate to contact us either by email PIPAH@hse.gov.uk or by freephone **0800 093 4809** if you have any queries, want to discuss any aspect of the PIPAH study with us, or if you would like to update your current contact information.

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Visit our webpage <http://www.hsl.gov.uk/resources/major-projects/pipah>