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Silicosis in artificial stone workers

Submission date 13/08/2026	**Recruitment status** Not yet recruiting	[X] Prospectively registered [_] Protocol
Registration date 18/11/2026	**Overall study status** Ongoing	[_] Statistical analysis plan [_] Results
Last Edited 18/11/2026	**Condition category** Respiratory	[_] Individual participant data [X] Record updated in last year

Plain English summary of protocol

Background and study aims
Silicosis is a chronic incurable but preventable lung disease caused by inhalation of silica dust at work when cutting and polishing stone. In early stages it does not cause any symptoms but over time can result in scarring and hardening of the lungs causing worsening breathlessness. Since 2010, there has been an increasing number of cases worldwide of silicosis in people working with artificial stone (which can contain very high silica levels) in the worktop fabrication industry. This study aims to understand how many people working in the UK worktop fabrication industry in the UK have silicosis or other silica related health conditions. It also aims to understand why some people develop silicosis and others do not.

Who can participate?
Workers at participating worktop fabrication companies with at least 1 year of exposure to stone dust.

What does the study involve?
This is an observational study which means we are not testing any new treatments. There are three parts to the baseline study:
1. Completion of a questionnaire which asks about current job, the jobs done in the past and also about health. This will be completed at work and answers will not be shared with the employer. It should take around 15-20 minutes to complete.
2. Participants will be invited to attend a local hospital for tests. This includes a chest x-ray, CT scan of the chest and blood and urine tests. The CT scan is the main test to see if there are signs of silica-related lung disease. All results will be shared with participants and appropriate follow up in NHS clinics arranged if needed.
3. Some participants will also be invited to have measurements of silica made whilst working over the course of 2 or 3 days. This involves wearing a personal sampling device to collect samples of the air present in the breathing zone (within about 20-30 cm from your nose and mouth). The sampler is usually positioned around the upper chest region and is attached using tubing to a lightweight pump to draw air through.
The follow up study will take place around 2 years later. Participants will be invited to complete a similar (shorter) questionnaire and attend a local hospital for the same repeat tests to see if there have been any changes.

What are the possible benefits and risks of participating?
The main benefit to participants is to have a health check including CT scan and blood tests. Silicosis does not cause any symptoms in the early stages. Therefore a worker could have silicosis and not realise it. The only way to detect it is to do a CT scan. If diagnosed with silicosis then we can provide best advice about how to reduce the chance of this getting worse.
The study will also provide information about why some workers develop silicosis and others do not. It will tell us if artificial stone can be used safely. It will also provide information about why some people with silicosis get disease which gets worse whilst other have silicosis which is stable. Finally, it will provide important information about silica levels in your workplace.
The main disadvantage to taking part in this study is that we may identify a medical issue or an abnormality that was not previously known about. This may or may not be related to silica exposure and further tests may be recommended to investigate these. If diagnosed with silicosis there is unfortunately no specific treatment available. However, the earlier it is picked up then the higher the chance of it remaining stable and not getting worse. Particularly if it is possible to stop being exposed to silica. For this reason, for workers diagnosed with silicosis we may advise that they change their job and this can be a difficult decision for some people. We can provide advice and support about this and other ways to keep healthy.
Blood sampling may cause brief discomfort when the needle is inserted. There is a small risk of bruising or minor bleeding at the site afterwards. Occasionally, people may feel faint or light-headed. Both chest x-rays and CT scan examinations use ionising radiation. The radiation dose from a chest X-ray is very low, while the CT scan involves a higher radiation exposure. The imaging protocols will keep radiation exposure as low as reasonably practicable while obtaining images of sufficient diagnostic quality.

Where is the study run from?
Researchers at Imperial College London (UK) are running the study but will visit participating workplaces around the country

When is the study starting and how long is it expected to run for?
January 2027 to January 2031

Who is funding the study?
National Institute for Health and Care Research (NIHR) (UK)

Who is the main contact?
Dr Johanna Feary, j.feary@imperial.ac.uk

Contact information

Type(s)
Principal investigator, Public, Scientific

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Additional identifiers

Study information

Scientific Title
Understanding the epidemiology of ARTIficial STone: the ARTIST study

Acronym
ARTIST

Study objectives

Ethics approval required
Ethics approval required

Ethics approval(s)
Not yet submitted

Primary study design
Observational

Secondary study design
Cohort study

Study type(s)

Health condition(s) or problem(s) studied
Silicosis

Interventions
Recruitment of a cohort of worktop fabricators at their workplaces. A cross-sectional study (comprising questionnaire, CT scan, chest x-ray, blood tests, urine tests) will be carried out. Participants will then be followed up at 2 years with repeated questionnaire and clinical measures. Exposure measurements to respirable crystalline silica will also be made on select workers in the cross-sectional study.

Intervention Type
Other

Primary outcome(s)
1. Prevalence of silicosis measured using CT scan at baseline

Key secondary outcome(s)

Completion date
02/01/2031

Eligibility

Key inclusion criteria
1. Self-reported history of at least 6 months of exposure to silica in the worktop fabrication industry
2. Employed at contributing workplace

Healthy volunteers allowed
No

Age group
Mixed

Lower age limit
18 Years

Upper age limit
80 Years

Sex
All

Total final enrolment
0

Key exclusion criteria
Not willing to consent

Date of first enrolment
02/01/2027

Date of final enrolment
02/01/2029

Locations

Countries of recruitment
United Kingdom

England

Study participating centre

Royal Brompton Hospital
Sydney Street
London
England
SW3 6NP

Study participating centre
Heartlands Hospital
Bordesley Green East
Bordesley Green
Birmingham
England
B9 5SS

Study participating centre
Manchester University Hospital NHS Ft (hq)
Oxford Road
Manchester
England
M13 9WL

Sponsor information

Organisation
Imperial College London

ROR
https://ror.org/041kmwe10

Funder(s)

Funder type

Funder Name
National Institute for Health and Care Research

Alternative Name(s)
National Institute for Health Research, NIHR Research, NIHRresearch, NIHR - National Institute for Health Research, NIHR (The National Institute for Health and Care Research), NIHR

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
United Kingdom

Funder Name
Colt Foundation

Alternative Name(s)
The Colt Foundation

Funding Body Type
Private sector organisation

Funding Body Subtype
Trusts, charities, foundations (both public and private)

Location
United Kingdom

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not expected to be made available