

# Reconstructive science

Reconstructive science is concerned with the corrective treatment of patients with malformation, cancer or trauma – especially in the skull, jaw and face.

In this area of healthcare science, you'll specialise in the prosthetic reconstruction and therapeutic management of patients needing corrective treatment due to malformation, cancer or trauma.



## Working life

As a clinical scientist working in reconstructive sciences, you'll specialise in the prosthetic reconstruction and therapeutic management of the patient.

Treatment could be required for a variety of reasons, such as malformation from birth, effects of a disease such as cancer, or as a result of trauma

You will design, construct and apply custom-made medical devices for patients such as:

- realistic prostheses <sup>[1]</sup>
- intra-oral prosthetics
- therapeutic splints
- implantable devices
- titanium skull plates

Such treatment could be required for a variety of reasons, such as malformation from birth, the effects of a disease such as cancer, or the result of trauma. You could be working on any area of the body but particularly the jaw, face and skull of a patient.

In your work you'll usually:

- meet patients in order to assess their needs, explain exactly what you need to do to treat them and how long it will take

- take an impression of the patient and book subsequent appointments at your clinic. Some splints will require you to take the impression in an operating theatre
- be required to attend theatre to give advice on the positioning of any implants for the fixation of the prosthesis.

At follow-up appointments, you'll design and sculpt the device for the patient using wax, acrylic or clay and try-on and colour-match culminating in the fitting of the device. You'll also be required to arrange ongoing monitoring and review of the patient and device.

You may be called on for advice by other clinical colleagues in emergency cases - such as constructing special splints to be used in theatre for a patient who has been in a car accident or suffered other facial trauma.

## Who will I work with?

Typically, you'll work in a maxillofacial or plastic surgery department within an NHS hospital.

You'll work as part of a team which could include oral and maxillofacial surgeons [2], plastic surgeons [3], ear, nose and throat surgeons [4], oncologists [5], dental technologists [6], maxillofacial prosthetists, ocular prosthetists, nurses [7], allied health professionals [8] and other healthcare science staff.

## Want to learn more?

- Find out more about the entry requirements, skills and interests required to enter a career in reconstructive science [9]
- Find out more about the training you'll receive for a career in reconstructive science [10]

## • Pay and conditions

Most jobs in the NHS are covered by the Agenda for Change (AfC) [11] pay scales. This pay system covers all staff except doctors, dentists and the most senior managers. Trainee clinical scientists train at band 6 level, and qualified clinical scientists are generally appointed at band 7. With experience and further qualifications, you could apply for more senior posts.

Staff will usually work a standard 37.5 hours per week. They may work a shift pattern.

Terms and conditions of service can vary for employers outside the NHS.

## • Where the role can lead

With further training or experience or both, you may be able to develop your career further and apply for vacancies in areas such as further specialisation, management,

research, or teaching.

Healthcare science staff often work at the forefront of research and innovation, so that patients are continually receiving the very best healthcare. For example, in reconstructive sciences, you could be researching new materials and methods of treatment.

## • **Job market and vacancies**

### **Job market**

In November 2018, there were 6,123 clinical scientists registered with the Health and Care Professions Council <sup>[12]</sup>.

The NHS Scientist Training Programme (STP) <sup>[13]</sup> attracts many more applicants than there are places and so there is considerable competition for places.

### **Finding and applying for jobs**

Check vacancies carefully to be sure you can meet the requirements of the person specification before applying and to find out what the application process is. You may need to apply online or send a CV for example.

For the STP <sup>[13]</sup>, there is an annual recruitment cycle. Applications usually open in early January for the intake in the following autumn and should be made through the National School of Healthcare Science's website <sup>[14]</sup>, where you can also find information about the programmes and the recruitment process.

Key sources relevant to vacancies in the health sector:

- vacancies in organisations delivering NHS healthcare can be found on the NHS Jobs website <sup>[15]</sup>
- opportunities in the Civil Service can be found on the Civil Service Jobs website <sup>[16]</sup>
- vacancies in local government can be found on the Local Government Jobs website <sup>[17]</sup> and the Jobs Go Public website <sup>[18]</sup>

As well as these sources, you may find suitable vacancies in the health sector by contacting local employers directly, searching in local newspapers and by using the Universal Jobmatch tool <sup>[19]</sup>.

Find out more about applications and interviews <sup>[20]</sup>.

Volunteering is an excellent way of gaining experience (especially if you don't have enough for a specific paid job you're interested in) and also of seeing whether you're suited to a particular type of work. It's also a great way to boost your confidence and you can give something back to the community.

Find out more about volunteering and gaining experience <sup>[21]</sup>.

## • Further information

For further information about a career in reconstructive science, please contact:

- [Academy for Healthcare Science](#) [22]
- [Health and Care Professions Council](#) [23]
- [The Institute of Maxillofacial Prosthetists and Technologists](#) [24]
- [National School of Healthcare Science](#) [14]

## Other roles that may interest you

- [Dental technician/dental technologist](#) [25]
- [Oral and maxillofacial surgery](#) [26]
- [Knowledge and library services](#) [27]
- [Experienced paramedic](#) [28]

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**Source URL:** <https://www.healthcareers.nhs.uk/explore-roles/healthcare-science/roles-healthcare-science/physical-sciences-and-biomedical-engineering/reconstructive-science>

### Links

[1] <https://www.healthcareers.nhs.uk/glossary#Prostheses> [2] <https://www.healthcareers.nhs.uk/explore-roles/surgery/oral-and-maxillofacial-surgery> [3] <https://www.healthcareers.nhs.uk/explore-roles/surgery/plastic-surgery> [4] <https://www.healthcareers.nhs.uk/explore-roles/surgery/ear-nose-throat-surgery> [5] <https://www.healthcareers.nhs.uk/explore-roles/medicine/medical-oncology> [6] <https://www.healthcareers.nhs.uk/explore-roles/dental-team/dental-techniciandental-technologist> [7] <https://www.healthcareers.nhs.uk/explore-roles/nursing> [8] <https://www.healthcareers.nhs.uk/explore-roles/allied-health-professionals> [9] <https://www.healthcareers.nhs.uk/explore-roles/physical-sciences-and-biomechanical-engineering/reconstructive-science/entry> [10] <https://www.healthcareers.nhs.uk/explore-roles/physical-sciences-and-biomechanical-engineering/reconstructive-science/training> [11] <https://www.healthcareers.nhs.uk/about/careers-nhs/nhs-pay-and-benefits/agenda-change-pay-rates> [12] <http://www.hcpc-uk.org> [13] <https://www.healthcareers.nhs.uk/i-am/considering-or-university/not-studying-health-related-degree/nhs-scientist-training-programme> [14] <http://www.nshcs.hee.nhs.uk/> [15] <http://www.jobs.nhs.uk> [16] <https://www.civilservicejobs.service.gov.uk/csr/index.cgi> [17] <http://www.lgjobs.com/> [18] <http://www.jobsgopublic.com/> [19] <https://www.gov.uk/jobsearch> [20] <https://www.healthcareers.nhs.uk/career-planning/offering-career-support/training-and-teaching-resources-young-people/application> [21] <https://www.healthcareers.nhs.uk/i-am/secondary-school-or-fe-college/gaining-experience> [22] <http://www.ahcs.ac.uk> [23] <http://www.hcpc-uk.org/> [24] <http://www.impt.co.uk/> [25] <https://www.healthcareers.nhs.uk/explore-roles/dental-team/roles-dental-team/dental-techniciandental-technologist> [26] <https://www.healthcareers.nhs.uk/explore-roles/doctors/roles-doctors/surgery/oral-and-maxillofacial-surgery> [27] <https://www.healthcareers.nhs.uk/explore-roles/health-informatics/roles-health-informatics/knowledge-and-library-services> [28] <https://www.healthcareers.nhs.uk/explore-roles/ambulance-service-team/roles-ambulance-service/experienced-paramedic>