

# Prevalence of latex allergy among operating room employees in the Netherlands

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Research questions: What is the current prevalence of latex allergy among operating room employees from Erasmus Medical Centre, Rotterdam? Is the sensitisation prevalence significantly lower compared to the prevalence before introducing non powdered...

<b>Ethical review</b>	Approved WMO
<b>Status</b>	Recruiting
<b>Health condition type</b>	Ocular infections, irritations and inflammations
<b>Study type</b>	Observational invasive

## Summary

### ID

NL-OMON32458

### Source

ToetsingOnline

### Brief title

latex allergy among operating room employees in the Netherlands

### Condition

- Ocular infections, irritations and inflammations
- Respiratory disorders NEC
- Angioedema and urticaria

### Synonym

job related allergy, work related allergy

### Research involving

Human

## Sponsors and support

**Primary sponsor:** Erasmus MC, Universitair Medisch Centrum Rotterdam

**Source(s) of monetary or material Support:** Ministerie van OC&W

## Intervention

**Keyword:** allergy, latex, occupational, operating room

## Outcome measures

### Primary outcome

Prevalence of sensitisation to latex, prevalence of work related

rhinoconjunctivitis, asthma

and skin complaints after contact with latex.

### Secondary outcome

n/a

## Study description

### Background summary

In the present situation, latex hypersensitivity among healthcare workers is a well-known and acknowledged occupational disease. An IgE mediated allergy to latex can induce reactions ranging from (work related) urticaria and rhinoconjunctivitis to asthma and even anaphylactic shock and is therefore a serious health problem. Health care workers are especially at risk due to their frequent contact with rubber gloves.

Powder (from maize meal) in powdered NRL gloves plays an important role in the sensitisation process in glove wearing employees, since latex allergen can bind to it. When this powder subsequently becomes airborne, employees are exposed to latex allergen and sensitisation can occur via inhalation.

The use of protective gloves by health care workers has increased since the era of acquired immunodeficiency syndrome (AIDS). This increase has led to numerous undesirable cutaneous and mucosal effects, such as IgE mediated reactions. In the 1990s, the prevalence of NRL allergy in health care workers had been estimated at up to 40%.

In a systematic review published in 2006, natural latex allergy was found in 4.32% of health care workers. The decrease in new cases has been attributed to an overall reduction in NRL exposure by introduction of low-allergen (often powder-free) NRL gloves or allergen free non NRL gloves in health care facilities.

In 1997 and 1998, two studies on the prevalence of latex allergy among Dutch health care workers regularly wearing NRL gloves have been performed. Both studies were carried out in Erasmus Medical Centre, Rotterdam. These studies, among employees of the immunology department on the one hand and the operating rooms on the other hand, showed prevalence figures of respectively 8.3% and 14.1%.

In order to reduce the sensitisation prevalence among Erasmus Medical Centre employees, the board of Directors changed the hospital glove policy: In 1998 powdered research NRL gloves were replaced by non powdered NRL gloves and 1 year after, the same replacement was realized for sterile surgical NRL gloves.

## **Study objective**

Research questions:

What is the current prevalence of latex allergy among operating room employees from Erasmus Medical Centre, Rotterdam? Is the sensitisation prevalence significantly lower compared to the prevalence before introducing non powdered sterile surgical NRL gloves for operating room employees?

## **Study design**

Study design:

Glove wearing operating room employees from Erasmus Medical Centre, (n = 328) older than 18 years will be asked to participate. Biographic data, data on job characteristics and (work related) respiratory symptoms will be gathered by means of a questionnaire. Also skin prick tests with allergen extracts will be performed including a latex extract from a surgical glove and commercial available latex (soluprick ALK 960), cross reacting foods such as kiwi, avocado, banana and common inhalant allergens. Additionally, blood samples will be taken for additional recombinant RAST tests.

## **Study burden and risks**

Burden and risks:

A systemic severe reaction after a skin prick test (an allergic reaction to the skin test) is rare, because only a minimum amount of allergen is used. Local itchiness can occur. Apart from the direct skin reaction (after 15 minutes) an itchy swelling can appear after 6 hours. This swelling will disappear in the next few days.

The duration of the visit amounts approximately 30 minutes.

## Contacts

### **Public**

Erasmus MC, Universitair Medisch Centrum Rotterdam

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Nederland

### **Scientific**

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## Trial sites

### Listed location countries

Netherlands

## Eligibility criteria

### **Age**

Adults (18-64 years)

Elderly (65 years and older)

### Inclusion criteria

Glove wearing operating room employees from Erasmus Medical Centre, Rotterdam older than 18 years.

### Exclusion criteria

If an employee is not able to stop his antistamine medication for 3 days prior to the investigation, the employee concerned can not participate in the study.

## Study design

### Design

**Study type:** Observational invasive

Masking: Open (masking not used)

Control: Uncontrolled

Primary purpose: Other

### Recruitment

NL

Recruitment status: Recruiting

Start date (anticipated): 18-11-2008

Enrollment: 328

Type: Actual

## Ethics review

Approved WMO

Date: 06-11-2008

Application type: First submission

Review commission: METC Erasmus MC, Universitair Medisch Centrum Rotterdam (Rotterdam)

## Study registrations

### Followed up by the following (possibly more current) registration

No registrations found.

### Other (possibly less up-to-date) registrations in this register

No registrations found.

## In other registers

### Register

CCMO

### ID

NL24309.078.08