Risk for allergic and non-allergic health problems. The Veterinary Health Study-Part I

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Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Allergic conditions
Study type	Observational invasive

Summary

ID

NL-OMON30307

Source
ToetsingOnline

Brief title
The Veterinary Health Study: VHS

Condition

- Allergic conditions
- Hepatobiliary neoplasms malignant and unspecified
- Bronchial disorders (excl neoplasms)

Synonym
allergy, respiratory health problems

Research involving
Human

Sponsors and support

Primary sponsor: Universiteit Utrecht

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

Intervention

Keyword: allergy, infectious diseases, respiratory health effects

Outcome measures

Primary outcome

Prevalence rates of allergic and non-allergic health problems in veterinary students in different phases of their studies and the possible role for genetic polymorphisms in the innate immune pathway in the development of allergies and asthma.

Secondary outcome

nvt

Study description

Background summary

Veterinarians are potentially exposed to a range of animal-related allergens. Few studies looked at allergies among veterinarians but prevalence rates ranging from 17 to 66% for self-reported atopic and allergic diseases have been described. More studies assessed the prevalence of allergies in laboratory animal workers and demonstrated prevalence rates of animal-related allergies from 11 to 44%. Increasing exposure intensity to laboratory animals is associated with an increased likelihood of IgE-mediated sensitisation and prolonged exposure resulted in allergy, accelerated lung function decline and irreversible respiratory disease. Laboratory animal workers that develop allergies to one animal species are at risk of developing allergy to other species as well.
Besides exposure to allergens, veterinarians have an increased exposure to infectious agents like zoonoses (e.g. mycosis, brucellosis, psittacosis) and other non-direct pathogenic microbial bio-aerosols. Reported prevalence rates of zoonotic diseases in veterinarians range between 4 to 17%. A Dutch survey among veterinarians showed that the mean dust and endotoxin exposure was high in swine, poultry and cattle practitioners and relatively low in companion animal practitioners.

The prevalence of allergic and non-allergic diseases occurring during veterinary study, when first exposure takes place, is not known. A study in animal-health technology apprentices starting exposure to laboratory animals showed an incidence of 8.9% of work-related sensitisation and an incidence of occupational asthma of 2.7%. Sensitisation, symptoms and disease occurred in the first 2 to 3 years after exposure to laboratory animals began and predictors of sensitisation were atopy, nasal and respiratory symptoms in the pollen season and number of contact hours with rodents.

Study objective

The main aim of this study is to assess the prevalence of allergic and non-allergic health problems in veterinary students in different phases of the veterinary education. On later stage, genetic predisposition for allergies will be studied. In the light of the GABRIEL study, a multidisciplinary study to identify the genetic and environmental causes of asthma in the European Community, DNA will be analyzed for asthma specific genetic polymorphism.

Study design

An epidemiological cross-sectional study will invite all veterinary students (n=1500) to fill out a standardized health questionnaire and a single blood draw. Blood will be analysed on atopic status by IgE and IgG4 serology to a range of common and veterinary-specific allergens. Past and present zoonotic infections will be determined by IgG serology. Leucocytes of participants will be isolated and stored to allow genotyping of innate immunity pathways such as polymorphisms in toll-like receptors, CD14, CR3 and Myd88. Leucocytes of participants will be stored to allow genotyping of innate immunity in a later stage and analyze asthma specific genetic polymorphisms in the light of the GABRIEL study.

Study burden and risks

Study participation by completing the questionnaire and giving blood once is unlikely to be associated with significant health risks and will cause no significant burden.

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adults (18-64 years)
Elderly (65 years and older)

Inclusion criteria

Most important inclusion criterium: The participant has to study veterinary medicineat the Utrecht University at the start of this cross-sectional study

Exclusion criteria

Not able to read the Dutch language and fill out the questionnaire

Study design

Design

Study type: Observational invasive

Masking:	Open (masking not used)
Control:	Uncontrolled

Primary purpose:	Basic science

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	15-06-2006
Enrollment:	1500
Type:	Actual

Ethics review

Approved WMO

Date:	06-06-2006
Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Utrecht (Utrecht)

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	ID
CCMO	NL11225.041.06