

# Hepatitis E prevalence in a sexual high-risk population compared to the general population

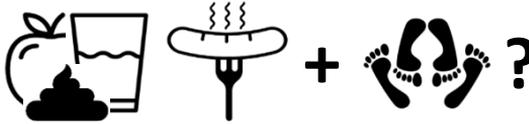
Jeanne Heil<sup>1,2\*</sup>, Christian JPA Hoebe<sup>1,2</sup>, Inge HM van Loo<sup>2</sup>, Jochen WL Cals<sup>3</sup>, Geneviève AFS van Liere<sup>1</sup>, Nicole HTM Dukers-Muijers<sup>1,2</sup>

(1) Department of Sexual Health, Infectious Diseases and Environmental Health, Public Health Service (GGD) South Limburg  
(2) Department of Medical Microbiology, Care and Public Health Research Institute (CAPHRI), Maastricht University Medical Center (MUMC+)  
(3) Department of Family Medicine, Care and Public Health Research Institute (CAPHRI), Maastricht University

\*e-mail: jeanne.heil@ggz.nl

## Background

Transmission routes of the hepatitis E virus (HEV) are under debate. In developing countries it is typically caused by consuming contaminated food or water and the faecal-oral route (causing epidemic outbreaks of genotype 1 and 2). Traditionally, HEV was considered to be a travel-related disease in developed countries. However, reported cases of patients that have not travelled to endemic areas – so-called autochthonous hepatitis infections – have increased in developed countries. These infections are mainly caused by HEV genotype 3. It is now proven that HEV is transmitted by ingesting uncooked or poorly cooked pork or game meat. As the HAV and HEV are both single-stranded RNA viruses with similar incubation periods and transmission routes, including sexual activity, we studied the possible sexual transmission route of HEV infections.



## Study objectives

1. To explore the possible role of sexual transmission, we compared the HEV prevalence of a population with higher sexual risk to the general population.
2. In addition, we assessed potential sociodemographic and sexual risk factors.

## Results

- The overall prevalence of anti-HEV IgG of 18.9% (n = 562) was, adjusting for confounders, similar between the two populations ( $p = 0.44$ ).
- Prevalence was higher for each years increase in age (aOR: 1.03, 95%CI: 1.02-1.04,  $p < 0.01$ ), for men (aOR: 1.24, 95%CI: 1.02-1.50,  $p = 0.03$ ) and among individuals diagnosed with sexually transmitted infections (aOR: 1.60, 95%CI: 1.02-2.49,  $p = 0.04$ ).

## Methods

- Cross-sectional study
- South of the Netherlands
- Dec 2011 – Nov 2015
- Sexual high-risk population (n = 1,482) and general population (n = 1,487)
- Logistic regression analyses

## Conclusion

Our results only hint at the possibility of a sexual transmission route for HEV given higher rates in those with chlamydia and/or gonorrhoeal infections. Sexual transmission is not a dominant transmission route, as its prevalence was not higher for the sexual high-risk population than for the general population.

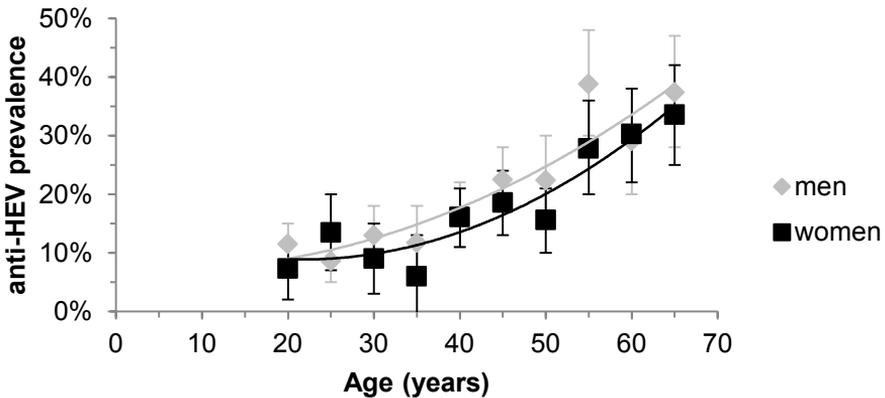


Figure 1 Anti-HEV IgG prevalence in five-year age groups (n=2,969), south Netherlands, Dec 2011 - Nov 2015.