Atopic disease in relation to *Staphylococcus aureus* carriage and spa type distribution in a subarctic adult population

*Investigating the atopic epidemic*

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*Emneord: dermatologi, epidemiologi, medisinsk mikrobiologi, allergi.*
Background

• “atopic disease is the price paid by some members of the white community for their relative freedom from diseases due to viruses, bacteria and helminths” Gerrard JW 1976

• The challenge....

• Hygiene hypothesis

• Biodiversity hypothesis - ”old friends”

• MeDALL-hypothesis

• Aim
Material and methods

• Tromsø 6 – Tromsø Staph and Skin Study from October 2007 to December 2008.
• Cross-sectional design
• Colonization or carriage
• 3,367/2,485 participants included
• 659/1,541 excluded
• Logistic regression model adjusted for available plausible confounding biofactors
Results

• S. aureus colonization and carrier rate was 29.5% and 26.1%, respectively.

• We found pollen allergy to be associated with 45% [odds ratio OR= 1.45, 95% CI, 1.11 to 2.52] and 55% [OR=1.55, 95% CI, 1.06 to 2.24] higher risk of S. aureus colonization and carriage in males, respectively.

• Furthermore, among males, having one atopic disease was associated with a 67% [OR=1.67, 95% CI, 1.11 to 2.52] higher risk of S. aureus carriage.
Conclusion

• Atopic disease is associated with higher risk of S. aureus carriage or colonization
  • Pollen allergy in males
  • Allergic co-morbidity trend

• Equal spa-type distribution

BUT:
Temporal relationship can’t be determined. Sub-group analysis prone to type II error due to small $n$. Seasonal distribution of pollen allergy. Self-reported questionnaire. Over-representation of healthcare workers.