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*Published in:*  
European Journal of Public Health

*Link to article, DOI:*  
[10.1093/eurpub/ckz185.389](https://doi.org/10.1093/eurpub/ckz185.389)

*Publication date:*  
2019

*Document Version*  
Publisher's PDF, also known as Version of record

[Link back to DTU Orbit](#)

*Citation (APA):*  
Toft, U., Riis, N. L., Lassen, A. D., Trolle, E., & Bjørnsbo, K. S. (2019). Effects of salt reduction on cardiovascular risk factors. The STRIVE-study. *European Journal of Public Health*, 29(Supplement 4), 146-146. Article ckz185.389. <https://doi.org/10.1093/eurpub/ckz185.389>

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## Effects of salt reduction on cardiovascular risk factors. The STRIVE-study

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Potential adverse effects of reducing salt intake in the general population are discussed. This study aims to explore the effect of gradually reducing salt intake in a real-life setting.

The study was a 4-month cluster RCT with families randomly assigned to either A) salt reduced bread, B) salt reduced bread and dietary counselling or C) standard bread (control). Participants in intervention A received bread gradually reduced in salt content from 1.2 g salt/100g (regular) to 0.6 g salt/100g in ryebread and 0.4 g salt/100g in wheat bread. Participants in intervention B received the same bread as intervention A but in addition, they received dietary advice on how to further reduce their salt intake and promote potassium. The control group received regular bread (blinded). Changes in outcomes were assessed using linear mixed models.

### Results:

A total of 89 Danish families (155 adults; 156 children) participated in the study. A total of 291 (94%) participants completed the intervention. Results are preliminary. Intention to treat analyses showed no significant effects of the salt reduction intervention on changes in systolic and diastolic blood pressure, plasma triglyceride. A small, but significant (-0.26 mmol/l;  $P = 0.02$ ) decrease in total plasma cholesterol was shown in intervention group A. Per protocol analyses, including only participants in the intervention groups that decreased their salt intake by at least 20% from baseline to 4-month follow-up, showed a significant decrease in diastolic (-3.5 mmHg;  $P < 0.0001$ ) and systolic (-6.3 mmHg;  $P < 0.0001$ ) blood pressure, total cholesterol (-0.25 mmol/l;  $P = 0.0009$ ), LDL cholesterol (log. transformed) (-6%;  $P = 0.03$ ) and plasma triglyceride (log. transformed) (-17%;  $P = 0.04$ ). No significant effects were found for HDL plasma cholesterol, aldosterone, renin, plasma glucose and HbA1c.

### Conclusions:

Reduced salt intake were associated with beneficial changes in cardiovascular risk factors. No adverse effects were observed.

### Key messages:

- Reduced salt intake were associated with beneficial changes in cardiovascular risk factors.
- No adverse effects were observed.