

Obese individuals more prone to blood poisoning

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High weight, little physical activity and smoking increase our vulnerability for severe bloodstream infections. They also increase mortality.

Blood poisoning, or [sepsis](#), is a serious infection with a mortality rate of over 20 per cent. It is a fairly common disease that affects three to four out of every thousand people in Norway annually, and kills more than six million people worldwide every year.

Researchers at the Mid-Norway Centre for Sepsis Research have taken a closer look at the relationship between lifestyle, obesity and the risk of being affected both by sepsis and the risk of death. The centre comprises the Norwegian University of Science and Technology (NTNU), St. Olavs Hospital, Nord-Trøndelag Hospital Trust and Yale University in the US.

They have examined nearly 2,000 North-Trøndelag residents with [blood poisoning](#) who participated in the longitudinal Nord-Trøndelag Health Study (HUNT Study).

Obesity plays a major role

"We're finding that obesity is an important risk factor for sepsis," says doctor Julie Paulsen, an NTNU PhD candidate who is affiliated with the Department of Clinical and Molecular Medicine.

"Slightly overweight [individuals](#) with a BMI between 30 and 35 increased their risk by 30 per cent, as compared with people of normal [weight](#). People with a BMI over 40 had three times as high a risk as those of normal weight," says Paulsen.

"People with a BMI over 35 who smoke and are less physically active had almost five times the risk of serious blood poisoning as physically active normal-weight non-smokers," she said.

In smokers, the risk was increased by 50 per cent as compared to never-smokers, and those who are physically inactive have almost twice as high a risk as people who exercise hard at least one hour a week.

At the same time, research shows increased mortality among individuals who are obese compared with those who are normal weight.

Slightly overweight individuals increase their risk by 35 per cent, while people with a BMI over 40 have three times the risk of death as [normal-weight](#) individuals.

This study shows that lifestyle-related measures can reduce the incidence of serious infections.

The research was based on 64,000 participants from the HUNT study.

More information: Julie Paulsen et al. Associations of obesity and lifestyle with the risk and mortality of bloodstream infection in a general population: a 15-year follow-up of 64 027 individuals in the HUNT Study, *International Journal of Epidemiology* (2017). [DOI: 10.1093/ije/dyx091](#)

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