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## Equal access – equal egress: Accounting for people with disabilities in emergency situations

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## **Equal access – equal egress: Accounting for people with disabilities in emergency situations**

Janne Gress Sørensen and Anne S. Dederichs

Accessibility to buildings for all persons independent of their (dis-)abilities is required by law in many countries (the Swedish BBR 3, the Danish BR10:3:2 ). However, accessible buildings are not automatically egressible in case of a fire. The fire safety design is based on escape routes, and numerical evacuation models are applied for the prediction of the evacuation process in the fire safety design. In many cases these models are best fit to describe a normative description of the population comprehending young abled bodied adults. It has been shown, that some models poorly describe populations, other than abled bodied adults (Ulriksen & Dederichs, 2012, Sørensen & Dederichs, 2012). Hence, the safety level in buildings for the vulnerable groups might not be the same as for abled bodied adults. Furthermore, it has been shown that people with disabilities are more frequently hurt in fires (Papaioannou, 2006). It is essential to use models, enabling the prediction of the egress of a total population in a building. In the current quantitative and qualitative study evacuation times and - characteristics from a train in a tunnel are measured for a full-scale evacuation exercise. The results are compared to times determined with a computer simulation of the exercises. The full-scale experiment involved 46 participants, where the composition of the test population corresponded to the demographic profile of Denmark, including children, able-bodied adults, elderly people and people with different types of impairments. Four different exercises were performed, altering the composition of the test population. The effect of the inclusion of different groups on evacuation times was investigated.

### **Referencer**

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