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What happens when the captain tells you there is a bomb or a fire on board the plane, or when after a routine examination you receive a letter informing you that signs of life-threatening disease have been detected?

## False alarm

After we had landed at one of Europe's main airports in autumn 2016, the captain told me, my wife and around 120 other passengers that he had received a message that there was a bomb on board, and that further investigation was needed. A full disaster evacuation took place with around one hundred emergency service people and police officers, blue lights everywhere, emergency response personnel and bomb-sniffer dogs – and seven to eight fire engines lined up, ready for action. The passengers were confined and kept under surveillance, and we were able to follow the search of the cabin, luggage and baggage hold from a safe distance. After a couple of hours, the conclusion was: negative findings. «Contact the information desk in the departures hall. Thank you for your cooperation.» Sometime later, I related this incident to some friends. The first comment was: «Weren't you afraid?» In light of the many terror attacks in the last year, the question was as relevant as it was difficult to answer. Above all, we were struck by the professionalism, efficiency and calm of those who assisted us. The exception was when one of the flight attendants contradicted the message to leave our hand luggage behind – we were told to take it off the plane with us anyway. At that point she was clearly flustered.

Our experience corresponds to the result of a study in which the authors sat on a plane with 370 colleagues on their way to a conference on behavioural medicine in New York (1). The captain announced over the loudspeaker system that one of the engines was on fire and they had to make an emergency landing. In the interval before the plane had safely landed, the authors designed a questionnaire on factors that might have triggered anxiety and the techniques used to counteract this. The responses were collected within two hours of landing, while everyone was still assembled. It transpired that the cabin crew, who had been informed of the fire before the information from the captain was broadcast over the loudspeaker system, had triggered a sense of unease that the passengers had picked up on. According to the responses, the negative effect of this was greater than the information from the captain (1).

Both stories are reminiscent of the situation for patients who receive a doctor's letter following a routine examination such as a mammography, informing them of findings that indicate a life-threatening disease (2, 3). How should patients with possible disease be followed up? In one study, eight women were interviewed in the interval between mammography and subsequent examination (4). None of them had prepared themselves beforehand for being among the 3 % of participants who were recalled for further examination. They realised that there was a definite risk of breast cancer,

but on the other hand they were happy that the waiting time until follow-up was brief. However, some were worried that the short waiting time was an indication of a greater degree of severity. It later transpired that only three of the eight needed further follow-up and treatment (4).

Another study from the same group of researchers included women who had undergone mammography screening each time they were called in over a six-year period (5). In these women, the recurrent nature of screening had become imprinted. Waiting for the results became easier each time, while the stress related to receiving the result was undiminished. Their knowledge of risk factors for breast cancer was unchanged, and the self-perceived risk remained low – despite their knowing that the disease was common and could also be dangerous (5). One in five women who participate in the Norwegian mammography screening programme every second year from the age of 50 to 69 is recalled for a further examination that reveals a false positive finding from the mammogram (6). The risk of being exposed to an invasive procedure with a benign outcome was estimated at around 4 %.

Flying is not without risk. I myself have flown several times without giving it another thought, despite the incident last autumn. With all screening procedures, a balance and a dilemma exists between true positive findings and a false alarm, and attendance for mammography or any other form of screening is still voluntary. Costs and benefits must be weighed against each other, by those offering these services as well as those who choose to make use of them.

An alarm that turns out to be false, when professionally dealt with, is still better than no alarm at all.

### References

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