British Heart Foundation

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PUBLIC UNDERSTANDING OF RISK

This is the first of two Factfiles dealing with risk. The first deals with the public understanding of risk and the second will include a glossary of terms used by professionals.

Risk Perception

An understanding of how the public think about risk is important for two reasons. First, health professionals are increasingly performing *risk assessment* and *risk communication* due to the emphasis on primary and secondary prevention of coronary heart disease (CHD). Second, *risk perception* can determine risk-reducing behaviour.[1] That is, patients who perceive themselves to have an increased risk of CHD are more likely to adopt behaviours that reduce risk: these include stopping smoking, eating a low-fat diet, taking more exercise and taking their medication as prescribed.

Risk perception consists of two judgements: the perceived likelihood of a coronary event and the perceived severity of such an event. Risks are perceived as verbal categories (eg 'likely', 'probable', 'possible'), as absolute probabilities (eg 'I have a 10% chance of developing CHD') and/or in comparison to other people. Since verbal categories mean different things to different people, their use is best avoided.[2] People tend to downplay their risk and there is a strong tendency for them to make overly optimistic judgements of risk compared to others of the same age and sex.[1]

Risk Perception and Risk-reducing Behaviours

Perceptions of absolute risk show moderate associations with the adoption of risk reducing behaviour[1] and the willingness to consent to medical and surgical procedures. However, the perception of being at increased risk of CHD is by itself unlikely to motivate people to adopt risk-reducing behaviours.[1] It is also necessary to perceive that one has control over CHD. This perception of control comprises two components: response efficacy and self efficacy. Response efficacy is the perception that a risk-reducing behaviour (eg stopping smoking) will be effective in preventing CHD. Self-efficacy is feeling confident in one's ability to adopt the risk-reducing behaviour. Therefore, risk communication involves imparting information about risk, how to reduce that risk and ensuring that patients have confidence in their ability to change their behaviour.

Risk Communication

Absolute and relative risk information can have differential effects in terms of persuasiveness and comprehension. It is recommended that both types of risk are communicated.[2] How risks are communicated can vary between simple verbal expressions and different types of visual presentation such as graphs and charts. At present, there is insufficient evidence on how different formats influence the impact of the information. Simple and clear presentations, such as a bar chart, may well be the most effective. But, more research is needed to assess the effectiveness of risk communication in all its possible formats on the understanding of CHD risk, anxiety, and adopting risk-reducing behaviour.

Nevertheless, there are reasons to believe that personalised risk information will be more likely to influence patients to change their behaviour than more general information about risk.[3] A personal risk profile for CHD will take account of both unmodifiable risk, such as age, sex, and family history, and modifiable risk factors, including smoking, blood pressure and serum lipids. A number of charts and computer software packages are now available for assessing CHD risk[4] and are generally based on equations derived from studies based in Framingham. There is also at least one computer programme that permits patients to view in graphic form the effects of changing individual components of their CHD risk.[5] It seems likely that clear, instant feedback will motivate the attempts to reduce risk, but further evaluation of this and other techniques is desirable.

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Factfile *is produced by the British Heart Foundation in association with the British Cardiac Society and is compiled with the advice of a wide spectrum of doctors, including general practitioners. It reflects a consensus of opinion.*

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Further Reading:

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