

Make the numbers manageable – people often have problems with percentages. For example, say one in a million rather than 0.0001 per cent.

Large numbers are very difficult to imagine.

Illustrate a number like one million by talking about the population of Glasgow. Rather than 1 in 1,200, talk about one child in a large secondary school.

Real numbers make a lot more sense than percentages, and are often less frightening, especially when you have a small sample size.

'It's the 'Judas Effect': although a massive 8% of Jesus' disciples betrayed him, this was actually just a single person.'

'A 26% rise in breast cancer may sound alarming, but it actually means a difference of less than one case in every 1,000 women per year.'

Put the size of the risk in context.

'A tiny risk just got a tiny bit riskier.'

'You would have to eat thousands/tonnes of X for it to have any impact on your health.'

'I've seen no research that would persuade me of a significant risk, but a huge amount that would suggest that this is safe.'

'There are millions of germs in or on or around you. Most are harmless, some are beneficial, while a very small portion pose a risk.'

'You've got more chances of winning the lottery/being hit by an asteroid/ etc than...'

What not to say

This is probably not the right time for a risk tutorial.

Explaining the differences between relative/absolute risks, or 'hazard' and 'risk', will probably be seen as hair-splitting.

Try not to make flippant comparisons.

'That cloud of chemicals is no more dangerous than a gin and tonic.'

Don't say, 'These risks are unquantifiable' or 'unknown'.

Try, 'It's difficult to say, because...', or, 'At the moment it's not absolutely clear, but we're trying to find out by doing X, Y and Z.'

Q Is it risky?

A 'Not very. The benefits outweigh the risks.' The interviewer then has little choice but to ask you about the benefits.

A 'It is a very small risk. So small that I believe it is safe.'

A 'To most people, safe doesn't mean 'no risk', it means 'negligible risk' – so I believe that this is safe.'

A 'Whether or not something is safe will always be a matter of weighing up the risks and the benefits – no-one has ever proved that something is safe.'

A 'Nothing is completely risk free – but we can assess all the evidence and decide that something is safe enough.'

Q Will investment make it safer?

A 'If we plough money into reducing these tiny risks, then for every one person it benefits 1000's of others may suffer because the money has had to be diverted from somewhere else.'

Further reading

www.sciencemediacentre.org/risk.htm

For a copy of this document.

www.dh.gov.uk/assetRoot/04/03/96/70/04039670.pdf

Department of Health Guidelines

www.psandman.com

Peter Sandman has been called 'the guru of risk communication'. There's a wealth of information and advice here.

www.bioss.sari.ac.uk/topics/howsafe.html

'How safe is safe?' Risk communication in a policy context.

www.soton.ac.uk/mediacentre/talking_to_media/index.html

Southampton University's 'Getting your message across to the media' guide.

communicating risk in a soundbite

a guide for scientists

This guide is for scientists, doctors and engineers preparing for a broadcast interview. It will help you to answer questions where some form of risk analysis is required.

Communicating Risk in a Soundbite is the result of a meeting between top scientists and journalists, who assessed the best ways to explain risks via the broadcast media, and suggested a whole host of examples. It is not meant to be a definitive 'best practice' guide – we simply want to offer a choice of effective ways of answering questions about safety and risk.

This guide is intended for use in situations where risks are perceived to be much higher than they actually are. It is not intended to help cover up significant risks or threats to public health.

If you have ever wondered how to answer that killer question, 'Is it safe?', then this guide is for you.

For more information, see the URLs on the back page, or contact the Science Media Centre:

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www.sciencemediacentre.org

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Don't be afraid to say, 'We simply don't know.' Make it personal.

'I certainly won't stop eating X because of this.'

'Having read all of the research, I would still eat it, drink it, swim in it, and give it to my family.'

'I've already done five riskier things this morning.'

'I have children of my own...'

'It's the most effective way of protecting our children.'

'I can completely understand how you feel.'/'I care deeply about this issue.'

Be clear about what your evidence means.

If you say, 'There is no evidence', do you mean, 'There are no studies done on X', or, 'There are lots of studies out there, and they show no risk of X causing Y'?

Compare risks with everyday events.

'Water isn't 100% safe because you can drown if you drink too much, sugar definitely isn't 100% safe because it rots your teeth...'

'The most dangerous aspect of a flight to Australia is the car journey to the airport.'

'Compared to the risk of being killed in a road accident...'

'Sunbathing is probably still more dangerous than flying.'

'Any form of transport entails a risk. It just happens that rail is the safest.'

'Nothing is risk-free – even oxygen, which we breathe to keep us alive, can actually be quite toxic.'

Consider the consequences of not taking the risk.

'The risks of NOT doing X are clearly greater than the risks of X.'

'If society demanded 100% certainty of no harm before any drug could be sold, we would have to abandon virtually every drug currently on the market.'

'It's safer than the alternatives.'

'Although there may be a small risk with this therapy, it can also offer great improvements in quality of life. So it has to be a personal decision for every individual, based on a consultation with your GP.'

'If we close the railways because of fears about risks, imagine how the number of road deaths will increase.'

'If you think the pill is dangerous, try an unwanted pregnancy.'

'If we don't do this, the overall number of injuries will rise.'

'HRT does have a small risk associated with it. None of us wants to be that one case in ten thousand with bad side-effects, but nor do we want to be the one who lights up like a Christmas tree during an important meeting.'

Sometimes, controlled risks can be a good thing.

'What about the child that grows up in a risk-free playground – how can they be expected to cope with the real world?'

Talk about the benefits first, before tackling the problems.

'How many people have avoided breaking their hips because of the benefits of HRT?'

'Despite the tragedy, we have a remarkably safe train system.'

People care a lot more about benefits to themselves than benefits to the population.

'Don't forget that it could be you that suffers just because we didn't take that tiny risk.'

Look at the bigger picture

'Every vaccine has side effects. We share that information fully with the parents.'

'Imagine a world with no risk...'

'What about the risks of being alive?'

Feel free to fall back on the weight of scientific opinion, IF it is heavy enough.

'Many leading scientists have assured me...'

Explain how science works (briefly!)

'When scientists change their minds, it's not necessarily a bad thing – science is always progressing, and the best we can tell you is what the forefront of our knowledge is today.'

People will want strong proof against intuitively plausible links.

'I know it seems to make sense, but research has shown the exact opposite.'

'You may think that a 3-in-1 vaccine can 'overload' a young immune system, but research has shown that children have an enormous capacity to respond to thousands of different vaccines at once.'

Offer an alternative for the listener. Give them an opportunity to take some positive action.

'On balance we believe that this is safe, but if you are still concerned...'

'The overwhelming balance of evidence says that this is safe – but as a precautionary measure...'

'There is clear evidence that obesity is a significant risk to your health but we also know that losing weight can reduce those risks.'

Appearing to take an unconventional position may engender trust in the listener.

'I'm usually the first to attack [the conventional position] on X. But on this occasion I think this is the right decision.'

Stay calm. Be honest, frank and open.

'The risks are all clearly laid out on our website/leaflet etc.'

Don't be afraid of saying that something is not 100% safe.

Show that you've done your homework, and that you can be trusted: 'I've spoken to many of the leading scientists in the area...'

'I've looked at the key research in this area...'

Avoid ducking the question.

Give a reason if you can't discuss a subject, and never say 'No comment'.

It's no bad thing to agree with the interviewer when appropriate!

People often care more about trust, credibility, competence, fairness and empathy than about statistics and details.

Pick your key message before you do the interview, and drive it home. Try not to tackle too many issues.

Use plain English, without resorting to jargon or acronyms.

Think about what your audience needs to know.

Try to address their concerns first.

Talk to the audience, not to the interviewer. Even if the interviewer gives you a hard time, you may have impressed millions of people at home.

You can't win 'em all.

Address the large numbers of people that are swayed instead of the 5% of people that have already decided not to believe you.

Not everyone will be subject to a particular risk.

So target the at-risk group (smokers, mothers, men over 60 etc.), make sure that the right message gets to the right people, and let everyone else off the hook.

'If you use common sense, you'll probably never have a problem with...'

Using anecdotes helps you to connect with the audience and shows that overt caution is not always the best way forward. 'History shows us that any new technology is often greeted with fear.'

'If society demanded absolute certainty of safety before products could be marketed, then we would have missed out on thousands of years of technology.'

'Apparently, Harrods offered a glass of brandy to those customers who were afraid of getting on their new-fangled 'escalators'...'