**10 things you may not know about laughter**

Laughter really is funny. Why is laughter so much fun? Neuroscientist and part time stand-up comic Prof Sophie Scott reveals 10 things you probably didn't know about laughter.

**1. Rats are ticklish**

Want to see a rat laugh? Then tickle it. Rats laugh, chimps laugh and so do dogs. But rats aren't laughing at jokes. They laugh when they're playing, in the same way humans do, to show that they're happy and to encourage bonding. The rats that played more, laughed more. And the ones that laughed more preferred to be around other rats that laughed. This is evidence that human laughter has evolved from play vocalisation, a behaviour seen in many other mammals. In humans, laughter has developed into an important emotional expression, used throughout many channels of communication. Think of the ways we try to convey laughter in text based media, like smileys.

**2. Laughter isn't about jokes**

Ask adults what makes them laugh, and most will tell you it's jokes and humour. But they would be wrong. Robert Provine, a psychologist from the University of Maryland found that we actually laugh most when talking to our friends. In fact we're 30 times more likely to laugh at something when we are with other people. Intriguingly, within these conversations, we are still not laughing at jokes: we laugh at statements and comments that do not seem on the face of them to be remotely funny. It's a form of communication, not a reaction. So laughter is less to do with jokes and more a social behaviour which we use to show people that we like them and that we understand them.

**3. Your brain can tell the difference between deliberate and helpless laughter**

In my lab we see the importance of laughter in our brain imaging studies. We compared staged laughter with the real thing. Not only does your brain automatically tell the difference, but listening to staged laughter produces greater activity in an area called the anterior medial prefrontal cortex. It's known to be involved in understanding other people's emotions. It shows that we automatically try to comprehend someone's deliberate laughs, even when not instructed to do so.

**4. Laughter is catching**

Our brain scans also reveal that laughter is contagious. Even when someone is having their brain scanned, which is not really very funny, you can see their brain responding to the laughter by preparing their facial muscles to join in. And the more that someone shows a contagious response to laughter, the better they are at telling whether a laugh is real or forced. This seems to suggest that joining in when you hear laughter may be helping you to understand what that laughter means.

**5. People you know are funnier**

The fact that laughter encourages laughter is why an MC at a comedy club will spend a lot of time warming up the audience and keeping the energy high between acts. But familiarity and our own expectations are still often at the heart of laughter. People find jokes funnier if they think they were told by a famous comedian. "Two snowmen are standing in a field. One says to the other: 'Funny, I can smell carrots too'." - even on paper it's funnier when you think it's coming from Jimmy Carr rather than Jamie Oliver.

**6. Laughter doesn't make you fitter**

The internet is full of claims that laughter is great for your health. It's sadly not true however that laughter burns more calories than going for a run. Although laughing does raise energy expenditure and heart rate by about 10-20%, this burns an extra 10-40 calories for every 10-15 minutes laughing. You would have to laugh solidly for up to three hours to burn off a packet of crisps.

**7. Relationships last longer when you laugh**

Psychologist Prof Bob Levenson asked couples to discuss something about their partner that annoyed them - a touchy subject. The couples that used laughter and smiling not only felt better immediately but also reported higher levels of satisfaction in their relationship, and stayed together for longer. This shows us that laughter is an emotion that we can use with those with whom we are emotionally close, to make ourselves feel better. This is critical to our enjoying a happy mood - but maybe even more important when circumstances are making us feel bad. Just before my father's funeral service started, I can remember saying something solely to try and make my mother laugh, to get us on track before everything kicked off. And it worked. Laughter may help us measure the health of not just people, but the relationships between people - a way of looking at our social interactions and the effects they have on us.

**8. Laughter requires precise timing**

In conversations, people time their laughter to occur very precisely at the ends of sentences. Even people speaking in sign language do this - despite the fact that they could laugh throughout their "silent" conversation if they wished to. I'm intrigued by how comedians co-ordinate the responses to their routines from the stage. It's also difficult to learn to have the confidence to leave a pause for the audience to laugh, and to cope if they don't. Comedians are very sensitive to the way that laughter can grow and fade in a room, and leaving a space for laughter to happen at all is a real skill. Kiri Pritchard-Mclean, a stand-up comedian points out: "It takes a lot of confidence to stand on a stage and do nothing while the audience laugh - and it is hard to learn to come back in at the right point - not to trample on the laughter or wait too long and lose the momentum of the room."

**9. Laughter is attractive**

Can you really laugh someone into bed? One study of personal ads found that both men and women specified a sense of humour more frequently than intelligence, education, profession or sexual drive. Another found that we rate strangers as more attractive if they laugh at our jokes.

**10. Some things are almost guaranteed to make you laugh**

No comedian has found THE joke that's universally and timelessly amusing. But when trying to make people laugh in my lab I've found some things work better than others. One of the best tools are clips of people trying to not to laugh in situations where laughter is highly inappropriate. The classic example is [Charlotte Green](https://www.youtube.com/watch?v=kKBWsy5A2bA) attempting to read the news live on BBC Radio 4 whilst desperately trying to suppress fits of giggles. Listen to the clip and try not to laugh yourself.



http://www.bbc.com/news/health-29754636?print=true

**Find new words/collocations/phrasal verbs/idioms**

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