Uncertainty is 'MORE stressful' than knowing for definite

UNCERTAINTY creates more stress than knowing for definite that something unpleasant or painful is about to happen, new research shows.

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Getting stressed during uncertain times may mean you have a clearer judgement of risk.

This new finding could have given us an important evolutionary advantage, making us more aware of potential dangers.

In a study published in Nature Communications, 45 participants played a computer game in which they turned over rocks, some of which had snakes under them.

The participants had to guess whether or not there would be a snake under the rock.

If there was a snake under a rock that they selected, the participant would receive a mildly painful electric shock on the hand.

As the game progressed, the participants learned which rocks were more likely to conceal snakes, but those odds changed throughout the experiment, prompting feelings of uncertainty in the players.

Researchers used a sophisticated model to track participants' uncertainty and studied stress levels by taking measurements of the participants' pupil dilation and perspiration levels to track their feelings of uncertainty.

They found that participants were more stressed when they didn't know whether they would get a shock than when they knew one was coming for certain.

They also found that people whose stress levels closely followed feelings of uncertainty were better at guessing which rocks concealed snakes, suggesting these people could have better judgement.

Study author Archy de Berker, a PhD student at University College London, said: “Using our model we could predict how stressed our subjects would be not just from whether they got shocks but how much uncertainty they had about those shocks.

“Our experiment allows us to draw conclusions about the effect of uncertainty on stress. It turns out that it's much worse not knowing you are going to get a shock than knowing you definitely will or won't.

“We saw exactly the same effects in our physiological measures - people sweat more and their pupils get bigger when they are more uncertain.”

Dr Robb Rutledge, also of UCL, said: “When applying for a job, you'll probably feel more relaxed if you think it's a long shot or if you're confident that it's in the bag.

“The most stressful scenario is when you really don't know. It's the uncertainty that makes us anxious. The same is likely to apply in many familiar situations, whether it's waiting for medical results or information on train delays.“

Dr Sven Bestmann, also of UCL, added: “From an evolutionary perspective, our finding that stress responses are tuned to environmental uncertainty suggests that it may have offered some survival benefit.

“Appropriate stress responses might be useful for learning about uncertain, dangerous things in the environment. Modern life comes with many potential sources of uncertainty and stress, but it has also introduced ways of addressing them.

“For example, taxi apps that show where a car is can offer peace of mind by reducing the uncertainty about when it will arrive.

“Real-time information boards at bus stops and train platforms perform a similar role, although this can be undermined by unspecified delays which cause stress for passengers and staff alike.”