31 October 2011 Last updated at 02:39

**BBC**

**Near-death experience 'all in the mind'**

Near-death experiences are simply "manifestations of normal brain functions gone awry", researchers say.

Psychologists from Edinburgh University and the Medical Research Council in Cambridge reviewed existing research.

They say phenomena such as out-of-body experiences or encounters with dead relatives are tricks of the mind rather than a glimpse of the afterlife.

One of the researchers, Dr Caroline Watt, said: "Our brains are very good at fooling us."

The researchers say that many common near-death experiences could be caused by the brain's attempt to make sense of unusual sensations and perceptions occurring during a traumatic event.

Dr Watt, of the University of Edinburgh, said: "Some of the studies we examined show that many of the people experiencing a near-death experience were not actually in danger of dying, although most thought they were.

"The scientific evidence suggests that all aspects of the near-death experience have a biological basis."

Bliss and euphoria

One of the most frequently reported features of near-death experiences is an awareness of being dead - but the researchers say these feelings are not limited to near-death experiences.

Researchers

There is a condition called "Cotard" - or "walking corpse" syndrome, where a person believes they are dead.

It has been seen following trauma and during the advanced stages of typhoid and multiple sclerosis.

Out-of-body experiences, where people feel they are floating above themselves, are also commonly reported.

But Swiss researchers found such experiences could be artificially induced by stimulating the right temporoparietal junction in the brain that plays a role in perception and awareness.

The "tunnel of light" sensation reported by those who believe they are having a near-death experience can also be artificially induced.

Pilots flying at G-force can sometimes experience "hypertensive syncope" which causes tunnel-like peripheral or even central visual loss for up to eight seconds.

And a US study suggested the light at the end of the tunnel can be explained by poor blood and oxygen supply to the eye.

The feelings of bliss and euphoria, meanwhile, can be recreated with drugs such as ketamine and amphetamine.

The paper also suggests the action of noradrenaline, a hormone released by the mid-brain, can evoke positive emotions, hallucinations and other features of the near-death experience.

Writing in the journal Trends in Cognitive Science, the researchers say: "Taken together, the scientific experience suggests that all aspects of near-death experience have a neuro-physiological or psychological basis."

Dr Sam Parnia, director of resuscitation research at the State University of New York and author of What Happens When We Die said: "Every experience, whether near-death or otherwise such as depression, happiness and love is mediated by the brain.

"In fact many experiences share the same brain regions, and so it is not unusual to be able to reproduce them.

"Discovering those areas or reproducing them, doesn't imply the experience is not real.

By the same token, we wouldn't say love, happiness and depression are not real.

"Furthermore many people accurately report "seeing" events taking place at a time when the brain doesn't function (such as during cardiac arrest).

These cannot be explained by brain changes, since the brain had shut down and 'flatlined'.

"While seeming real to those who experience them, near death experiences provide a glimpse of what it is like to die for the rest of us".

**Related Internet links**

* [Trends in Cognitive Sciences](http://www.cell.com/trends/cognitive-sciences/)

DAILY MAIL (London)

October 31, 2011 Monday

**AN OUT-OF-BODY** **EXPERIENCE? IT'S YOUR** **BRAIN PLAYING TRICKS**  
**BYLINE:** By Fiona MacRae Science Correspondent  
  
**LENGTH:** 475 words

SOME report feeling as if they are hovering above their own bodies, while others find themselves drawn towards a blinding light.

But out-of-body experiences are nothing more than a trick of the mind, scientists claim.

They say that common spooky scenarios, such as floating above a hospital bed or walking towards the light at the end of a tunnel, can be explained by the brain trying to make sense of the process of death.

Scientists from the universities of Edinburgh and Cambridge reviewed studies into changes in the brain that cause certain sensations associated with near-death experiences.

Researcher Caroline Watt said one common vision Ð that of people seeing a bright light which seems to be drawing them into the afterlife Ð is probably produced by the death of the cells we use to process the light picked up by our eyes and turn it into pictures.

'The most parsimonious explanation is not that you are travelling to some spiritual realm Ð it is simply your brain trying to make sense of the unusual experiences you are having,' Dr Watt said.

Feelings of being out of the body can also be explained by the brain's behaviour, the journal Trends in Cognitive Sciences reports.

'If you put on a virtual reality headset showing an image of yourself three feet in front, you can trick your brain into thinking that is you over there, and get the sense you are outside your body,' Dr Watt added.

'The scientific evidence suggests that all aspects of the near-death experience have a biological basis.'

In another example, the hormone noradrenaline, which is released when we suffer from stress and injuries, could be behind the feelings of love and peace many experience when they seem to be approaching death.

However, other scientists say we should not be so quick to dismiss people's accounts.

Sam Parnia, of the University of Southampton, stressed that being able to trace something back to the brain does not mean it is not real. Dr Parnia, who is close to completing a three-year study of hospital patients' recollections of their near-death experiences, said: 'Every experience, whether near-death or otherwise Ð such as depression, happiness and love Ð is mediated by the brain. Ê

'In fact, many experiences share the same brain regions, and so it is not unusual to be able to reproduce them.

'Discovering those areas, or reproducing them, doesn't imply the experience is not real.

'We wouldn't say love, happiness and depression are not real.

'Furthermore, many people accurately report "seeing" events taking place at a time when the brain doesn't function, such as during cardiac arrest.

'These cannot be explained by brain changes, since the brain had shut down and "flatlined". Ê

'While seeming real to those who experience them, near-death experiences provide a glimpse of what it is like to die for the rest of us.'

Spiritual? That floating feeling

i-Independent Print Ltd

October 31, 2011   
First Edition

**Study finds near-death events are biological;**PARANORMAL  
  
**BYLINE:** Mark McLaughlin  
  
**SECTION:** NEWS; Pg. 22  
  
**LENGTH:** 265 words

Near-death experiences - reported by people who have recovered after being pronounced dead or close to death - are not paranormal but are triggered by a change in normal brain function, according to researchers.

Psychologists who reviewed a range of phenomena such as out-of-body experiences, visions of "tunnels of light" or encounters with dead relatives, said they were tricks of the mind rather than a glimpse of the afterlife.

Researchers at the University of Edinburgh and Cambridge University say most of the experiences can be explained by a reaction in the brain to a traumatic, although sometimes harmless, event.

Caroline Watt, of the University of Edinburgh's School of Philosophy, Psychology and Language Sciences, said: "Some of the studies we examined show that many of the people experiencing a neardeath experience were not actually in danger of dying, although most thought they were.

"The scientific evidence suggests that all aspects of the near-death experience have a biological basis."

The researchers say many common near-death experiences could be caused by the brain's attempt to make sense of unusual sensations and perceptions occurring during a traumatic event.

Out-of-body experiences, for example, may happen when there is a breakdown in the brain's multi-sensory processes, and visions of tunnels and bright lights could stem from a breakdown in the brain's visual system caused by oxygen deprivation.

The study also points to the effects of noradrenaline, a hormone which may evoke positive emotions, hallucinations and other features of the near-death experience.

Metro (UK)

October 31, 2011 Monday   
Edition 1;   
Scotland

**Near-death mind games**  
**SECTION:** NEWS; Pg. 9  
  
**LENGTH:** 221 words

NEAR-DEATH experiences are not paranormal but triggered by a change in normal brain function, according to researchers.

Psychologists who reviewed a range of phenomena such as out-of-body experiences, visions of tunnels of light and encounters with dead relatives, claim they are tricks of the mind rather than a glimpse of the afterlife.

Researchers at Edinburgh and Cambridge universities say most of such experiences can be put down to the brain's attempt to make sense of unusual sensations and perceptions during a traumatic event.

Caroline Watt, of Edinburgh's school of philosophy, psychology and language sciences, said: 'Some of the studies we examined show many of the people having a near-death experience were not actually in danger of dying, although most thought they were.

The scientific evidence suggests all aspects of the near-death experience have a biological basis.'

The researchers say outof-body experiences may result from a breakdown in the brain's multi-sensory processes.

Visions of tunnels and bright lights could stem from a problems in the brain's visual system caused by oxygen deprivation.

The study also points to the effects of noradrenaline, a hormone which, when triggered, may evoke hallucinations and other features of the near-death experience.

Evidence points to there being biological basis