

Changed in a flash: Life after a lightning strike

It left scars inside and out for survivor, who overcame struggles through pain and time

Sue-Ann Tan

Eleven years may have passed, but realtor Carolyn Lim, 39, said she has yet to fully recover from the effects of a lightning strike in September 2006 which left her in a six-week long coma.

She suffered a traumatic brain injury and even now, sometimes struggles with double vision.

"At that time, it felt like I was living in a nightmare," said Ms Lim, who also had to deal with depression in the first few months after the accident.

The question of what happens in a lightning strike surfaced after a Nov 20 incident which affected MRT trackside equipment near Bedok station.

While train occupants are protected by a conductive material that blocks electric fields and electric currents from entering, Ms Lim took the full brunt of a lightning strike while windsurfing with friends in the waters off East Coast.

Rendered unconscious, Ms Lim was saved by her life vest that kept her afloat. A friend who saw what happened pulled her out of the water.

Doctors The Sunday Times spoke to said approximately 10 per cent of lightning strikes result in death but survivors can suffer brain and nerve damage.

When she woke up from her coma, Ms Lim could not sit up, speak, swallow, write or walk.

After years of therapy and self-motivation, she said she has mostly recovered, but continues to have slight double-vision and faces some difficulty writing with her right hand.

She also uses a wheelchair when she is out of her home because even a slight bump or someone brushing against her can cause her to lose her balance, she said.

"I was depressed for about six months," she said. "It was like being trapped in a body I couldn't control. I used to be an English teacher and (after the accident) I couldn't even talk or read."



Ms Carolyn Lim and her husband William Ng. Ms Lim took the full brunt of a lightning strike while windsurfing with friends in the waters off East Coast in 2006. Rendered unconscious, she was saved by her life vest which kept her afloat. A friend who saw what happened pulled her out of the water. ST PHOTO: NG SOR LUAN

At the time, Ms Lim was diagnosed with traumatic brain injury, which affected her motor skills. She could only speak a few syllables at a time because her vocal chords were affected.

"I used to be very sporty and independent. Suddenly, everything was impossible to do."

The nerves in her face were also damaged, causing her right eye to be skewed to one side, giving her double vision.

The turning point in Ms Lim's life came when her then-boyfriend, Mr William Ng, proposed to her in 2007.

"I told him he was crazy to still want to marry me, but I realised if someone has so much faith in me, I

owe it to him to give recovery my best shot," she said.

Mr Ng, 37, is also a realtor.

He said: "I didn't think it was a big deal because I thought anyone in my position would still have proposed."

According to the National Environment Agency, Singapore has one of the highest occurrences of lightning activity in the world, because of its warm and humid tropical conditions that allow thunderstorms to develop.

On average, Singapore experiences 168 thunderstorm days per year, which refers to the number of days in which thunder is heard over Singapore, giving an indication of lightning activity.

In contrast, the United Kingdom gets between five to 20 thunderstorm days a year.

More thunderstorm days also occur in Singapore during the intermonsoon months of April and May, as well as October and November.

Ms Lim published a book in 2009, *Making Pink Lemonade*, about how she overcame her struggles. She now has two sons, aged four and seven.

She said: "It has also given me a different perspective on life. It made me treasure and love my life. Nobody thought I could ever walk or talk back then, but this shows me nothing is ever impossible."

suetan@sph.com.sg

FEELING TRAPPED

I was depressed for about six months. It was like being trapped in a body I couldn't control. I used to be an English teacher and (after the accident) I couldn't even talk or read.



CAROLYN LIM, who was diagnosed with traumatic brain injury, which affected her motor skills, after the incident. She could only speak a few syllables at a time because her vocal chords were affected.

Harm done when lightning strikes

In 2009, a businessman died after he was struck by lightning while playing golf at The Tanah Merah Country Club.

A lightning strike does not have to directly hit a person to cause serious injuries, said Dr Kanak Naidu, a consultant at the acute and emergency care department of Khoo Teck Puat Hospital.

He added: "There is a large amount of electricity, more than 1,000 volts, that can course through a person's body and into the ground, if they are touching the ground."

Dr Lim Er Luen, consultant at the Emergency Medicine Department of National University Hospital (NUH), said: "The more common cause of death is when the electrical charge of the lightning strike courses through the heart, disrupting the heart's intrinsic electrical system. This causes the heart to stop beating."

It may also disrupt the breathing centres in the brain, causing the victim to stop breathing.

In other cases, Dr Lim said, the body's tissues may be damaged because of the energy transmitted by the current.

NUH has seen 16 patients who were struck by lightning from 2012 to this year.

Fatalities due to lightning strikes are 0.35 death per million in Singapore, compared to 0.6 in the United States, 0.2 in Britain and 1.5 in South Africa, Dr Lim said.

Those who survive can suffer memory loss, speech problems and other brain and nerve injuries.

"Victims may also have depression and post-traumatic stress disorder following the lightning injury," Dr Lim added.

He said that while wearing a metallic object like a watch or jewellery may divert the electric current away from crucial structures in the body such as the brain and the heart, the objects can heat up and cause burn injuries.

As for wearing shoes with rubber soles, Dr Naidu said the voltage of the strike will "more than likely outdo the protective effect of rubber-soled shoes".

Sue-Ann Tan