

David G Simons

Set a record with a balloon flight
19 miles above Earth

The US Air Force's Major David G Simons was exhausted, aching, and sweaty after 36 hours crammed in a tiny metal capsule hanging from a huge helium filled balloon 19 miles (31 km) above Earth. It was 20 August 1957, and he should have landed hours before, but dangerous thunderclouds swirling below had postponed his descent.

The capsule's air regeneration system was not working properly, and the carbon dioxide level was high. Ground observers in radio contact noticed that the 35 year old was speaking at a quarter of normal speed.

No doubt a brave man, Simons later admitted, "At this point I was approaching panic. If I were not a physician, perhaps I would have panicked. But I knew what was causing my rising apprehension. One symptom of carbon dioxide poisoning is panic. And the terrific heat compounded that. I stopped to look at my problem as dispassionately as I could. I gave myself a short lecture."

Manned space flights

The balloon flight, part of the Operation Man High research programme, was a giant first step toward manned space flights. Simons had been hermetically sealed in the capsule at 10.40 pm on 18 August at the premises of the firm in Minneapolis, Minnesota, that had constructed the balloon and capsule. It was then driven 240 kilometres and placed at the bottom of a 130 metre deep pit for mining iron ore, to protect the delicate balloon from winds at lift-off, which came at 8 am on 19 August. Within hours Simons rose to a record high 30 942 metres, to the outer edge of the Earth's atmosphere, confirming visually that the Earth is round.

Christian Gröbli, president of the David G Simons Academy for pain therapy, in Winterthur, Switzerland, and decades later a colleague of Simons, said, "He told me, and it impressed me, that he was the first man to see the curvature of the earth."

After setting the altitude record Simons remained aloft to perform 25 experiments requested by astronomers, meteorologists, and physicists. "For my own medical research program," he wrote, "I wanted to record my physical and mental reactions to confinement and discomfort in a completely alien environment." This included taping photo-



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graphic track plates to his arms and chest to learn about "cosmic ray bombardment."

He slept only 30 minutes that night as the cabin temperature fell to 1°C. The next morning, 20 August, thunderclouds blocked his descent. The subsequent panic attack eased after he began breathing periodically from limited emergency oxygen supplies. By midday the clouds broke, and he began a slow descent. The capsule bumped to earth in South Dakota at 5.32 pm. Simons was an instant US hero, his face 12 days later on the cover of Life magazine.

David Goodman Simons was born on 7 June 1922 in Lancaster, Pennsylvania, where his father was a doctor. He earned a bachelors degree in chemistry in 1943 from Franklin and Marshall College in Lancaster and in 1946 his medical degree from Jefferson Medical College in Philadelphia.

He joined the army air force a year later and was assigned to space oriented research, including studying physiological responses of monkeys sent aboard V-2 rockets to weightless altitudes of 100 kilometres. In 1953, after serving as flight surgeon in the Far East during the Korean war, he became project officer at the aeromedical field laboratory, Holloman Air Force Base, New Mexico, studying the effects of cosmic radiation on mice and guinea pigs sent aloft by balloon.

Myofascial trigger points

He transferred in 1962 to the Air Force School of Aerospace Medicine in San Antonio, Texas, helping develop in-flight medical monitoring. In 1963 he was inspired by a two day seminar on myofascial trigger points by Janet Travell, personal doctor for the US president John Kennedy, who had severe back pains.

After retiring from the air force in 1965 as a lieutenant colonel he spent the next 20 years at Veterans Administration hospitals focusing on trigger points and myofascial pain research, collaborating with Dr Travell. In 1983 they published the first of the two volume *Trigger Point Manual*. "The textbook was a major breakthrough in the understanding of pain," said Mr Gröbli, who added that Simons is considered a pioneer in the discipline.

In 1997 Simons moved to Georgia, becoming clinical professor and consultant at the department of rehabilitation medicine at Emory University. He authored 231 peer reviewed papers, including several in collaboration with the pain expert Siegfried Mense of the University of Heidelberg in Germany. The two men were among three coauthors of *Muscle Pain: Understanding Its Nature, Diagnosis and Treatment*, published in 2000.

Simons continued working and writing until shortly before his death, communicating with colleagues around the world. "He had a thirst for knowledge," Dr Mense said.

In 2005, after the death of his fourth wife, Simons met the pain researcher and chiropractor Carolyn McMakin. They exchanged wedding vows in a non-legally binding ceremony in 2006. "He loved that it was unconventional, and I think he secretly enjoyed the discomfort it caused in our more conventional acquaintances and colleagues," she said.

In declining health since 2008, he was told by doctors in March that death would come soon. He informed family and colleagues around the world he was ready for "the next adventure." Dr McMakin said, "He loved being a pioneer and he loved the idea of being able to move on into the other dimensions of existence after he passed from this life unencumbered by his body and its limitations. One of the last things he said to me was, 'I'll see you on the other side.'"

Simons leaves two sons and two daughters from his first marriage.

Ned Stafford

David G Simons, pain researcher (b 1922; q 1946 Jefferson, PA, USA) died 5 April 2010 from heart failure.

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