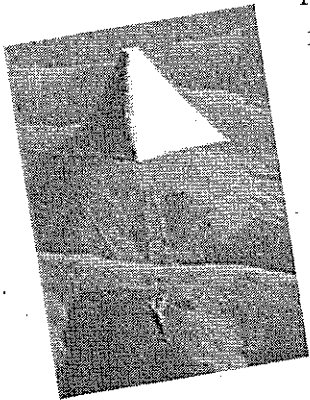


## Leonardo's Parachute

One of Leonardo's most famous quick sketches is of a tiny stick figure suspended from a parachute. Although he sketched it more than five centuries ago and probably never had an opportunity to try out his design, Leonardo's parachute bears an uncanny resemblance to parachutes that are used today.

Leonardo described his parachute as follows: "If a man is provided with a length of gummed linen cloth with a length of 12 yards on each side and 12 yards high, he can jump from any great height whatsoever without injury." Leonardo never got to try out his parachute from great heights (it is said that he may have tested it, but it could have only been from trees or tall buildings), but in the year 2000, hundreds of years after Leonardo first sketched his ideas, a world-renowned sky diver named Adrian Nicholas tested a model of Leonardo's parachute.

Nicholas worked for months on a replica of Leonardo's parachute. He even used canvas and wood—materials Leonardo would have had access to—and tools similar to those that Leonardo may have used. Nicholas's parachute weighed more than 187 pounds (compare that to the average modern parachute that weighs between 25 and 30 pounds). Most people who heard about Nicholas's plan were convinced the parachute wouldn't work because it was just too heavy. One safety measure Nicholas took was to attach a conventional parachute to his body as well, in case Leonardo's was a disaster.



*"ognuno si potrà gettare da qualsiasi altezza  
senza alcun rischio" anyone can jump from no  
matter what height without any risk whatsoever*

In July 2000, Nicholas jumped off a hot air balloon at 3,000 meters and floated gracefully through the skies of South Africa for almost 10 minutes. He stated that Leonardo's parachute gave a smooth ride—smoother than modern parachutes—and that it felt as though he was floating through space. He cut himself free from Leonardo's parachute about 2,000 feet above the ground because he was afraid that the weight of the parachute would injure him upon landing. He then used a modern parachute with a ripcord, which gave him a very safe landing.

### History of the Modern Parachute

The term parachute was coined by Sebastian Lenormand in France in 1783, and though he claims to have invented it, Lenormand apparently never tried the parachute out. A couple of years later a man named Jean Pierre Blanchard built and tested a parachute. First he launched a dog from a hot air balloon. Luckily for the dog, the parachute worked. Later, Blanchard used his parachute to save his own life: his hot air balloon malfunctioned when he used his parachute to safely reach the ground.

While the first parachutes were made of linen and wood (similar to Leonardo's design), parachute innovators quickly turned to lighter and more compactable materials such as silk. In 1797 a man named Andrew Garnerin tested a silk parachute successfully, and silk became the material of choice in parachute construction. Garnerin later made a vented parachute, which allowed for more stability and a smoother ride. In 1890, two men named Paul Letterman and Katchen Paulus invented the first knapsack parachute. This allowed for an easier launch—the parachute was now confined to a small backpack rather than floating loose.

In 1912, U.S. Army Captain Albert Berry made the very first jump from an airplane and parachuted through the air over Missouri. Today, modern parachutes use "can-air," or parafoil wings that self-inflate by trapping air between two layers of material and allow for complete control of direction. Parachutes are generally safe, as long as certain precautions are taken (such as packing them correctly). Although it's not common, parachutes can malfunction. Backup parachutes have been designed so that the jumper has a reliable safety mechanism.