

It is in the very nature of the helicopter that its great versatility is found. To begin with, the helicopter is the fulfillment of one of man's earliest and most fantastic dreams. The dream of flying; not just like a bird, but of flying as nothing else flies, or has ever flown. To be able to fly straight up and straight down – to fly forward or back or sidewise, or to hover over and spot till the fuel supply is exhausted.

To see how the helicopter can do things that are not possible for the conventional fixed-wing plane, let us first examine how a conventional plane works. It works by its shape – by the shape of its wing, which deflects air when the plane is in motion. That is possible because air has density and resistance. It reacts to force. The wing is curved and set at an angle to catch the air and push it down; the air, resisting, pushes against the under surface of the wing, giving it some of its lift. At the same time the curved upper surface of the wing exerts suction, tending to create a lack of air at the top of the wing. The air, again resisting, sucks back, and this gives the wing about twice as much lift as the air pressure below the wing. This is what takes place when the wing is pulled forward by propellers or pushed forward by jet blasts. Without the motion the wing has no lift.

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Title: Working of Conventional plane  
in comparison to Helicopter

The unique and diverse functionalities of Helicopter provide an unprecedented experience to humans. Its working principle is different from conventional planes. The shape of wings of plane make it fly when come in interaction with air. The curved wings provide lift by pushing air under its wing and creating vacuum at top. This phenomenon takes place when plane is in motion, and helps it to fly.