

# Lower limb prosthetics evolution

[History](#)



Outline In this project I will focus on the development or evolution of lower limb prosthetics from 2000s to present day.

There has been acceptance of amputees in the international games where they have been allowed to play in the Olympics and other games.

Presently, there has been an increase in the number of injured people due to car accidents and other circumstances that can be avoided.

There has been an increased demand of the Lower limb prosthetics from both athletes and people who want to continue with their accustomed lifestyle.

As the number of traumatic injuries have increased, scientist or developers of the prostheses have opted to use carbon fiber springs material for the making of the artificial lower limb.

The introduction of the Carbon fiber has been an improvement from the material that was being used previously as the devices developed are more functional and comfortable

The carbon fiber springs allow shock absorption and mobility without increasing any weight; hence, allowing the amputees to put more weight on the limb.

In 2004, there was the development of a light and more comfortable limb that would help the amputees that was created and modified for an individual.

Additionally, the materials used to make the lower limb prosthetics have improved creating a more durable limb for the person using it in their life.

The modern prostheses have been transformed by the advancement of plastic materials that aid in making prostheses stronger, lighter, and more flexible and can imitate the function of a natural limb.

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The project will further identify the role the advancement of the technology has played today in the improvement of the advent of microprocessors, robotics and computer chips that have allowed amputees to get back to their accustomed lifestyle.

The project will also compare the materials used in the past and the one used in the present to establish the advantages and the disadvantages of the materials.

The project will conclude by establishing whether the new development since 2000 up to now has been of any benefit to patients who have suffered traumatic accidents.

#### Lower Limb Prosthetics Evolution

##### First period 2000

There has been development of Lower Limb Prosthetics, especially from 2000s to present day where people who have artificial limbs are allowed in the Olympics, as well as, participate in various sports. The number of people who have been amputated or recovering from traumatic injuries has increased recently due to the introduction of risky sports and car accidents<sup>1</sup>.

##### Second period from 2004

Presently, there has been the use of Carbon fiber springs in the prostheses that allows improved shock absorption and mobility without increasing any weight. Additionally, the carbon fiber have allowed active amputees to wear limbs that can help in the absorption of two to four times their total body weight. In 2004, the esteemed international event aided the drive of development of lighter and more functional devices such as the gait-adaptive knee and an artificial limb that can be modified for its users<sup>2</sup>.

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### Third period 2014

There has been the advancement of the technology today where scientists and developed with the advent of microprocessors, robotics and computer chips have allowed amputees to get back to their accustomed lifestyle.

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