

ARTIFICIAL LEG

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ABSTRACT

Have you ever met anyone who has an artificial limb? Chances are you have- without even knowing it. Modern prostheses work so effectively and look so convincing that you wouldn't even know someone was wearing one. A Prosthesis also called a prosthetic limb , artificial limb, or limb "replacement" though natural limbs are irreplaceable is an artificially made substitute for a limb lost through a congenital defect present at birth ,accident ,illness, or wartime, injury. A type of prosthesis called a COSMESIS.

Any part of the body - from your ear or nose to your finger or toe- could be replaced by a prosthesis.in practice, there are four common types of prosthetic limb, which replace either a partial or complete loss of an arm or leg:

- below the knee (BK, transtibial): An prosthetic lower leg attached to an intact upper leg.
- above the knee (AK, transfemoral): A prosthetic lower and ipper leg, including a prosthetic knee.
- below the elbow (BE , transradial): A prosthetic forearm.
- above the elbow (AE, transhumeral); A prosthetic lower and upper arm, including a prosthetic elbow.

HISTORY :

The history of prosthetics is not only a scientific history , but the story of human beings The '**GENERAL MARCUS SERGIUS**'who is considered the first documented wearer of a prosthetic limb.in the second '**PUNIC WAR**'.The Sergius lost his right hand in the war that time prosthesis fashioned from iron.it enabled him to hold his shield and continue fight

The first artificial leg was developed by **BENJAMIN FRANKLIN PALIMER** in 4 november,1846.And he also received patent number 4,834 for the artificial leg later the artificial leg was inverted by Doctor **DOUGLAS BLY** in 1858.Which is called 'anatomical leg'.but it is the

construction of artificial leg has been merely mechanical,and not an anatomical.



In 1863 '**DUBOIS PARMLEE**' invented an advanced prosthesis with a suction socket, polycentric knee and multi-articulated foot.

In 1946 when researchers at 'UC BERKELY' developed a suction sock for lower-limb amputees. Similar

Attachment technology is still in use today.

In 1970's the inventor 'YSIDRO M.MARTINEZ' he also developed the same lower



limb but it is replicate the motion of a natural limb, and focused on improving gait and reducing friction. It gives more comfortable to walk.

GENERAL SERGIUS : he invented iron hands fashioned for knights are no more advanced than that in thousand years earlier.

DOCTOR AMBROISE PARE : In the early sixteenth century he made significant advances in both amputation surgery in mid 19th century and the development of prosthetic limbs. He was the first to introduce a "Hinged prosthetic hand and a leg "with locking knee joint.

His innovative techniques are unfortunately still rather common in modern prosthetics. Hanger a confederate soldier became the first amputee in the war and went on to invent the 'HANGER LIMB'.

HANGER LIMB: prosthetics leg made from barrel staves and metal, that featured hinged joints at the knee and ankle. It is the most advanced limb in the history of prosthetics, and the 'company he founded continues to be a leader in the industry today

THE SOCKET : Which is called their residual limb or some times, informally , the "Stump". The connecting part of a prosthesis is called the SOCKET and it's carefully molded around a plaster

TODAYS TECHNOLOGY : Now a days there are many advancement in artificial leg .

- 3D Printing.
- Biometrics have enhanced the lives of amputees.

More precisely fitting sockets can now be made by scanning a patient's residual limb with lasers and cutting- edge techniques such as 3Dprinting are also now being used. at UNYQ-3D printing technology is used. To create beautiful protective prosthetic covers used to restore symmetry to amputees, silhouettes and inspire confidence.

Now new materials to create prosthetics for finger, arms & legs .

CONCLUSION : We are no longer leaving people with an incomplete sense at self . If the history of prosthetic is the story of human beings struggling to regain a wholeness they have been tragically denied.

It is also a place where amputees can easily find one another. And share stories, advice and comfort.