



Once upon a time, there was a monster who killed many people...Then one fine day, came our super hero who killed the monster and made all of us live happily ever after...

Through ages, our stories have always been complete with this sort of a happy ending. A superhuman, a symbol of courage and nobility and who has abilities beyond those of normal human beings, always comes to the rescue to free us from all evil.

Who is a Superhuman?

The dictionary defines a superhuman as an entity with intelligence or unusual abilities exceeding normal human standards. Superhuman can also mean something that isn't human, but considered to be "superior" to humans in some ways. They could be godlike, so exceptional, with extraordinary gifts.

How does a Superhuman evolve?

All our comic books and science fiction stories are bereft with examples of superhumans. Superhumans evolve as mutants, through genetic engineering or as cyborgs.

■ **Mutants:** One type of superhuman described in science fiction stories, particularly during the Atomic Age, derives from the concept of mutation. In such tales, a human being would mutate into or give birth to a being that either has powers not yet exhibited by humans and may even have supernatural abilities. Mutant powers vary seemingly without limit. Some of these powers include telepathy, flying capability, the ability to project energy, enhanced physical strength, agility, or senses. Mutant powers can grow and increase as the mutant grows and develops, while sometimes it becomes apparent immediately from birth. Superman, the X-Men in Marvel comics and Ninja Turtles are examples of mutant superhumans.

■ **Genetic Engineering:** Superhumans can also be genetically engineered. Human genetic engineering has the potential to change human beings' appearance, adapt-

ability, intelligence, character, and behaviour. It may potentially be used in creating more dramatic changes in humans. For example, Spiderman is bitten by a genetically engineered spider that alters his own DNA structure. The 1930 novel *Gladiator*, featured a man granted super-strength and durability through prenatal chemical experimentation.

■ **Cyborgs:** Superhumans could also be a cyborg, a cybernetic organism that has both artificial and natural systems. It is a human being whose body has been taken over in whole or in part by electromechanical devices – a synthesis of man and machine. Cyborgs are often portrayed with physical or mental abilities far exceeding a human counterpart. Characters like Frankenstein's monster and the Terminator are examples of cyborgs.

Do Superhumans exist only in Stories?

While superhumans may have been introduced to us through stories and mythology, today biotechnology and genetic engineering has made it possible for man to design his own evolutionary progress. Scientists can now pinpoint many specific genes including being lean, living a long life, improved self-healing and having an improved memory among many other incredible traits. They also believe that these genes can be manipulated in ordinary humans, creating Superhumans.

Can Superhumans be created today?

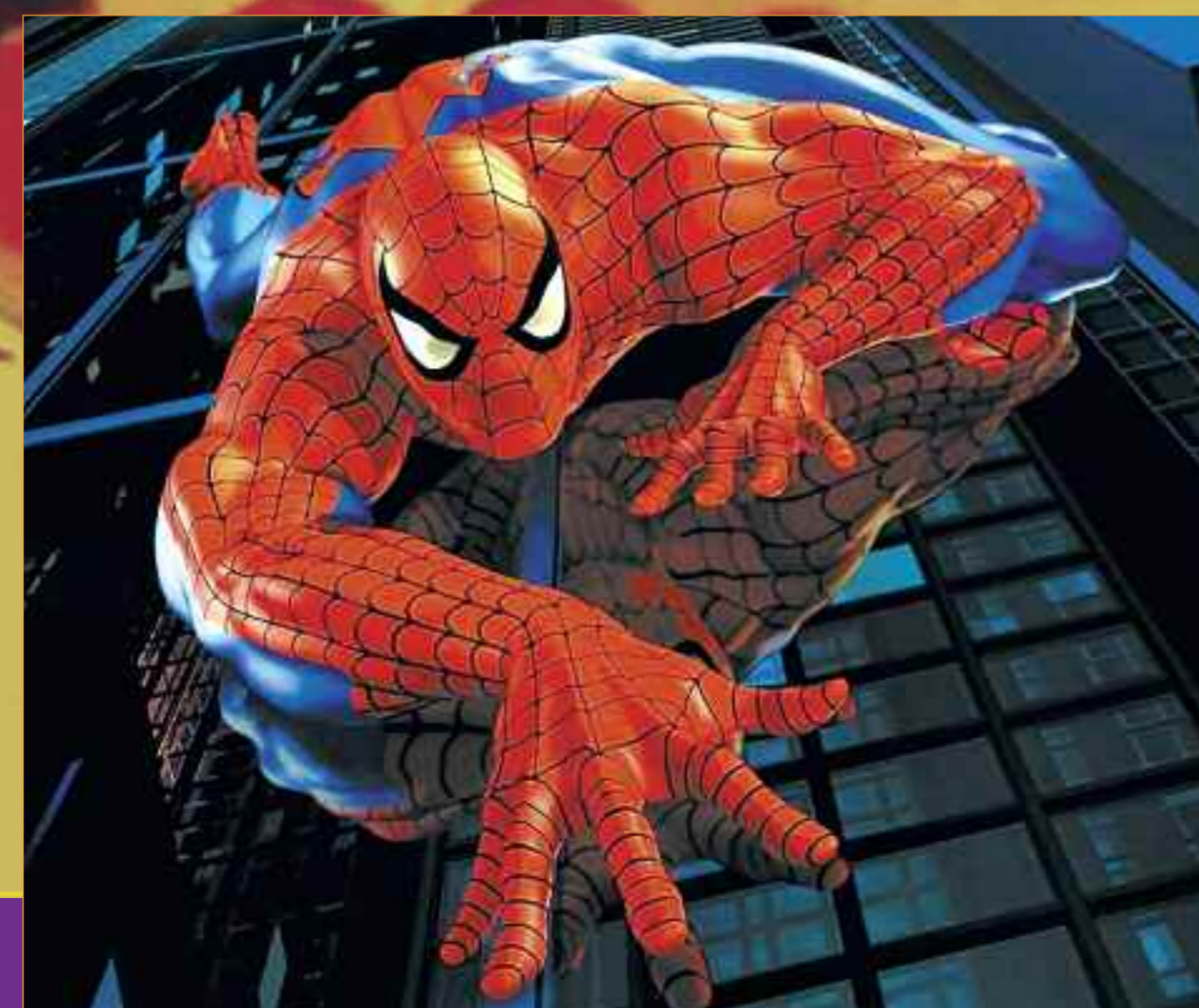
The options are nearly limitless. Theoretically, if a gene exists in another species, it can be brought over to a human cell. Imagine some of the incredible traits of the animal kingdom that humans miss out on – night vision, amazing agility, or the ability to breathe underwater. Work on this front is already being done. Experimental mice, for example, were successfully given the human ability to see in color. If animals can be engineered to have human traits, then humans can certainly be mutated to have desirable animal traits.

It is even thought possible that Human enhancement technologies could so drastically alter human genomes that a type of superhuman species could emerge – the latest being using cells of a dead person. The idea is that you could borrow skin cells from a living or dead person to give your child a genetic enhancement. If we had a few skin cells from Albert Einstein, or anyone else in the world, you could have a child that is say 10 per cent or 70 per cent Albert Einstein by just injecting a few of their cells into an embryo!



Human to Superhuman

WHETHER IT IS THE FRIENDLY NEIGHBOURHOOD SPIDERMAN, OUR VERY OWN KRISHH OR THE TERMINATOR; SUPERHUMANS HAVE FASCINATED US FROM TIME IMMEMORIAL...AND TODAY, WITH HUMAN ENHANCEMENT TECHNOLOGIES, THE ERA OF 'REAL' SUPERHUMANS COULD BE BACK AGAIN. **YE UNRAVELS THE MAKING OF A SUPERHUMAN**



What are Human enhancement technologies (HET)?

Human enhancement technologies (HET) are techniques that can be used not simply for treating illness and disability, but also for

enhancing human characteristics and capacities, roughly synonymous with human genetic engineering. It is used most often to refer to the general application of the convergence of nanotechnology, biotechnology, information technology and cognitive science to improve human performance.

SUPERHUMANS THROUGH THE YEARS

■ Superman was the first true superhero introduced way back in 1938. The original story of Superman relates that he was born Kal-El on the planet Krypton, before being rocketed to Earth as an infant by his scientist father Jor-El, moments before Krypton's destruction. Discovered and adopted by a Kansas farmer and his wife, the child is raised as Clark Kent and imbued with a strong moral compass. He displays superhuman abilities from childhood, which upon reaching maturity he resolves to use for the benefit of humanity.

■ Unlike many superheroes, Batman has no superpowers. Batman's secret identity is Bruce Wayne, a wealthy industrialist, playboy, and philanthropist. Witnessing the murder of his parents as a child, Wayne trains himself both physically and intellectually and dons a bat-themed costume in order to fight crime.

■ A bite from a scientifically enhanced spider causes a variety of changes in the body of Peter Parker, giving him superpowers such as the ability to cling to walls, superhuman strength, a sixth sense ("spider-sense") that alerts him to danger, perfect balance, as well as superhuman speed and agility. He is intellectually gifted, excelling in applied science, chemistry and physics.

■ From powers such as instant healing, flying, reading minds, and so on, X-Men are a unique breed of superheroes in that they

are outcasts in terms of society, yet all the different mutants have joined together for the benefit of society.

■ A recent entry into the superhumans category is *The Terminator*, a seemingly unstoppable cyborg assassin who has been sent back from the year 2029 by a race of artificially intelligent computer-controlled machines.

■ *The Real Superhumans and the Quest for the Future Fantastic*, is a special show on Discovery Channel which follows people with real life superhuman abilities, genetic engineering and the progress of human evolution...So just watch out!

