

# Newsweek

## Anywhere in the World in Four Hours, and Other Scientific Breakthroughs

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In this post-Thanksgiving atmosphere, here is another installment in Human Progress's series of posts on incremental (and sometimes revolutionary) ways in which our world is becoming a better place. This week we look at anti-aging drugs, falling maternal mortality deaths and death rates, prosthetic hands with a sense of touch and a potential breakthrough in air travel.

### *British Company to 'Transform' Air and Space Travel with Pioneering New Engine Design*

BAE Systems has recently bought a minority stake of a small technology company called Reaction Engine. The support of BAE will allow Reaction Engine to continue working on its breakthrough engine, known as Sabre. This versatile engine can be used for both air and space travel, reaching up to five times the speed of sound for air travel and twenty-five times the speed of sound for space travel. Using these high rates of speed, it could be possible to fly anywhere in the world in four hours within the next ten to fifteen years. Reaction Engine hopes that the first Sabre engine will be tested within the decade.

### *World's First Anti-Aging Drug Could See Humans Live to 120*

The aging process is not inevitable. Our cells contain a DNA blueprint that can, theoretically, keep our bodies functioning forever. However, overtime our cells divide rapidly, leading to an increased likelihood of "errors" occurring. These "errors" cause diseases like cancer and dementia. Recently, the FDA approved a human trial for a drug called Metformin, which has been proven to increase the lifespan of animals. The trial contains around 3,000 people who are between the ages of 70 and 80. If similar results occur with humans as with animals, the human lifespan could increase by up to 50 percent.

### *Maternal Mortality Falls by Almost 50% - UN Report*

The United Nations has been monitoring maternal mortality, which is defined as the number of mothers who die during pregnancy or shortly thereafter, for a number of decades. According to a recent report, global maternal mortality has dropped from 532,000 deaths in 1990 to 303,000 in 2015. That's a reduction of 44 percent. Eastern Asia made the most substantial progress, with maternal mortality rates dropping from 95 deaths for every 100,000 live births to 27. Maternal mortality, once ubiquitous throughout the world, is now almost exclusively (99 percent) found in poor countries. Once again, economic development and income growth are the keys to further progress.

### *A Prosthetic Hand that Can Feel*

Researchers at Case Western Reserve University have recently created a prosthetic hand that allows the patient to not only grip objects more accurately, but also enjoy a sense of touch. The technology works by creating a connection between the artificial hand and the brain. When the prosthetic hand senses pressure, it sends a neural code to the brain through an artificial pathway. Igor Spetic, who lost his hand about five years ago due to a workplace accident, is one of the first patients to receive the artificial hand. Because of his newly acquired treatment, Igor is now able to cut up fruits and vegetables, confidently grip cups, and open bags and containers. Researchers are currently developing a wireless version of this technology, which they hope to have finished within the next five years.

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