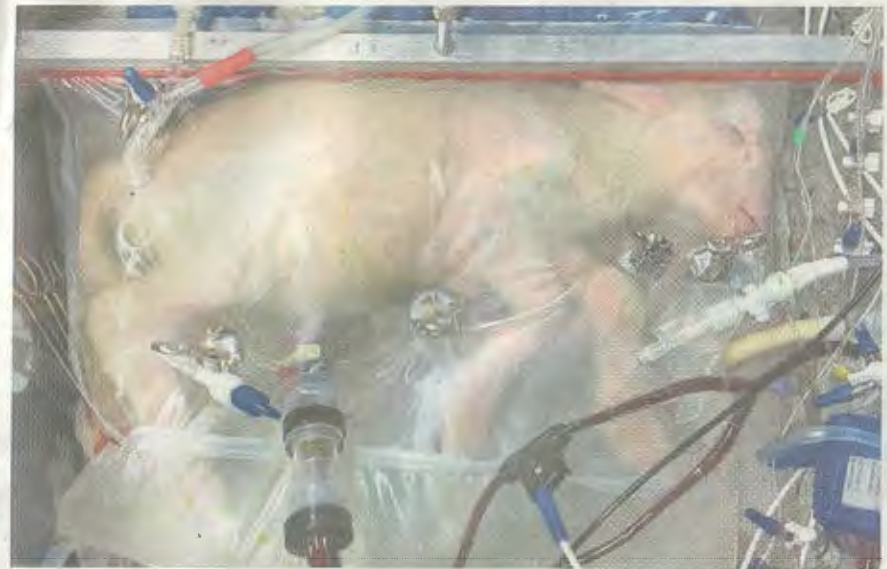


# GROW BAGS FOR BABIES

Synthetic wombs tested on lambs could reduce premature birth risk



A HIGH-TECH plastic bag could save the lives of thousands of premature babies a year by helping them to keep growing.

The artificial womb has been tested on lambs at the same stage of development as a human foetus is at 23 weeks.

The animals spent up to a month in the

by **DANIEL BINNS**

pouches and developed healthily, becoming bigger, growing wool and opening their eyes. Researchers now aim to begin testing the system on babies in three years.

Infants born at 23 weeks typically weigh

little more than 11b and have only a 30-50 per cent chance of surviving. It is hoped the 'grow bags' could dramatically reduce both the number of deaths and the risk that babies will have disabilities and illnesses.

'This system is potentially far superior to what hospitals can currently do for a 23-

week-old baby born at the cusp of viability,' said Dr Alan Flake, one of the research team. 'This could establish a new standard of care for extremely premature infants.'

The bags are designed to replicate the

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# Plastic womb breakthrough 'will never replace pregnancy'

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way that real wombs sustain babies. There is no ventilator or external blood pump because even the most gentle pressure can overload a premature infant's organs.

Instead, the umbilical cord is threaded out of the bag, allowing the heart to naturally pump blood through a placenta-like machine that provides oxygen and nutrients.

The baby floats in an imitation of the amniotic fluid that cushions foetuses in the womb. The fluid and the bag itself provide a sealed environment that protects against infection.

The researchers from the Children's Hospital of Philadelphia stressed there

was 'no question' of using the technology to grow babies from scratch.

Josephine Quintavalle, from Christian pro-life group CORE, said use of the bags would need tight regulation.

But she added: 'If used wisely and ethically this would certainly seem like a positive pro-life initiative.'

A recent report showed almost 5,700 UK babies died before, during or after birth in 2013 – in many cases because of complications from being premature.

The tests on six lambs were stopped after four weeks because of regulations, but the researchers believe they would have kept developing if left in the bags.

Most were humanely killed to allow study of their organs but one that was allowed to live reached a year old.

## HOW IT WORKS... MIMICKING MUM'S TUMMY

