Scientists are cautiously optimistic after a trial HIV vaccine has shown promising results in initial testing. A study published in medical journal The Lancet examined the effects of the vaccine in test subjects, who were chosen from 12 HIV clinics in East Africa, South Africa, Thailand and the US.

Seven groups were given different combinations of the vaccine, while one group was administered with a placebo. All subjects who received a vaccine responded by producing some form of immune response against HIV during the course of testing. A side-study carried out by researchers tested strains of the vaccine on rhesus monkeys for resistance against the simian-human immunodeficiency virus, a disease similar to HIV that affects monkeys. The most effective vaccine combination was found to protect 67 per cent of monkeys used in the trial against the virus.

As the tests were deemed successful, a second round of trials is now taking place on a group of 2,600 women in sub-Saharan Africa. Dr Dan H Barouch, principal investigator on the study and a professor at Harvard Medical School, said he was “pleased” with the research, but urged the results should be treated with caution.

“I would say that we are pleased with these data so far, but we have to interpret the data cautiously,” he told CNN. “We have to acknowledge that developing an HIV vaccine is an
unprecedented challenge, and we will not know for sure whether this vaccine will protect humans.”

Close to 37 million people worldwide are thought to be living with either HIV or Aids, of which more than two million are children. According to UNAIDS, the joint United Nations programme on HIV and AIDS, an estimated 1.8 million people worldwide become newly infected with the virus each year – roughly 5,000 new cases every day. Although HIV treatments have become exponentially better since the disease was officially identified in the early 1980s, a vaccine has proved elusive. Prep, or pre-exposure prophylaxis, can prevent HIV being transferred sexually between partners, with experts suggesting it could prevent one in four cases. However, the drug must be taken regularly, unlike a vaccine, in order to prevent the user contracting the virus.