

IVF prediction calculator to provide accurate potential pregnancy reading

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Researchers have produced a calculator which gives the most accurate reading yet on the potential success of IVF treatment.

The team from the University of Glasgow and the University of Bristol analysed the details of more than 144,000 IVF cycles to produce a [statistical model](#) which gives a prediction of live birth which is up to 99 per cent accurate.

Using data held by the Human [Fertilisation](#) and Embryology Authority, which regulates IVF in the UK, the researchers looked at all cycles carried out between 2003 and 2007 and assessed the chances of having a live birth.

Professor Scott Nelson, Muirhead Chair of Reproductive and Maternal Medicine at the University of Glasgow, said: “Essentially, these findings indicate that treatment-specific factors can be used to provide infertile couples with a very accurate assessment of their chance of a successful outcome following IVF.

“It provides critical information on the likely outcome for couples deciding whether to undergo IVF – up until now estimates of success have not been reliable. The result of this study is a tool which can be used to make incredibly accurate predictions.

“As is commonly known, not every attempt at IVF is successful. In the US and the UK, IVF is successful in about a third of women under 35

years old but in only 5 per cent to 10 per cent of women over the age of 40. However, there are many other factors in addition to age which can alter your chance of success and clinics don't usually take these into account when counselling couples or women.”

Debbie Lawlor, Professor of Epidemiology at the University of Bristol said: “This study assessed the extent to which the characteristics of infertile couples and the treatment they receive can be used to predict [live birth](#) after IVF. It looked at a large number of different factors which can influence the outcome of an IVF cycle.

“The IVF calculator is not only of use to the couples themselves but also to health care funders like the NHS to ensure appropriate use of resources.

“The sheer scale of the data which we analysed is the key to the accuracy of this model. The more data you look at, the more accurate the predictions become.”

The free calculator has been made available on the website www.ivfpredict.com and is also in the process of being turned into a smart phone app, to make the information as widely accessible as possible.

The findings, which are published in the *Public Library of Science*, were welcomed by Professor Gordon Smith, Head of the Department of Obstetrics and Gynaecology at Cambridge University.

He said: “There is a real need in medicine to try and replace general statements such as ‘high risk’ and ‘good chance’ with well validated, quantitative estimates of probability, such as we have with Down's syndrome screening.

“This model for predicting the outcome of IVF has exploited a valuable collection of routinely collected data, applies sophisticated statistical modelling and the output provides women considering IVF with an understandable and quantitative estimate of their chances of success. It is a great resource.”

The calculator assesses the woman’s age, number of years trying to get pregnant, whether she is using her own eggs, cause of infertility, number of previous IVF cycles and whether she has previously been pregnant or had a baby to obtain accurate prediction.

Provided by University of Glasgow

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