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# Improved diagnosis for male infertility

25 May 2017 | News

**The Magnetic Resonance Spectroscopy technique, uses powerful magnets and works like radar by firing pulses of energy at the sperm sample inside a purpose built scanner and then listening to the echoed signal by the molecules in response.**

Scientists at the University of Sheffield have developed a new technique to examine human sperm without killing them and helping to improve the diagnosis of fertility problems.

The Magnetic Resonance Spectroscopy technique, uses powerful magnets and works like radar by firing pulses of energy at the sperm sample inside a purpose built scanner and then listening to the echoed signal by the molecules in response. This could help to distinguish between populations of good or poor sperm.

Unlike other more destructive examination methods, the low energy pulses do not damage sperm, meaning they could potentially go on to be used in IVF treatment. This is similar to a technique that doctors use to capture images of cells and tissues inside the body.

The novel approach was pioneered by physicists from the University of Sheffield's Academic Unit of Radiology working together with fertility experts from the University's Academic Unit of Reproductive and Developmental Medicine in the interdisciplinary spermNMR project.

This new development can open up an opportunity to develop a novel biomarker to help with diagnosis or to design specific therapies for men with poor sperm in order to give them a boost.