

Individuals with fertility problems: Primary care assessment and advice Local referral pathways



July ^{2nd} 2019 Vale of York Protected learning time event Dr Catherine Hayden MB ChB, MD, FRCOG Consultant gynaecologist and fertility specialist

THE BIOLOGICAL URGE TO REPRODUCE

1 203 030 CHILDREN ARE BORN EACH DAY WORLDWIDE





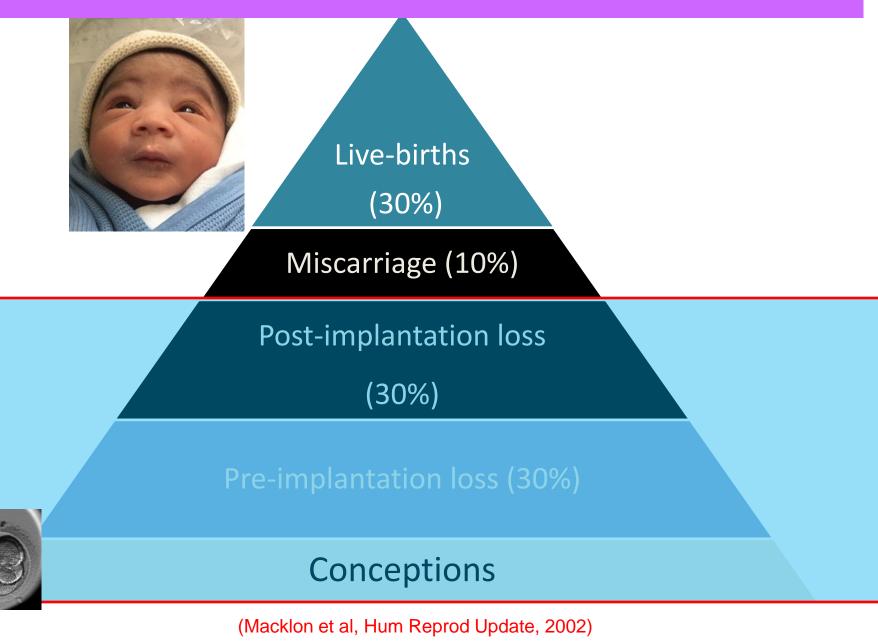
WHAT DOES IT TAKE?



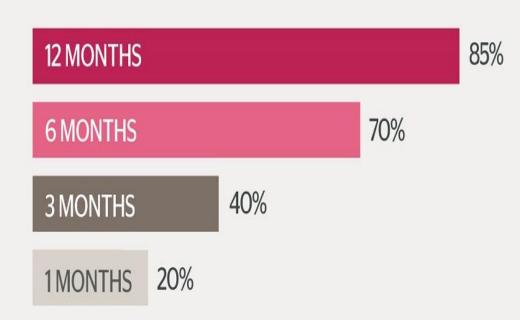
HOW TO MAKE IT HAPPEN?

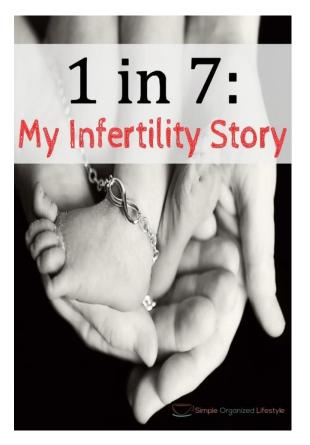


EMBRYO LOSS ICEBERG



NATURAL CHANCES OF CONCEPTION OR NOT?





OVERVIEW

- Definition of infertility
- Causes of infertility
- The 10 minute consultation what to advice?
- Investigations in primary care which tests?
- Local referral pathways when and where to refer?
- Funding
- Leeds Fertility

DEFINITION OF INFERTILITY

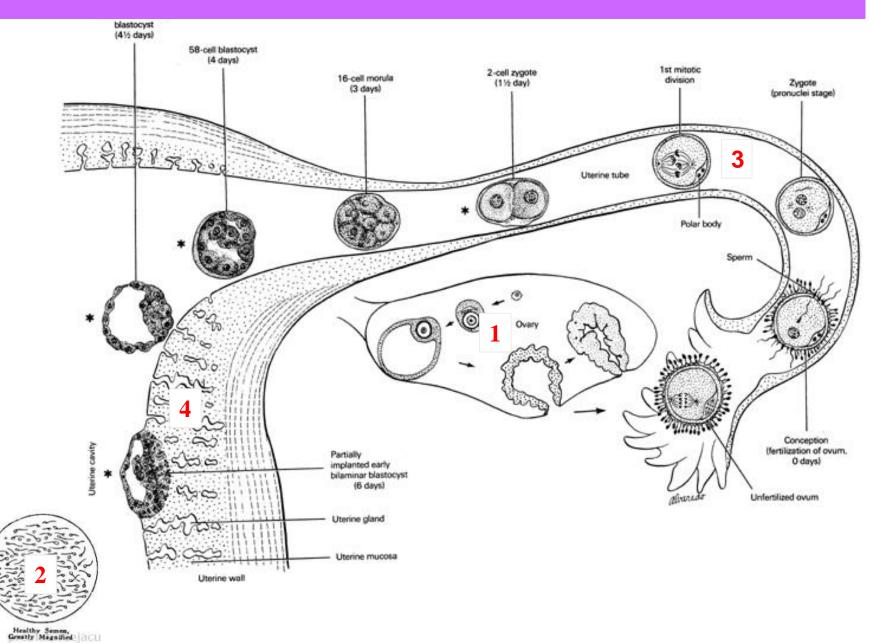
- A disease characterised by the failure to establish a clinical pregnancy after 12 months of regular unprotected intercourse or
- Due to an impairment of a person's capacity to reproduce either as an individual or with his / her partner
- PRIMARY: never had a clinical pregnancy
- SECONDARY: delay conceiving again

The International Glossary on Infertility and Fertility Care, 2017

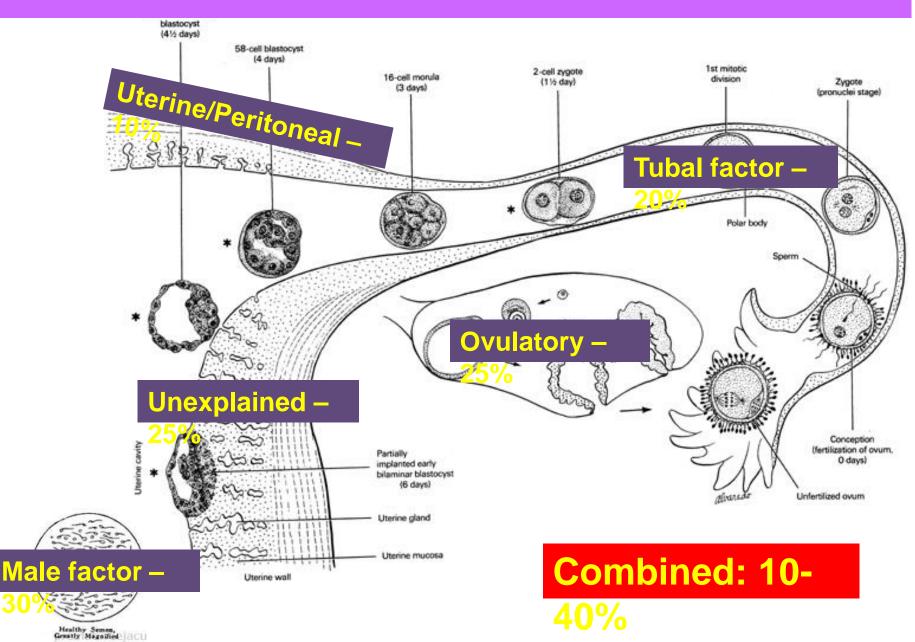
Cros

Fernando Zegers-Hochschild,° G. David Adamson,^b Silke Dyer,^c Catherine Racowsky,^a Jacques de Mouzon,° Rebecca Sokol, ^f Laura Rienzi,⁰ Arne Sunde," Lone Schmidt, ^l Ian D. Cooke, ^J Joe Leigh Simpson,^b and Sherji Van der Poel

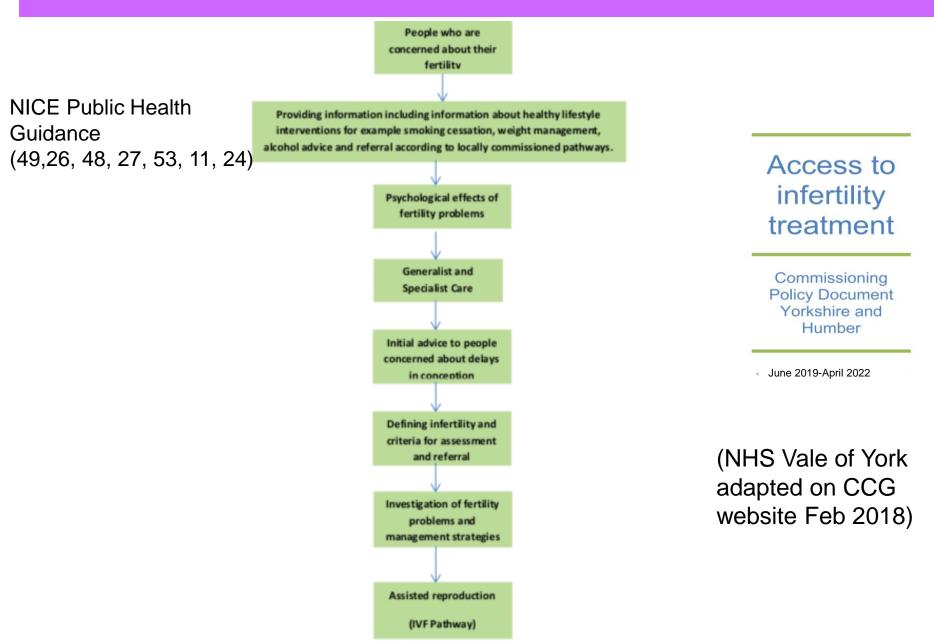
MAIN CAUSES OF INFERTILITY



MAIN CAUSES OF INFERTILITY



PRIMARY CARE ROLE & PATHWAY



INITIAL CONSULTATION AND ADVICE



Both partners are affected by decisions

surrounding investigation and treatment

Partner – male or female?

Duration of difficulty conceiving

Frequency of SI: every 2-3 days



HISTORY

- Age
- Previous pregnancies
- Menstrual cycle details
- Gynaecological symptoms
- Past STIs and PIDs
- Medical illness and surgeries
- BMI

• Age

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- Previous pregnancies
- Medical illness and surgeries
- Past STIs
- Steroid supplements and protein shakes
- BMI

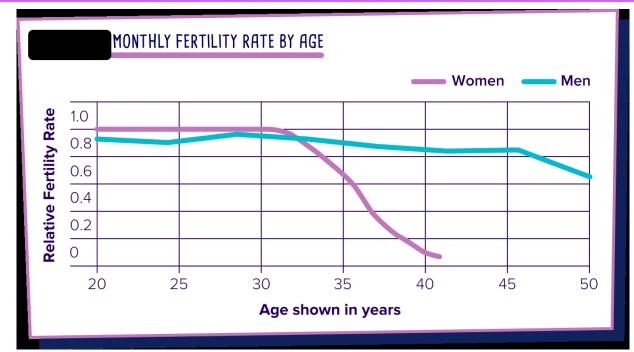
Occupation

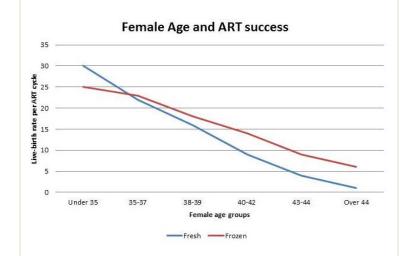
- Alcohol
- Stress

Smoking Caffeinated beverages

Exercise

AGE







TIMING OF SEXUAL INTERCOURSE

- NICE: Timed intercourse is not beneficial, does not increase chance of a natural conception, but can cause stress
- Sexual intercourse every 2-3 days
- Men: Even ejaculation 8 times/week does not reduce fertility

Days in the cycle with the highest chance of getting pregnant

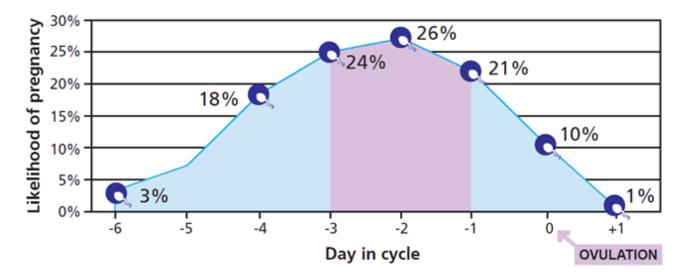


Image adapted from https://britishfertilitysociety.org.uk/fei/when-are-women-men-most-fertile

LIFESTYLE

• Weight

- Under / over weight female reduces chance of spontaneous conception and IVF success
- Obstetric complications rise
- NHS funding for BMI 19-30

Smoking

- Toxic to eggs and sperm
- Passive smoking impact similar
- Flavoured e-cigs linked to sperm damage

Alcohol

- CMO guide to abstain although evidence of harm from light intake is lacking (<6U /w; avoid binge)
- Caffeine
 - Inconsistent association with fertility problems but high Intake linked to reduced IVF success







FOLIC ACID

To reduce the risk of neural tube defects:

400 mcg per day – 3months prior to conception till 12 weeks

5 mg per day till 12 weeks

BMI > 30

Coeliac disease

Diabetes Mellitus

Anti-epileptic medications,

Personal or family history or

previous baby with NTD

5 mg throughout pregnancy

Sickle cell disease

Thalassemia

Thalassemia trait



VITAMIN D

- Male mice bred to lack vitamin D receptors had lower sperm counts & the females had abnormal ovary function.
- Women: balance sex hormones & regulate menstrual cycle
- Men: increase sperm quality and testosterone levels
- Lack of vitamin D is linked to lower birth rates after fertility treatment



Recent

 BFS Chair responds to Daily Mail investigation into gender selection

Jul 21 2016

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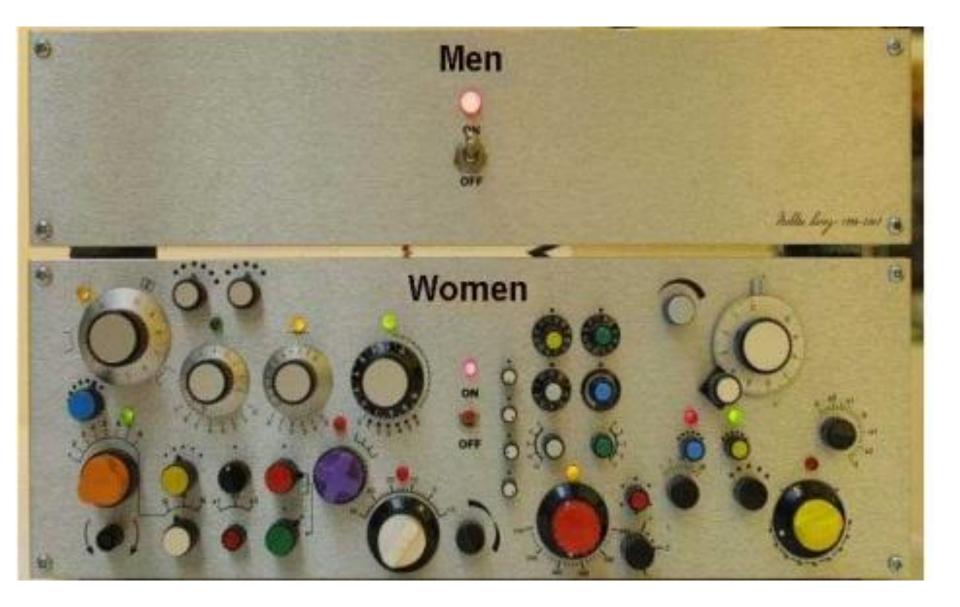
BFS statement on new guidance on vitamin D supplementation

Today Public Health England (PHE) published new advice on vitamin D supplementation. This advice is based on the recommendations of the Scientific Advisory Committee on Nutrition (SACN) following its review of the evidence on vitamin D and health.

There has been increasing information in recent years about the important role of vitamin D for healthy reproduction. The new guidance from PHE indicates that the general UK population (aged 4y and above) require a daily intake 10 µg/d (400 IU/d) and this includes pregnant and lactating women. It is therefore very important that women attending fertility clinics should be advised to take preconception vitamin D supplements alongside folic acid. Consideration should also be taken for the formal measurement of vitamin D levels, especially in high risk groups.

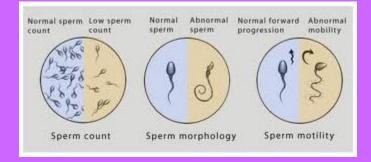
8th Oct 2018

INITIAL WORK-UP



MALE WORK-UP

- Early morning urine sample for Chlamydia and Gonococcus
- Volume \geq 1.5 ml
- pH ≥ 7.2
- Concentration ≥ 15 million / ml
- Total sperm number ≥ 39 million per ejaculate
- Total motility ≥ 40%
- Progressive motility ≥ 32%
- Vitality \geq 58%
- Morphology $\geq 4\%$





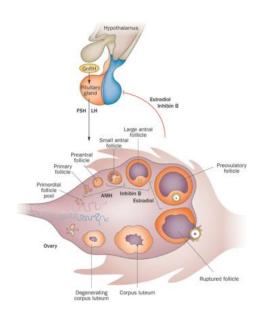
MALE WORK-UP

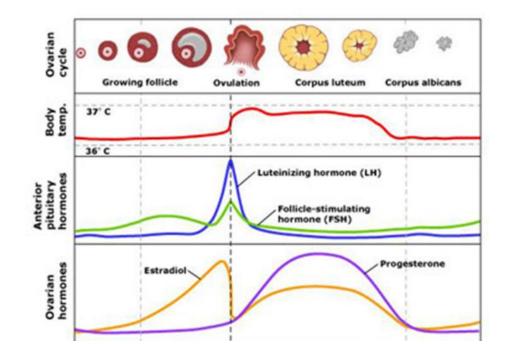
Incentration ≥ 1[±] semen analysis in 3 months Total spermatory semen analysis or severe oligozoosper 5[±] Confirmatory and a severe oligozoospere Early morning urine sample for Chlamydia and Ger Exception: azoospermia or severe oligozoospermia • • J0gy ≥ 4% Sperm morphology Sperm motility Sperm count

SEMEN ANALYSIS

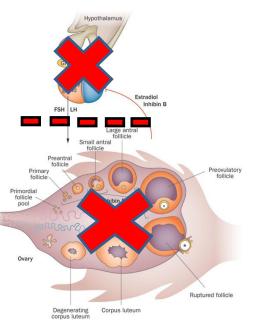
FEMALE WORK-UP

- FSH, LH, Oestradiol (Day 1-5 if regular cycles & random if oligo or amenorrhoea)
- TSH +/- T4
- Serum prolactin, Testosterone/SHBG & HbA1C
 ONLY IF oligomenorrhoea (>35 days) or amenorrhoea
- Serum progesterone (26-35d cycles): 7d before the next period





OVULATORY DYSFUNCTION



- Group I: hypothalamic pituitary failure (hypogonadotrophic hypogonadism)
- Group II: hypothalamic-pituitary-ovarian dysfunction (Polycystic ovary syndrome)
- Group III: ovarian failure



	Group I
FSH/LH	Low / normal
Oestradiol	Low

POLYCYSTIC OVARY SYNDROME (PCOS)

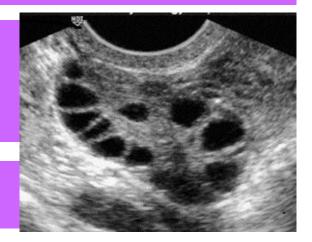
- Commonest endocrine condition in women
- 10-15% prevalence
- PCOM 33% of women
- 80% overweight or obese
- 5-10% weight loss restores fertility



Anovulation

FEMALE WORK-UP

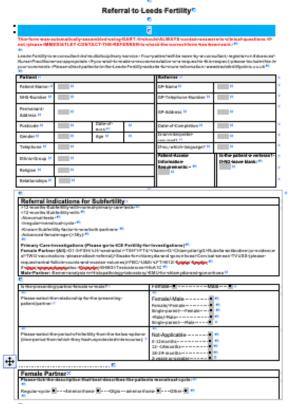
- FBC
- Vitamin D
- Rubella antibodies
- Chlamydia antibodies
- LFT, U&E, HbA1C: co-existing medical disease or risk of occult DM
- HIV, Hepatitis B & C and Syphilis positive history or high risk
- Swabs for chlamydia and gonococcus
- Cervical smears
- Pelvic scan pelvic pathology and AFC



NICE GUIDELINES

- A woman of reproductive age who has not conceived after L year of unprotected vaginal sexual intercourse, in the absence of any known cause of infertility, should be offered further clinical assessment and investigation along with her partner
- Offer an early referral
 - Women aged \geq 36 years
 - Known clinical cause for infertility
 - History of predisposing factors for infertility
 - Before interventions that could lead to infertility
 - Unable or would find it difficult to have vaginal intercourse

Leeds electronic referral



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Funding

- Yorks and Humber Access Policy
 - Shared Commissioning Policy document updated June 2019 informs CCGs who is eligible for specialist fertility services not how many cycles of treatment are to be paid for (local decisions)
 - New equitable criteria include same sex partners from the start (DIUI, then DIVF if needed), transgender couples
 - Demonstration of smoke-free status x > 3/12
 - New rules for overseas visitors: infertility investigations not covered (nor treatment)

Access to infertility treatment

Policy Document Yorkshire and Humber

Commissioning

January 2017- January 2020

Funding VoY

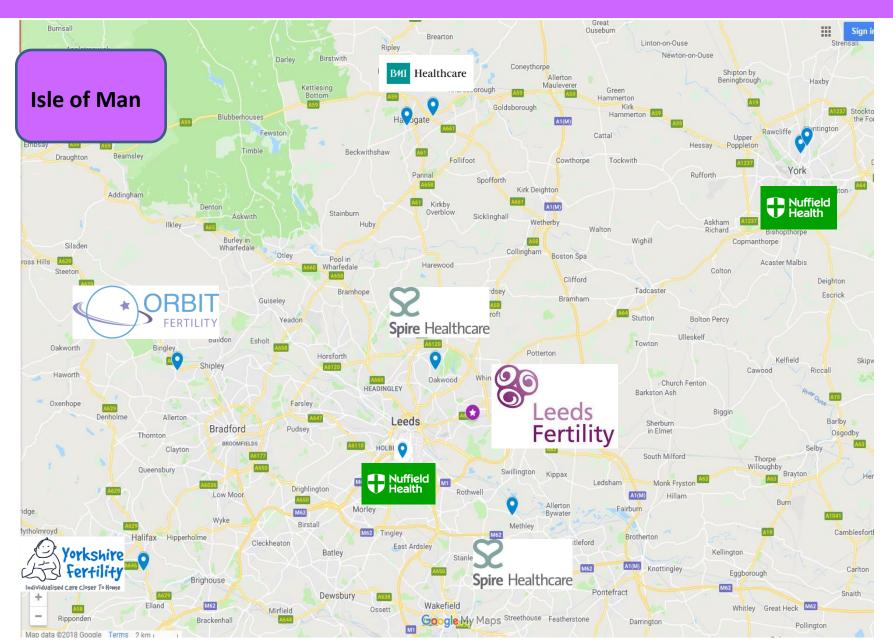
Access to infertility treatment

Commissioning Policy Document Yorkshire and Humber (NHS Vale of York CCG adapted)

Published February 2018

- Feb 2018 updated in line with Yorks and Humber (expect summer 2019 revision)
 - After **2y trying** together: **One cycle** (stimulation to egg harvest and transfer of all resulting good embryos until livebirth or exhausted – likely max 4 attempts)
 - 23-42y 0 days, stable cohabiting couple >2y, no living child incl adopted
 - BMI ≤ 29.0 x 6/12, both non-smokers 6/12 confirmed by CO test <5</p>
 - ovarian reserve in 40-42y olds must be satisfactory
 - FSH <9IU/I, or AFC >4, or AMH <5pmol/l
 - No previous NHS-funded IVF in either partner

LEEDS FERTILITY HUB



LEEDS FERTILITY





 Multi-disciplinary team of 5 reproductive medicine sub-specialists, a consultant andrologist, Scientists, Fertility Nurses, Embryologists, Sonographers and dedicated specialist fertility counsellors, and admin support team

LEEDS FERTILITY



- One of the largest & comprehensive fertility services in the UK
 - OI, IUI, IVF, ICSI, FET & SSR
 - Donation of eggs, sperm and embryos
 - Surgery: fibroids, ovarian cysts, endometriosis & tubal disease
 - Fertility preservation (men, women & trans-community)
 - Pre-implantation genetic Testing
 - Surrogacy
 - Outpatient Hysteroscopy
 - 2-D & 3-D scans
 - HyCoSy & Saline-infusion sono-hysterography











www.leedsfertilityclinic.co.uk