FUNCTIONAL FERTILITY

FUNCTIONAL
MEDICINE
SERVICES

ABOUT US

WHY FUNCTIONAL FERTILITY?

- Functional medicine focuses on optimising HEALTH
- Infertility is an umbrella term
- Health (and fertility) is not a final destination

INFERTILITY

INFERTILITY

- The absence of conception after 12 months of regular, unprotected intercourse.
- 85% of couples with normal fertility will conceive within 1 year of trying
- “Wait till it gets worse”
- “Unexplained infertility”
- Infertility is not just a hormonal problem. It’s a red flag. It is linked to earlier death in men and women & increased risk of certain diseases.
- The incidence of infertility is rising, diverting the attention to environmental factors as genetic causes fail to explain.

INFERTILITY STATISTICS

- Around 17.5% of the adult population – roughly 1 in 6 worldwide – experience infertility (WHO, 2023), with male and female factors accounting almost equally.
- In western countries, sperm counts and testosterone levels are declining. SC declined 52.4% between 1973 and 2011 among men from Western countries, with no evidence of a ‘leveling off’ in recent years.
- Women are experiencing puberty earlier and higher rates of miscarriage.

Levine H, Jørgensen N, Martino-Andrade A, Mendiola J, Weksler-Derri D, Mindlis I, Pinotti R, Swan SH. Temporal trends in sperm count: a systematic review and meta-regression analysis. Hum Reprod Update. 2017 Nov 1;23(6):646-659. doi: 10.1093/humupd/dmx022. PMID: 28981654; PMCID: PMC6455044.

https://doi.org/10.1007/s43032-020-00279-3

WHAT IMPACT DOES INFERTILITY HAVE?

- It doesn’t just affect the couple trying to conceive
- Consider populations that are shrinking, with older people being supported by fewer younger people.
- If the current trend of declining sperm health continues (as it has over the last 4 decades) - what impact will this have on the global population?

TYPES OF PATIENTS

WHO WILL YOU SEE?

- Couple who is planning a pregnancy and looking to optimise preconception health.
- Couple who has been trying for a while, but has not been tested or diagnosed with infertility. Either can’t get pregnant, or recurrent miscarriages.
- Couple diagnosed with infertility & a problem associated with infertility eg. PCOS, endometriosis, thyroid problems, amenorrhea, or sperm issues.
- “Unexplained infertility”
- Wanting support for IVF
- Failed IVF and looking for another approach

WHAT YOU NEED TO DO FIRST

- Rule out anatomical causes
- Do they have a normal menstrual cycle?
- Do they know timing of sex?
- Go after infections & detoxification
- Optimise egg, sperm & uterus
- Optimise implantation & maintaining a healthy pregnancy
- Support health of growing foetus

OTHER FACTORS TO CONSIDER

- Reduce risk of pregnancy complications - gestational diabetes, preeclampsia
- Reduce risk for childhood disorders - obesity, allergies, autism
- Optimise maternal health during pregnancy
- Optimise maternal recovery and reduce risk for postpartum disorders - autoimmune disease eg Hashimotos, gall bladder issues, postnatal depression

OUR GOAL

- Be the first point of call, or at least the middle ground before IVF
- Our responsibility as health professionals to the next generation. We’re doing our future generation a disservice by jumping to ART too soon.
- Time is a factor - which is why these conversations need to happen earlier.
- Sometimes the strategies are so simple - there’s this belief that technology is better or holds more guarantees, which it doesn’t.

THE TRADITIONAL APPROACH

Table 2. World Health Organization 2010 Semen Analysis Reference Guidelines

Characteristic	*Normal reference*
Morphologically normal	4%
Motility (progressive)	32%
Motility (total)	40%
Sperm count	39 million per ejaculate; 15 million per mL
Vitality	58%
Volume	At least 1.5 mL

NOTE: *oligospermia = sperm count < 15 million per mL; asthenozoospermia = < 40% of the sperm are motile; teratozoospermia = normal morphology < 4%. If an individual has all three low sperm conditions, it is known as OAT syndrome, which is typically associated with an increased likelihood of genetic etiology of the infertility. Total motility differs from progressive motility only in the notation of forward movement.*

Information from reference 18.

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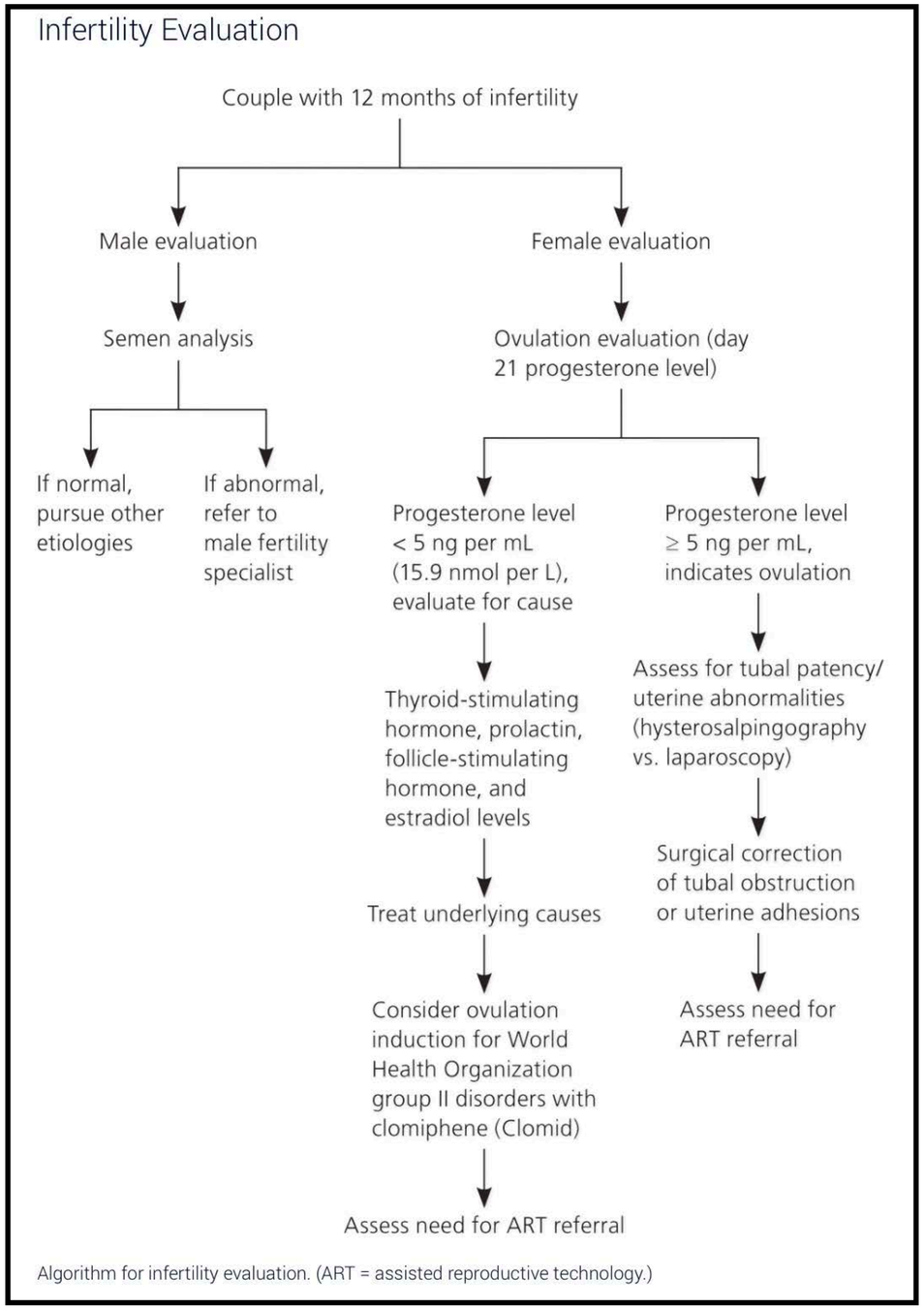


Algorithm for infertility evaluation. (ART = assisted reproductive technology.)

Am Fam Physician. 2015;91(5):308-314

EVALUATION & TREATMENT OF INFERTILITY

- Men should undergo evaluation with a semen analysis. Abnormalities of sperm may be treated with gonadotropin therapy, intrauterine insemination, or in vitro fertilization.
- Ovulation should be documented by serum progesterone level measurement at cycle day 21.
- Evaluation of the uterus and fallopian tubes can be performed by hysterosalpingography in women with no risk of obstruction. For patients with a history of endometriosis, pelvic infections, or ectopic pregnancy, evaluation with hysteroscopy or laparoscopy is recommended. Treatment of tubal obstruction generally requires referral for subspecialty care.

Am Fam Physician. 2015;91(5):308-314

EVALUATION & TREATMENT OF INFERTILITY

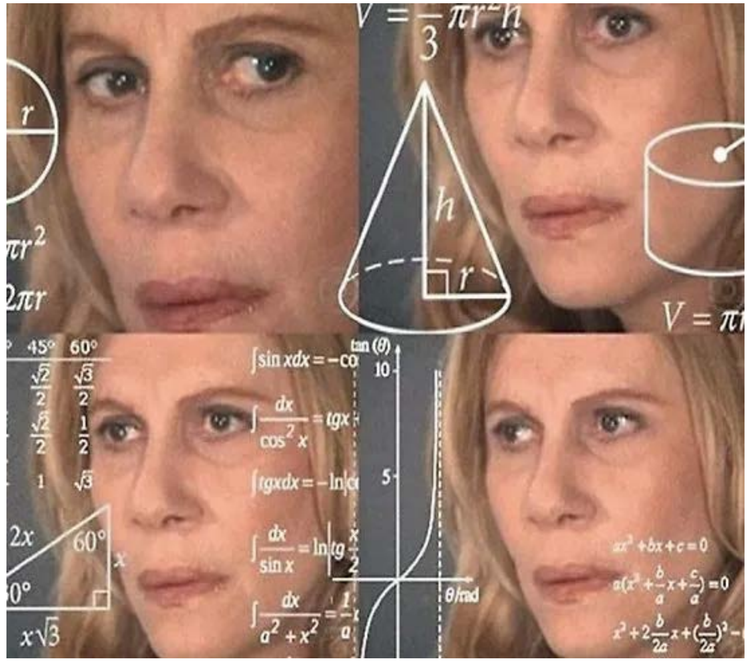
- Women with anovulation may be treated in the primary care setting with clomiphene to induce ovulation.
- Unexplained infertility in women or men may be managed with another year of unprotected intercourse, or may proceed to assisted reproductive technologies, such as intrauterine insemination or in vitro fertilization.

Am Fam Physician. 2015;91(5):308-314

FERTILITY STATISTICS

WHAT ARE THE ODDS?

- The probability of conception in one menstrual cycle is 30%.
- Only 50-60% of all conceptions advance beyond 20 weeks gestation.
- Only 1/3 of conceptions progress to a live birth.



DOI: 10.1056/NEJMra000763, DOI: 10.1186/1741-7015-11-154

HURDLES TO CONCEPTION

- Healthy sperm
- Vaginal microbiome/pH
- Healthy cervical mucus
- Healthy menstrual cycle + ovulation
- Correct timing of intercourse
- Compatibility of sperm & egg
- Proper Implantation
- Placental development
- Hormone balance
- Immune balance