

# YOUR GUIDE FOR A CHILD



Price: Rs 100



ISSN 2279-039X



9 772279 039005



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డాక్టర్ పూర్ణిమ దుర్గా





## Meet Dr Poornima Durga

*MBBS, DNB - Obstetrics & Gynecology  
Medical Director, Chief Consultant at Mom IVF  
& Research Centre, Hyderabad.*  
Certified teaching faculty for Fellowship in In-  
fertility Courses since 2017.

### Awards:

- Iconic Gem of Healthcare 2023
- Best Fertility Consultant Award by Fertility Directory of India - 2021
- Dr APJ Abdul Kalam Memorial Excellency Awards - 2020
- Vaidyashiromani Award - 2018.
- 

### Area of interest:

Thin endometrium, Recurrent implantation failure.

## డాక్టర్ పూర్ణిమా దుర్గాని కలవండి

MBBS, DNB - ప్రసూతి శాస్త్రం &

గౌనకాలజీహైదరాబాద్లోని మామ్ IVF & రిసెర్చ్ సెంటర్లో  
మెడికల్ డైరెక్టర్, చీఫ్ కన్సల్టెంట్.

2017 నుండి ఇన్ఫర్టిలిటీ కోర్సులలో ఫెలోషిప్ కోసం సర్టిఫైడ్  
టీచింగ్ ఫ్యాకల్టీ.

### అవార్డులు:

- ఐకానిక్ జెమ్ ఆఫ్ హెల్త్కేర్ 2023
- ఫెర్టిలిటీ డైరెక్టరీ ఆఫ్ ఇండియా ద్వారా బెస్ట్ ఫెర్టిలిటీ  
కన్సల్టెంట్ అవార్డు - 2021
- డాక్టర్ APJ అబ్దుల్ కలాం మెమోరియల్ ఎక్సలెన్సీ  
అవార్డ్స్ - 2020
- వైద్య శిరోమణి అవార్డు - 2018.

### ఆసక్తి ఉన్న ప్రాంతం:

సన్నని ఎండోమెట్రీయం, పునరావృత ఇంప్లాంటేషన్ వైఫల్యం.





## Services

### Fertility Counseling

Fertility counselling enables couples to talk about their problems and feelings with experts and get proper guidance. It also helps couples to understand the treatment process they are going through or about to go through.

Fertility counselling is a very important aspect of any Fertility Treatment. It can be very important for the patient's physical and mental well-being especially when the couple has been diagnosed with Infertility.

### Ovulation Induction

Ovulation Induction (OI) is one of the most sought-after fertility treatments. In Ovulation Induction process medications are used to cause or regulate ovulation, or increase the number of eggs produced during a cycle, to increase the opportunity for pregnancy, whether normal or assisted.

Ovulation Induction treatment is usually recommended for:

- Women with unexplained infertility.
- Women with long, irregular or infrequent cycles.
- Women who are not spontaneously ovulating.
- Couples with male-factor infertility.

Ovulation Induction consists of three processes:-

**Stimulation:-** In this process the ovaries are stim-

ulated with medication to assist the growth of follicles which produce the eggs.

**Monitoring:-** The ovarian response is monitored via ultrasounds and blood tests to control the quantity and quality of the follicles

**Egg Release:-** An injection of HCG hormone is given to the patient is administered to assist with the maturation and release of the eggs from the follicles

Timed sexual intercourse or IUI (Intra-uterine Insemination) is suggested after the procedure to the couple depending on the severity and situation. The potential fertility improvement OI will yield as a procedure yield may depend upon the woman's age and diagnosis.

### Intrauterine Insemination (IUI)

Intrauterine insemination (IUI) — a type of artificial insemination — is a procedure for treating infertility. As the name suggests IUI is a method of assisted reproduction in which a lab prepared semen sample is deposited inside the woman's uterus. The onus is on to keep the fertilisation process as natural as possible. The deposited sperm is made more effective by increasing its concentration and thus has higher chance of fertilising the egg.

### In-Vitro Fertilization (IVF)

In-Vitro fertilization or IVF is the most effective



and successful assisted reproductive technology procedure giving maximum clinical pregnancy rate.

Unlike the simpler process of artificial insemination — in which concentrated sperm is placed in the uterus and conception is allowed to happen as naturally as possible— IVF involves combining eggs and sperm outside the body in the laboratory.

Once the embryo develops after fertilization then it is placed inside the uterus. The procedure could be done using the parents' own egg or sperm or that of a donor. In case of inability to carry an embryo in the uterus, a gestational carrier (someone who has the embryo implanted inside their uterus) is used.

### **Intracytoplasmic Sperm Injection (ICSI)**

Intracytoplasmic Sperm Injection (ICSI) is a procedure which is done either in accordance with IVF or if IVF does not work. The key difference between IVF and ICSI is how the sperm fertilizes the egg. As the name suggests, in Intracytoplasmic Sperm Injection, a single sperm is directly injected into the egg to maximise the chances of fertilisation. The healthiest and most potent sperm is chosen. In male factor infertility, ICSI has a greater chance of success than IVF.

### **IMSI**

Intra-Cytoplasmic Morphologically Selected Sperm Injection (IMSI) helps magnify the image of the sperm 7,200 times, thereby allowing doctors to pick the best quality sperms. The machine is an advanced version of the earlier technique of Intracytoplasmic Sperm Injection (ICSI), having a magnification capacity of 16 times higher than ICSI. IMSI is a real-time method where sperms are selected just before the microinjection takes place.

### **Blastocyst Transfer**

Blastocyst transfer is a specialised technique used for embryo transfer during the In-Vitro Fertilization (IVF) process. Here, the embryo that is transferred to the uterus is the one which has been cultured to the blastocyst stage. Usually, it takes five days after fertilisation for

the embryo to reach blastocyst stage of development. During normal pregnancy blastocyst stage is when an embryo would normally move out of the fallopian tube and into the uterus.

Once in the uterus, the blastocyst starts to attach to the uterine lining in a process known as implantation.

The advantage of growing eggs up to the blastocyst stage is that it increases the chance of implantation, and the fallout is that very few embryos (30-40%) do reach the blastocyst stage.

### **Oocyte / Gamete Donor Cycle**

Oocyte(egg)/Sperm/Embryo donation collectively known as gamete donation means using eggs, sperm, or embryos from someone else to help intended parents have a child. This is also known as third-party reproduction. This is done in the case where one or both parents are unable to conceive naturally or with assisted reproduction methods due to inherent problems with their sperm/oocytes.

Donors can be chosen by the assent of the parents or can be anonymous. There are societal, ethical, and legal complexities related to third-party reproduction which must be followed.

## **FERTILITY ENHANCING SURGERIES**

### **Hysteroscopy**

Hysteroscopy is an endoscopic procedure used to visualise the inside of the uterus (uterine cavity) by the means of a telescopic camera. The procedure is named after hysteroscope- a thin tube with light on the end which is inserted into the uterus via vaginal cavity.

Hysteroscopy is a very important procedure in assisted reproduction techniques as the implantation of embryo happens in uterine cavity. This procedure helps to identify if there are any intrauterine causes to the infertility. It is also used to diagnose various abnormalities and conditions which can lead to infertility.

### **Laparoscopy**

Laparoscopy is a type of surgical procedure that allows a surgeon to access the inside of the abdomen (tummy) and pelvis without having to make large incisions in the skin. This procedure



is also known as keyhole surgery or minimally invasive surgery. Laparoscopy is used as a diagnostic and therapeutic tool in infertility. The advantage of laparoscopy over other methods of tubal patency procedure is that it allows for corrective procedures or treatments at the same time as the diagnostic procedure. The other advantages are less scarring as the surgical cuts are smaller and a faster recovery time.

### Frozen Embryo Transfer

It means replacing thawed frozen embryos in the womb at the optimum time for implantation. Oral medications and/or minimal number of injections required for endometrial lining preparation. This helps the woman avoid undergoing injections for growth of eggs again.

### Surgical Sperm Retrieval

This technique is used to help couples where the male partner cannot ejaculate sperm. A small number of sperms are obtained directly from the Epididymis or testicles in a small surgical procedure sufficient for IVF treatment. PERCUTANEOUS EPIDIDYMAL SPERM ASPIRATION (PESA):

A Sperm recovery technique where a fine needle is passed through the skin of the scrotum and into the epididymis region of the testes and sperms are withdrawn using gentle suction, retrieving sperm directly from the coiled tubing outside the testicles that store sperm (epididymis) using needle.

### TESTICULAR SPERM ASPIRATION (TESA):

This sperm extraction technique involves the insertion of a needle into the lower region of the testes and aspirating fluid and tissue with negative pressure.

### PGD/PGS

This procedure is required to check the embryos for any genetic conditions that may be passed on to the child. They relate to single gene conditions like cystic fibrosis or sickle anemia. In some cases, parental chromosomes are considered. The couple may not be infertile but the families may have a history of abnormal conditions which can be transmitted genetically. It helps in having a healthy baby, rather than passing on the condition.

## సేవలు

### ఫెల్లిలిటీ కౌన్సెలింగ్

సంతానోత్పత్తి కౌన్సెలింగ్ లొదంపతులు తమ సమస్యలు మరియు భావాలను నిపుణులతో మాట్లాడటానికి మరియు సరైన మార్గదర్శకత్వం పొందడానికి వీలు కల్పిస్తుంది. ఇది జంటలు తమకు చేస్తున్న లేదా చేయబోయే చికిత్స ప్రక్రియను అర్థం చేసుకోవడానికి కూడా సహాయపడుతుంది. ఏదైనా ఫెల్లిలిటీ ట్రీట్‌మెంట్‌లో ఫెల్లిలిటీ కౌన్సెలింగ్ అనేది చాలా ముఖ్యమైన అంశం. రోగి యొక్క శారీరక మరియు మానసిక శ్రేయస్సు కోసం ఇది చాలా ముఖ్యమైనది, ముఖ్యంగా జంట వంధ్యత్వంతో బాధపడుతున్నప్పుడు.

### అండోత్సర్గము ఇండక్షన్

అండోత్సర్గము ఇండక్షన్ (OI) అనేది ఎక్కువ కొరుకునే సంతానోత్పత్తి చికిత్సలలో ఒకటి. అండోత్సర్గము ఇండక్షన్ ప్రక్రియలో ఔషధాలను అండోత్సర్గము కలిగించడానికి లేదా నియంత్రించడానికి లేదా ఒక ఋతు చక్రంలో ఉత్పత్తి అయ్యే

గుడ్ల సంఖ్యను పెంచడానికి, సాధారణమైనా లేదా సహాయం చేసినా, గర్భధారణ అవకాశాన్ని పెంచడానికి ఉపయోగిస్తారు. అండోత్సర్గము ఇండక్షన్ చికిత్స సాధారణంగా సిఫార్సు చేయబడింది:

వివరించలేని వంధ్యత్వం ఉన్న మహిళలు.

దీర్ఘ, క్రమరహిత లేదా అరుదైన ఋతు చక్రాలు కలిగిన స్త్రీలు.

సహజంగా అండము విడుదల కాని స్త్రీలు.

పురుష-కారక వంధ్యత్వం ఉన్న జంటలు.

అండోత్సర్గము ఇండక్షన్ మూడు ప్రక్రియలను కలిగి

ఉంటుంది:-

స్టిమ్యులేషన్:- ఈ ప్రక్రియలో అండాశయాలు గుడ్లను ఉత్పత్తి చేసే ఫోలికల్స్ పెరుగుదలకు సహాయపడటానికి మందులతో ప్రేరేపించబడతాయి.

పర్యవేక్షణ:- ఫోలికల్స్ పరిమాణం మరియు నాణ్యతను

నియంత్రించడానికి అల్ట్రాసౌండ్లు మరియు రక్త పరీక్షల ద్వారా

అండాశయ ప్రతిస్పందన పర్యవేక్షించబడుతుంది.

అండం విడుదల:- ఫోలికల్స్ నుండి అండం పరిపక్వత



మరియు విడుదలకు సహాయపడటానికి రోగికి HCG హోర్మోన్ యొక్క ఇంజెక్షన్ ఇవ్వబడుతుంది. ఈ ప్రక్రియ తర్వాత తీవ్రత మరియు పరిస్థితిని బట్టి జంటకు సమయానుకూల లైంగిక సంపర్కం లేదా IUI (ఇంట్రా-యూటర్స్ ఇన్సెమినేషన్) సూచించబడుతుంది. సంభాష్య సంతానోత్పత్తి మెరుగుదల ఈ ప్రక్రియ అనేది స్త్రీ వయస్సు మరియు వ్యాధినిర్ధారణపై ఆధారపడి ఉంటుంది.

గర్భాశయంలోపల శుక్రకణాలను ప్రవేశపెట్టుట (IUI) ఒక రకమైన కృత్రిమ గర్భధారణ - వంధ్యత్వానికి చికిత్స చేసే ప్రక్రియ. పేరు సూచించినట్లుగా IUI అనేది సహాయక పునరుత్పత్తి పద్ధతి, దీనిలో ప్రయోగశాలలో శుద్ధి చేయబడిన వీర్యకణాలను స్త్రీ గర్భాశయంలో విడుదల చేస్తారు. ఫలదీకరణ ప్రక్రియను సాధ్యమైనంత సహజంగా ఉంచాల్సిన బాధ్యత ఉంది. విడుదల చేయబడిన వీర్యకణం దాని యొక్క సంఖ్యను పెంచడం లేదా కేంద్రీకృతం చేయడం ద్వారా మరింత ప్రభావవంతంగా తయారవుతుంది మరియు తద్వారా అండమును ఫలదీకరణం చేసే అవకాశం ఎక్కువగా ఉంటుంది.

ఇన్-విట్రో ఫెల్లిటైజేషన్ (IVF) ఇన్-విట్రో ఫెల్లిటైజేషన్ లేదా IVF అనేది గరిష్ట క్లినికల్ గర్భధారణ రేటును అందించే అత్యంత ప్రభావవంతమైన మరియు విజయవంతమైన సహాయక పునరుత్పత్తి సాంకేతిక ప్రక్రియ. IVF అనేది ప్రయోగశాలలో శరీరం వెలుపల అండం మరియు శుక్రకణాలను కలపడం ద్వారా ఫలదీకరణం తర్వాత పిండం అభివృద్ధి చెందిన తర్వాత అది గర్భాశయం లోపల ఉంచబడుతుంది. తల్లిదండ్రుల సాంత అండం, శుక్రకణం లేదా దాత యొక్క అండం, శుక్రకణం ఉపయోగించి ప్రక్రియ చేయవచ్చు. గర్భాశయంలో పిండాన్ని మోయలేనప్పుడు, గర్భధారణ క్యాలియర్ (గర్భాశయంలోకి పిండాన్ని అమల్చిన వ్యక్తి -Surrogate) ఉపయోగించబడుతుంది.

ఇంట్రాసైటోప్లాస్మిక్ శుక్రకణం ఇంజెక్షన్ (ICSI) ఇంట్రాసైటోప్లాస్మిక్ శుక్రకణం ఇంజెక్షన్ (ICSI) అనేది IVFకి అనుబంధంగా లేదా IVF పని చేయకపోతే చేసే ప్రక్రియ. IVF మరియు ICSI మధ్య ప్రధాన వ్యత్యాసం ఏమిటంటే, IVF లో శుక్రకణం అండంను ఫలదీకరణం చేస్తుంది. పేరు సూచించినట్లుగా, ఇంట్రాసైటోప్లాస్మిక్ శుక్రకణం ఇంజెక్షన్లో,

ఫలదీకరణ అవకాశాలను పెంచడానికి ఒక శుక్రకణం నేరుగా అండంలోకి ఇంజెక్షన్ చేయబడుతుంది. ఆరోగ్యకరమైన మరియు అత్యంత శక్తివంతమైన శుక్రకణం ఎంపిక చేయబడుతుంది. పురుషుల కారకం గా వున్నా వంధ్యత్వంలో, IVF కంటే ICSI లో విజయానికి ఎక్కువ అవకాశం ఉంది.

### IMSI

ఇంట్రా-సైటోప్లాస్మిక్ మోరోఫోలాజికల్ గా సెలెక్టెడ్ స్పర్మ్ ఇంజెక్షన్ (IMSI) స్పర్మ్ యొక్క ఇమేజ్ ను 7,200 రెట్లు పెద్దదిగా చేయడంలో సహాయపడుతుంది, తద్వారా వైద్యులు అత్యుత్తమ నాణ్యత గల స్పర్మ్లను ఎంచుకోవడానికి వీలు కల్పిస్తుంది. ఈ యంత్రం ఇంట్రాసైటోప్లాస్మిక్ స్పర్మ్ ఇంజెక్షన్ (ICSI) యొక్క మునుపటి సాంకేతికత యొక్క అధునాతన సంస్కరణ, ICSI కంటే 16 రెట్లు ఎక్కువ మాగ్నిఫికేషన్ సామర్థ్యాన్ని కలిగి ఉంటుంది. IMSI అనేది మైక్రోఇన్జెక్షన్ జరగడానికి ముందు స్పర్మ్లను ఎంపిక చేసే నిజ-సమయ పద్ధతి.

### బ్లాస్టోసిస్ట్ బదిలీ

బ్లాస్టోసిస్ట్ బదిలీ అనేది ఇన్-విట్రో ఫెల్లిటైజేషన్ (IVF) ప్రక్రియలో పిండ బదిలీకి ఉపయోగించే ఒక ప్రత్యేక సాంకేతికత. ఇక్కడ, గర్భాశయానికి బదిలీ చేయబడిన పిండం బ్లాస్టోసిస్ట్ దశకు కల్చర్ చేయబడుతుంది. సాధారణంగా, ఫలదీకరణం తర్వాత పిండం బ్లాస్టోసిస్ట్ అభివృద్ధి దశకు చేరుకోవడానికి ఐదు రోజులు పడుతుంది. సాధారణ గర్భధారణ సమయంలో బ్లాస్టోసిస్ట్ దశలో పిండం సాధారణంగా ఫెలోపియన్ ట్యూబ్ నుండి గర్భాశయంలోకి కదులుతుంది. గర్భాశయంలోకి ప్రవేశించిన తర్వాత, బ్లాస్టోసిస్ట్ ఇంప్లాంటేషన్ అని పిలువబడే ఒక ప్రక్రియలో గర్భాశయ లైనింగ్ కు జోడించడం ప్రారంభిస్తుంది. బ్లాస్టోసిస్ట్ దశ వరకు గుడ్లు పెరగడం వల్ల కలిగే ప్రయోజనం ఏమిటంటే ఇది ఇంప్లాంటేషన్ యొక్క అవకాశాన్ని పెంచుతుంది మరియు చాలా తక్కువ పిండాలు (30-40%) బ్లాస్టోసిస్ట్ దశకు చేరుకుంటాయి.

### ఊసైట్ / గేమేట్ డోనర్ సైకిల్

ఊసైట్(అండము)/శుక్రకణము/విరాళాన్ని సమిష్టిగా గామేట్ డోనేషన్ అని పిలుస్తారు అంటే ఉద్దేశించిన తల్లిదండ్రులకు బిడ్డను కనడంలో సహాయపడటానికి వేరొకరి నుండి అండాలు లేదా శుక్రకణాలను ఉపయోగించడం. దీనిని



మూడవ పక్ష పునరుత్పత్తి అని కూడా అంటారు. ఒకరు లేదా ఇద్దరు తల్లిదండ్రులు సహజంగా గర్భం దాల్చలేక పోయినప్పుడు లేదా వారి శుక్రకణం/ఓస్టైట్ తో ఉన్న స్వాభావిక సమస్యల కారణంగా సహాయక పునరుత్పత్తి పద్ధతులతో ఇది జరుగుతుంది. తల్లిదండ్రుల సమ్మతి ద్వారా దాతలను ఎంచుకోవచ్చు లేదా అనామకంగా ఉండవచ్చు. మూడవ పక్ష పునరుత్పత్తికి సంబంధించి సామాజిక, నైతిక మరియు చట్టపరమైన సంక్లిష్టతలు ఉన్నాయి, వీటిని తప్పనిసరిగా అనుసరించాలి.

**సంతానోత్పత్తిని పెంచే శస్త్రచికిత్సలు**  
**హిస్టెరోస్కోపీ**

హిస్టెరోస్కోపీ అనేది టెలిస్కోపిక్ కెమెరా ద్వారా గర్భాశయం లోపలి భాగాన్ని (గర్భాశయ కుహరం) దృశ్యమానం చేయడానికి ఉపయోగించే ఎండోస్కోపిక్ ప్రక్రియ. యోని కుహరం ద్వారా కాంతి తో కూడిన సన్నని గొట్టాన్ని గర్భాశయంలోకి చొప్పించబడే ఈ ప్రక్రియ ను హిస్టెరోస్కోపీ పిలుస్తారు.

పిండం యొక్క అమలక గర్భాశయ కుహరంలో జరుగుతుంది కాబట్టి సహాయక పునరుత్పత్తి పద్ధతులలో హిస్టెరోస్కోపీ చాలా ముఖ్యమైన ప్రక్రియ. వంధ్యత్వానికి గర్భాశయంలోని కారణాలు ఏమైనా ఉన్నాయో లేదో తెలుసుకోవడానికి ఈ ప్రక్రియ సహాయపడుతుంది. వంధ్యత్వానికి దారితీసే వివిధ అసాధారణ పరిస్థితులను నిర్ధారించడానికి కూడా ఇది ఉపయోగించబడుతుంది.

**లాపరోస్కోపీ**

లాపరోస్కోపీ అనేది ఒక రకమైన శస్త్రచికిత్సా ప్రక్రియ, ఇది చర్మంలో పెద్ద కోతలు లేకుండా పొత్తికడుపు (పొట్ట) మరియు పొత్తికడుపు లోపలి భాగాన్ని చేరుకోవడానికి వైద్యులకులకు వీలు పడుతుంది. ఈ ప్రక్రియను కీహోల్ సర్జరీ లేదా మినిముల్టీ ఇన్వాసివ్ సర్జరీ అని కూడా అంటారు. లాపరోస్కోపీ అనేది వంధ్యత్వ రోగనిర్ధారణ మరియు చికిత్స సాధనంగా ఉపయోగించబడుతుంది. ట్యూబల్ పేటెన్సీ ప్రక్రియ యొక్క ఇతర పద్ధతుల కంటే లాపరోస్కోపీ యొక్క ప్రయోజనం ఏమిటంటే ఇది రోగనిర్ధారణ ప్రక్రియ సమయంలోనే దిద్దుబాటు విధానాలు లేదా చికిత్సలను అనుమతిస్తుంది. శస్త్రచికిత్స కట్టు బిన్నుగా ఉండటం వల్ల తక్కువ మచ్చలు కలిగి, వేగంగా కోలుకోవడానికి వీలుపడుతుంది.

**శీతలీకరించిన పిండం బదిలీ:**

ఈ ప్రక్రియ లో గర్భంలో కలిగించిన ఘనీభవించిన పిండాలను ఇంప్లాంటేషన్ కోసం సరైన సమయంలో బదిలీ చేయడం. ఎండోమెట్రియల్ లైనింగ్ తయారీ కొరకు నోటి ద్వారా మందులు మరియు/లేదా తక్కువ సంఖ్యలో ఇంజెక్షన్లు అవసరం పడుతుంది. ఇది స్త్రీ మళ్ళీ గుడ్లు పెరగడానికి ఇంజెక్షన్లు తీసుకోకుండా ఉండటానికి సహాయపడుతుంది.

**సర్జికల్ స్పెర్మ్ లివ్రీవల్:**

మగ భాగస్వామి స్పెర్మ్ స్థలనం చేయలేని జంటలకు సహాయం చేయడానికి ఈ సాంకేతికత ఉపయోగించబడుతుంది. IVF చికిత్సకు సరిపోయే ఒక చిన్న శస్త్రచికిత్సా విధానంలో ఎపిడిడైమిస్ లేదా వృషణాల నుండి కొద్ది సంఖ్యలో స్పెర్మ్లు నేరుగా పొందబడతాయి. పెర్క్యూటేనియస్ ఎపిడిడైమిస్

లో స్పెర్మ్ ఆస్పిరేషన్ (పెసా):స్పెర్మ్ లికవరీ టెక్నిక్, దీనిలో సూక్ష్మమైన సూది స్ప్రింగ్ యొక్క చర్మం గుండా మరియు వృషణాల యొక్క ఎపిడిడైమిస్ ప్రాంతంలోకి పంపబడుతుంది మరియు సున్నిత చూపుణు ఉపయోగించి స్పెర్మ్లు ఉపసంహరించబడతాయి, సూదిని ఉపయోగించి స్పెర్మ్ (ఎపిడి డిమిస్) నిల్వ చేసే వృషణాల వెలుపల చుట్టబడిన గొట్టాల నుండి నేరుగా స్పెర్మ్లు తిరిగి పొందడం. .

టెస్టిక్యులర్ స్పెర్మ్ ఆస్పిరేషన్ (TESA):ఈ స్పెర్మ్ వెలికితీత సాంకేతికత వృషణాల దిగువ ప్రాంతంలోకి సూదిని చొప్పించడం మరియు ప్రతికూల ఒత్తిడితో ద్రవం మరియు కణజాలాన్ని ఆశించడం.

**PGD/PGS**

పిల్లలకి సంక్రమించే ఏవైనా జన్యుపరమైన పరిస్థితుల కోసం పిండాలను తనిఖీ చేయడానికి ఈ ప్రక్రియ అవసరం. అవి సిస్టిక్ ఫైబ్రోసిస్ లేదా సికిల్ సెల్ అనీమియా వంటి ఒకే జన్యు పరిస్థితులకు సంబంధించినవి. కొన్ని సందర్భాల్లో, తల్లిదండ్రుల క్రోమోజోములు పరిగణించబడతాయి. దంపతులు సంతానం లేనివారు కాకపోవచ్చు కానీ కుటుంబాలు జన్యుపరంగా సంక్రమించే అసాధారణ పరిస్థితుల చలత్రను కలిగి ఉండవచ్చు. ఈ పరిస్థితిని రాకుండా, ఆరోగ్య కరమైన బిడ్డను కలిగి ఉండటానికి సహాయపడుతుంది.



# #MomCutiePie



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Printed & Published by Ravi Prakash  
Pathak for Pugmarks Media, from 63/9A,  
South Lokpur, Naini, Allahabad 211008  
and Printed by him at Bhargava Press,  
11/4, Bai ka Bagh, Allahabad 211003.  
Editor: Ravi Prakash Pathak

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**EDITORIAL**

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# You Are Not Alone!

Infertility does not discriminate. The pain, suffering, helplessness and hope is common across religions, ethnicity and borders.

The WHO estimates the overall prevalence of primary infertility in India to be between 3.9 and 16.8 per cent. Estimates of infertility vary widely among Indian states from 3.7 per cent in Uttar Pradesh, Himachal Pradesh and Maharashtra, to 5 per cent in Andhra Pradesh, and 15 per cent in Kashmir. Moreover, the prevalence of primary infertility has also been shown to vary across tribes and castes within the same region in India. Infertility is a serious health issue worldwide, affecting approximately 8%–10% of couples worldwide. Of 60–80 million couples suffering from infertility every year worldwide, probably between 15 and 20 million (25%) are in India alone. According to a report by the World Health Organization (WHO), one in every four couples in developing countries is affected by infertility. The magnitude of the problem calls for urgent action, particularly when the majority of cases of infertility is avoidable.

The main challenges in estimating actual burden of infertility are the paucity of population-based studies and the varying definitions used in the few high-quality published studies.

**"This is no medicine like hope, no incentive so great, and no tonic so powerful as expectation of something tomorrow."**

Orison Swett Marden



02

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HOPE

SNIPPETS : SUGGESTIONS : SUPPORT

# UNPLUGGED

## MEDITERRANEAN DIET NOT ONLY BOOSTS HEALTH, BUT ALSO IMPROVES FERTILITY

With an emphasis on fruits, vegetables and legumes, the Mediterranean diet has long been applauded for its multiple health benefits. Now, new research shows that it may also help overcome infertility, making it a non-intrusive and affordable strategy for couples trying to conceive.

Conducted by Monash University, the University of the Sunshine Coast, and the University of South Australia, the review found that the Mediterranean diet can improve fertility, assisted reproductive technology (ART) success, and sperm quality in men.

Specifically, researchers identified that the anti-inflammatory properties of a Mediterranean diet can improve couples' chances of conception.



## Scientists discover new protein which helps sperm fuse with an egg and could improve fertility treatments

A new protein, named MAIA after the Greek goddess of motherhood, could be crucial in helping doctors better understand some aspects of infertility and develop novel treatments. Currently, infertility is unexplained in more than half of people who are unable to conceive naturally. In the first study of its kind, the international team of researchers led by the University of Sheffield created artificial eggs using thousands of beads. Each of these beads had a different piece of protein, known as a peptide, on its surface so that sperm could bond with them.

When sperm were incubated with the beads scientists found only a small number of beads had sperm attached to them. After several painstaking rounds of removing any beads that didn't have sperm bound to them, researchers were eventually left with beads corresponding to one particular protein -- MAIA -- and sperm bound to all of these beads.

The gene corresponding to MAIA was then inserted into human culture cells, and these became receptive to sperm in the exact way that it would during the natural fertilisation process.



# 40%

OF MEN IN THEIR 40S  
ARE AFFECTED BY ED

# 15%

OF MEN WITH ED ALSO  
SUFFER FROM PERI-  
ODONTITIS—A SEVERE  
FORM OF GUM DISEASE

# 75%

OF MEN WITH DIABETES  
WILL EXPERIENCE AT  
LEAST SOME DEGREE OF  
ERECTILE DYSFUNCTION

**MOST MEN WITH ED  
DON'T ACTUALLY HAVE  
ED:** Older men are more  
likely to suffer from erec-  
tile dissatisfaction than  
erectile dysfunction. This  
means that getting and  
keeping an erection has  
become more difficult  
and is more frustrating  
than it once was, but it's  
not impossible.

## COULD IMPOTENCE BE IN YOUR GENES?

*Scientists report they have uncovered the first evidence that erectile dysfunction may have genetic underpinnings.*

In the study, the researchers analyzed data from hundreds of thousands of men. The investigators found gene variations in a specific spot in the human genome near the SIM1 gene that are significantly associated with an increased risk of impotence.

"Identifying this SIM1 locus as a risk factor for erectile dysfunction is a big deal because it provides the long sought-after proof that there is a genetic component to the disease," said study author Eric Jorgenson. He's a research scientist at Kaiser Permanente Northern California's division of research.

"Identifying the first genetic risk factor for erectile dysfunction is an exciting discovery because it opens the door for investigations into new, genetic-based therapies," he added in a Kaiser news release.

Erectile dysfunction is a common condition among older men and is linked to many causes, such as neurological, hormonal and vascular factors. There are treatments that target these factors, but many men don't respond to them. Genetics are believed to play a role in about one-third of erectile dysfunction cases, but this is the first time that researchers have connected a specific genomic location with the disorder.

The study was published in the journal *Proceedings of the National Academy of Sciences*. According to study co-author Dr. Hunter Wessells, "This study points to a new research direction for erectile dysfunction that could help us identify other key genetic variants that trigger the disease and lead to investigations to better understand the precise mechanisms by which they operate." Wessells is chair of urology at the University of Washington School of Medicine.

"Hopefully, this will translate into better treatments and, importantly, prevention approaches for the men and their partners who often suffer silently with this condition," he added.

# 75%

OF MEN AFFECTED BY  
ED DO NOT SEEK  
TREATMENT

# 69%

OF MEN AFFECTED BY  
SLEEP APNEA EXPERI-  
ENCE REDUCED SEXUAL  
DESIRE

# 49%

OF MEN AFFECTED BY  
SLEEP APNEA EXPERI-  
ENCE REDUCED SEXUAL  
AROUSAL

## WOMEN'S TEARS - CAUSE FOR ED

In a bizarre experiment, men were instructed to sniff the tears of women. Their sexual interest and arousal were compared with a group of men who had sniffed a salt solution. The tear sniffers were found to be less sexually aroused and to have reduced levels of testosterone.



## BREAKTHROUGH INTO THE CAUSE OF MALE INFERTILITY



Scientists at Newcastle University have identified a new genetic mechanism that can cause severe forms of male infertility. This breakthrough in understanding the underlying cause of male infertility offers hope of better treatment options for patients in the future.

The study, published in Nature Communications, shows that new mutations, not inherited from father or mother, play a major role in this medical condition.

Experts have found that mutations occurring during the reproduction process, when the DNA of both parents is replicated, can result in infertility in men later in life.

"However, our research has found that mutations which occur when the DNA is replicated during reproduction in parents plays a significant role in the infertility in their sons.

"At present, we don't understand the underlying cause in the majority of infertile men, and this research will hopefully increase the percentage of men for whom we can provide answers," said Professor Joris Veltman, Dean of Newcastle University's Biosciences Institute, UK, who led the research which involved patients from Newcastle Fertility Centre and Radboud University Medical Centre in the Netherlands.

## LOW BIRTH WEIGHT AMONG IVF CHILDREN NOT LINKED TO INFERTILITY TREATMENTS

Children conceived through medically assisted reproduction are more likely to be born premature and are at greater risk of being born small than naturally conceived babies, according to new research. However, the study of almost 250,000 U.S. families finds that differences in birth weight and pregnancy term between medically assisted reproduction (MAR) -- including techniques such as IVF treatment, artificial insemination and fertility-enhancing drugs -- and naturally conceived children become insignificant once family circumstances are considered.





## LAGGING CHROMOSOMES AMONG CAUSES OF INFERTILITY

Why do women over 35 have more difficulty getting pregnant? After discovering one of the causes of age-related female infertility, researchers at the University of Montreal Hospital Research Centre (CRCHUM) suggest that it will be possible in the future to improve the quality of the eggs of older patients by intervening on the cell cycle level.

In a study published in the journal *Developmental Cell*, CRCHUM researcher Greg FitzHarris and Aleksandar Mihajlovic, a postdoctoral fellow in his lab and first author of the study, reveal in aged mouse eggs (oocytes) that some chromosomes are slower to move during meiosis, a crucial phase of cell division. These laggards contribute to an uneven chromosomal distribution and therefore to the formation of cells with an abnormal number of chromosomes. This abnormality, called aneuploidy, is one of the major causes of infertility and explains, in part, why older women have difficulty becoming pregnant and carrying a pregnancy to term.

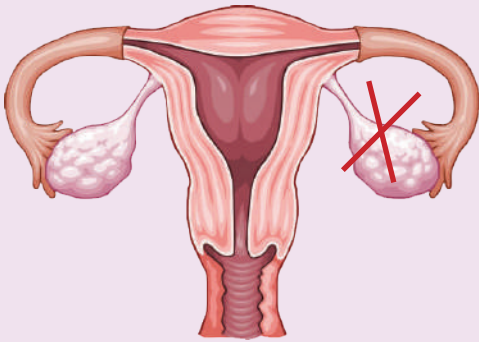


## Minimally invasive treatment could allow more women to conceive without fertility treatments



A simple diagnostic procedure, followed by an interventional radiology treatment known as fallopian tube recanalization, could allow a high percentage of women struggling with infertility from blocked fallopian tubes to conceive with less involved or, in some cases, no further invasive fertility procedures, according to new research to be presented at the Society of Interventional Radiology Annual Scientific Meeting. Researchers said that most women with blocked fallopian tubes could have their condition easily corrected.

"This procedure and treatment can help women make an informed decision about infertility treatments. And for many, it can actually give them the chance to conceive naturally," said Lindsay Machan, MD, associate professor in the Department of Radiology at the University of British Columbia and a lead author of the study.



## Lower chance of pregnancy and childbirth after IVF with one ovary

Women who have had one ovary surgically removed (unilateral oophorectomy) are less likely to become pregnant after in vitro fertilisation and give birth to fewer babies than women with both ovaries. That is according to an extensive meta-analysis published in the journal *Fertility and Sterility* by researchers at Karolinska Institutet in Sweden.

Whether women's fertility is affected by the removal of one ovary has been subject to inconclusive data. It was previously believed that the remaining ovary could compensate for the loss in women undergoing treatment with IVF and researchers at Karolinska Institutet have now interrogated the question through a meta-analysis.

"Our meta-study shows that a successful IVF outcome was less likely in women that have only one ovary, compared with women with both intact ovaries," says Kenny Rodriguez-Wallberg, adjunct professor at the Department of Oncology-Pathology, Karolinska Institutet, and consultant at Karolinska University Hospital. "We have been able to show, for the first time, that the surgical removal of an ovary has an adverse effect on fertility."

## RISK OF BREAST CANCER IN MALES MAY BE ASSOCIATED WITH MALE INFERTILITY



The risk of invasive breast cancer in men may be associated with self-reported infertility in the male partner, finds a study published in the open-access journal *Breast Cancer Research*. The authors interviewed 1,998 males in England and Wales diagnosed with breast cancer, with 112 (5.6%) also self-reporting infertility and 383 (19.2%) having no children.

Breast cancer in males is less common than in females and its relation to infertility has only been investigated in small studies to date. Only one small study has suggested a possible association between men fathering children and breast cancer.

Authors from The Institute of Cancer Research (London, UK) investigated the potential relationship between self-reported infertility or having had no children and the risk of breast cancer in men. Michael Jones and colleagues interviewed 1,998 males (under 80 years old) who were diagnosed with breast cancer between 2005 and 2017 and were living in England and Wales. They were compared with 1,597 males as a control group, who were not blood relatives. Eighty males reported infertility (5.0%) in the control group.

The risk of invasive breast cancer tumors (cancerous cells that spread beyond where they first formed) was significantly associated with male infertility, based on 47 individuals with breast cancer (2.6%) compared to 22 controls without cancer but with self-reported infertility (1.4%).

# 10 Ways to Manage Work Stress for Women

*Women are much more vulnerable and susceptible to workplace stress because of their varied roles.*



*Women who own and manage their own business are also prone to stress. Their high drive for business success cannot always protect them from times of depression and overwork.*

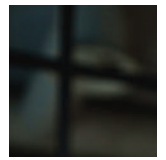
**W**omen are more prone to workplace stress because of the many roles they play in life: as career woman, wife, mother, daughter, and friend. Women work way beyond the 9-5 shift, often having to rush home to cook dinner, help the kids with homework, and prepare the next day's office attire for the hubby. The stress and anxiety caused by endless tasks and impossible deadlines in a high-speed, high-tech world has made women's lives a living web of complexity.

The question is: How can women cope with stress and anxiety? The first step is to dissect the problem and understand how these psychological and emotional conditions make women's lives more difficult.

Stress is a combination of fatigue, restlessness, depression, over-focusing, and over-all gloominess that is a consequence of overwork and other domestic or personal problems. The difficulty of trying to balance time between work and the home has caused many women to suffer from stress.

Personal or relationship issues like divorce or separation have also been the cause of anxiety panic attacks among women. Women who own and manage their own business are also prone to stress. Their high drive for business success cannot always protect them from times of depression and overwork. Career women, on the other hand, have to confront office politics, gender discrimination, sexual harassment, and the fear of being laid-off.

But there's still hope for over-worked, stressed women. Here are some practical ways for women to reduce and manage work-related stress:



**1. Put up relaxing scenes-** It could be a poster or a small painting with beautiful scenery. You can even download screen savers of beaches, waterfalls, clear lakes and other scenes that help create a serene mood.

**2. The To-Do-List-** Use that Post-Its or other stick-on note pads. Color-code your notes and even put up an “alarm” in your computer to remind you of priority tasks. The key is to know what to do first.

**3. Time out -** As they say, “All work and no play makes Jack a dull boy.” Take some time out to take a breather. Do away from reading emails the mostly junk. Do stimulating activities like sudoku or brainteaser. Reading some inspirational books like Chicken Soup for the Soul.

**4. Rearrange your workstation -** Add some “homey” look to your workstation... put up photo frames of your family or favorite pet. When ever you feel stressed out just glance at their happy faces or cuteness - and you'll find yourself smiling back!

**5. When a plant isn't just a plant -** Having a plant around your workplace is good stress relief. Studies show that looking at something green like a plant helps soothe your eyes after facing the computer monitor all day or after reading for a long time. Focusing on a green plant will have a soothing effect.

**6. Exercise -** Walking, climbing the stairs, or going out to run helps fight stress. Physical activity help get rid of tension. During a workout, your body releases endorphins which helps your body to relax. Endorphins also act as natural pain killers. There are a lot of exercise videos that you can use ranging from the standard aerobics to pilates, tae-bo, and a host of other fitness programs.

**7. De-clutter-** A cluttered workstation like pens,pencils, notepads,tons of papers spread around every inch of your work place adds to your stress. Make your work environment more appealing by organizing your things and throwing away things you no longer need.



**8. Set Boundaries-** Communicate and assert yourself, make your co-workers know when you are more available for chit chat.

**9. Go less in your caffeine intake-** caffeine even is popularly known as a stimulant, too much of it adds to stress even leads to depression.

**10. Eat a good breakfast-** Don' skip meals even if you are indeed in a hurry. Studies shows that if you make it a practice to eat breakfast every day, you're body gets more the needed proteins to give you an energy boost to face the working day.

Beat work-related stress without beating yourself up. Learn how to relax. Sure...we have duties and responsibilities but if you don't learn to relax- burn out is what you get! Make an effort to relax. Listen to good music. Try not to smoke. Because if you don't watch out, the results would be infertility...hypertension...depression... and a plethora of other ailments that can side-track your career and home life.



# INFERTILITY

## A Source of MARITAL CONFLICT

Rahul and Mugda were seen by their friends as the perfect couple. They started out as high school sweethearts and were even voted the King and Queen of Hearts during their college festival night. Their sweet, innocent relationship in school became more serious as the years went by. They married soon after finishing college.

The first few months of marriage was nothing but bliss. The couple lived in the proverbial paradise on earth as they enjoyed each other's

company as newlyweds. People would often see them walking hand in hand as they strolled along the beach. They still regularly went out on a movie date just like they used to in high school.

However, on their third year of marriage, things slowly began to change. Friends and family began to wonder why, after three years of marriage, the couple was still childless. Soon enough, Rahul and Mugda also began to feel the pressure and frustration of not having a child to



call their own. The empty nest began to take a toll on their romance as the feelings of incompleteness began to seep in.

Soon after, Mugda began showing signs of obsession about getting pregnant. Ironically, her desire to have a baby caused a rift between her and her husband. Depression cast a dark cloud on their relationship as Mugda developed strong feelings of inadequacy for not having been able to conceive after several years of marriage.

Rahul also had to grapple with his own stress and anxiety about being childless. He would often feel embarrassed about not having any stories about his own child whenever his friends would open up the topic of marriage and family during their regular get-togethers. The couple also found family reunions and other occasions with relatives to be quite awkward. The couple would often be surrounded by children of their siblings and relatives, all time wondering if they would ever have children of their own. Rahul and Mugda always had to dodge questions about the fact that they were still without child.

The worse thing that happened about Rahul and Mugda's relationship is that they slowly began to blame each other. The stress and anxiety in their relationship almost took a toll on their marriage. Far from the almost idyllic relationship they had when they first started as a newlyweds, the couple began to have more and more fights.

A concerned friend mustered enough courage to ask the couple to consider going to a counselor. The couple's friend also advised them to see a doctor who specializes in fertility issues. Fortunately, the couple decided to follow their friend's advice. After a series of tests, the doctor told Rahul and Mugda that she was perfectly capable of conceiving a child. The doctor also advised Rahul to get more sleep and rest periods that would help him improve his sperm count.

Like Rahul and Mugda, many couples experience problems with infertility. In fact, in India alone, an estimated 27.5 million people face infertility challenges every year. About 15 percent of all married couples in India struggle with the issue of being childless, a situation that causes

emotional as well as relational problems.

Infertility is defined by doctors as a condition when a couple fails to attain pregnancy after one year of regular and unprotected intercourse. Under ideal circumstances, the probability that a woman will get pregnant during a single menstrual cycle is only about 30%.

In most cases, infertility is caused by a combination of factors that prevent conception from occurring. Based on recent studies, infertility affects one in 25 Indian men. Infertility cases in men are due to low sperm count or poor sperm quality. In most countries like India, sperm count have been in decline supposedly due to the increased work load and hectic lifestyle of the male population.

With a double-digit increase, infertility has become a personal and public health issue in India. Infertility causes financial and emotional stress for couples and social stigma.

Among men, a few of the most prevalent causes are:

- Varicocele
- Problems ejaculating
- Tumors
- Imbalances in hormones
- Sexual dysfunction
- Infection
- Azoospermia
- Oligospermia
- Some drugs and supplements
- Unhealthy lifestyle

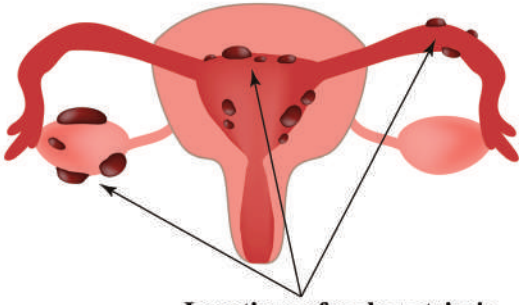
Some of the most typical causes of infertility in women are:

- Polycystic ovary syndrome (PCOS):
- Hypothalamic dysfunction
- Primary ovarian insufficiency
- Prolactin overproduction
- Fallopian tube damage
- Endometriosis
- Causes from the uterus or the cervical region

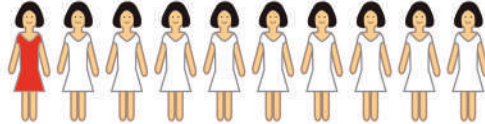


# ENDOMETRIOSIS

## Knowledge is Half the Battle Won



**Locations of endometriosis**



***1 in 10 women of reproductive age (15-49 years) is sick with endometriosis***

***176 million women today suffer from endometriosis***

They say women are blessed with the gift of child bearing. This also means having the burden of monthly periods and everything it entails. It requires doubling the hygiene rituals as disregarding those may cause complications. One of these complications can be endometriosis.

Endometriosis is a common issue for women over 30 who are of reproductive age but have never been pregnant. It is common to an estimated 89 million women but is most often shrugged off as the usual premenstrual syndrome. Though it appears to hit women over 30, it may also affect girls before they even start menstruating. It is said to be caused by excess amounts of estrogen in the body.

The endometrium is a lining of the uterus that separates the myometrium from the uterine cavity. During a woman's menstrual cycle, the uterus sheds off the endometrial lining in the form of a thick, glandular, blood vessel-filled tissue in response to the body's hormone production. Endometriosis may seem similar to a regular menstrual cycle in the sense that the endometrial lining is still sloughed off. However, not all of it is excreted. Instead, some of it gets misplaced and transported to other organs in the pelvic cavity. It may attach itself to the bowel, bladder or small intestines among other organs, causing infection, scarring, and worse - infertility.

The most common symptoms of endometriosis

include: progressive dysmenorrhea; chronic lumbar, pelvic and abdominal pain; dyspareunia (painful intercourse); dyschezia (painful bowel movement) or dysuria (painful urination); menorrhagia (heavy menstrual bleeding); nausea and vomiting, and pre- or intermenstrual spotting.

During menstruation, women usually experience abdominal cramps and tenderness of the breasts. This is said to be due to the estrogen level that fluctuates during that time. However, for people with endometriosis, the pain gets worse over time. This symptom is usually neglected as women often think of it as part of their usual dysmenorrhea attacks. This may well be carried over to experiencing chronic pain, usually on the lower back, pelvic and abdominal areas. As a lot of women experience radiating pain during dysmenorrhea. The pain radiates from abdomen to the lumbar area.

Women with endometriosis also experience dyspareunia, or painful sexual intercourse. There might be an inflammation of the vaginal lining, causing pain upon contact or friction during intercourse.

Once the misplaced endometrial lining attaches itself to your bowel, kidney or bladder, you may experience dyschezia or dysuria. Dyschezia is a condition wherein you experience discomfort while defecating. Dysuria is a condition characterized by painful urination. In both cases you

## Endometriosis and Caffeine

The majority of women who suffer from endometriosis also suffer from estrogen dominance. That is they have more estrogen in their hormonal system than normal, much of it caused by outside environmental factors. This is concerning to medical researchers because estrogen is the primary hormone that causes endometrial cells to reproduce and grow. The more estrogen a woman with endometriosis has the greater the tissue growth will be. One of the outside influences that scientists have studied is caffeine. What they have found is that caffeine causes a rise in estrogen in nearly all women.

It was found in clinical studies that women who drank just one cup of coffee had higher estrogen levels than women who had no coffee. These studies also found that as the women drank more coffee their estrogen levels continued to rise to the point that women who drink four to five cups of coffee a day saw an estrogen increase of almost 70%. Those four to five cups equals around 500 mg of caffeine.

There are three different types of estrogen women produce; estrone, estriol, and estradiol. In further studies caffeine has been shown to increase the third one, estradiol, the highest. This is worrisome because it not only causes endometrial cell growth but high amounts of estradiol are known to cause some forms of cancer. Caffeine is also known to affect other bodily organs in a negative manner. The one organ of the body that removes the bulk of any excess estrogen is the liver. Caffeine interferes with the liver's ability to do this, causing a build up of estrogen. As you can see caffeine causes estrogen dominance in two ways, by causing the body to produce more and also preventing the liver from doing its job of removing any excess as well.

The female body also has a hormone called progesterone that naturally counteracts the effects of estrogen. The adrenal glands produce pregnenolone which in turn produces progesterone. Large doses of caffeine, which the vast majority of women and men consume, continually



bombard the adrenals until they no longer function correctly causing adrenal fatigue. This naturally leads to a decrease in the production of progesterone and over 50 other important hormones. With nothing to buffer it estrogen continues to build up. This whole cycle caused by caffeine leads to estrogen dominance. This excess estrogen intensifies the growth rate of endometriosis and contributes to the many symptoms women with this condition suffer from such as fatigue, bloating, back and neck pain, and depression. The first step to reducing estrogen dominance is to stop the consumption of caffeine in all its forms. Caffeine not only makes endometriosis and its symptoms much worse but it also negatively affects the body's ability to deal with excess estrogen and the affects it has.

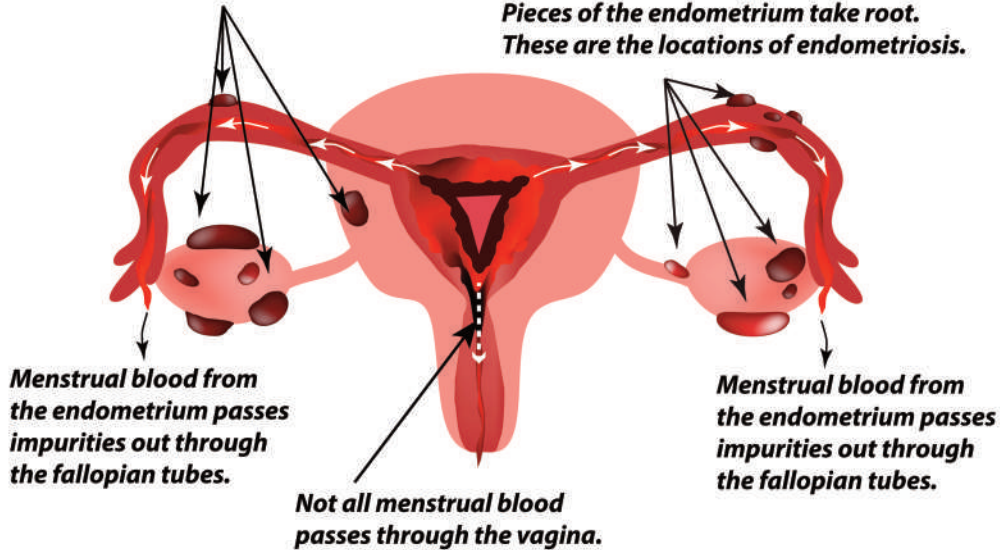
may experience hematochezia or hematuria wherein blood is found in your feces and urine. Difficulty defecating and urinating may cause internal bleeding and, in turn, infection. Menorrhagia, or heavy menstrual bleeding is not something to shrug off. It may manifest itself as prolonged menstrual bleeding, heavy menstrual bleeding, or even both. Some women are used to their periods taking two to three weeks to finish, This symptom is tricky to detect as menstrual cycles differ for every woman. Nausea and vomiting, again a common occur-

rence during dysmenorrhea, are also symptoms of endometriosis. This can also be a sign that misplaced endometrial lining had attached itself onto your gastro-intestinal organs. Premenstrual and inter-menstrual spotting can also be a symptom of endometriosis, and is characterized by blood spots that appear before and in between menstrual cycles. Endometriosis is a progressive condition that will, in the long run, affect a woman's ability to create life. As prolonged, untreated endometriosis may cause the endometrial lining to attach

## The occurrence of endometriosis

**Pieces of the endometrium take root.  
These are the locations of endometriosis.**

**Pieces of the endometrium take root.  
These are the locations of endometriosis.**



## Endometriosis And Cancer

Although Endometriosis affects one out of seven women throughout the world, not much is known about the disease. It occurs when tissue that is usually found inside the uterus appears in other parts of the body. The cause of endometriosis is unknown, though researchers have several theories.

Endometriosis is often compared to cancer since both are characterized by cell invasion and unstrained growth. Other similarities between the two diseases include the development of new blood vessels and the decrease in the number of cells undergoing apoptosis. Doctors have debated

since 1925 and researched the idea that endometriosis transforms into cancer without reaching a conclusion.

Recent research has found a possible connection between endometriosis and cancer. It has been found that women suffering from endometriosis are more susceptible to some forms of cancer including ovarian, endocrine, brain and breast cancer. Although doctors agree that this risk exists, further research is still needed since no conclusive proof has been found.

The studies done so far suggested that the cancer risk for women suffering from endometriosis is only slightly

higher than average. Also women who had a hysterectomy at or before the time endometriosis was diagnosed did not show increased risk of cancer.

The main difference between endometriosis and cancer, of course, is that endometriosis is not deadly, whereas cancer invariably kills unless treated for life. Endometriosis per se can be very painful, and it can be associated with other conditions, such as problems with the pelvis, but it is not cancer. You can get endometriosis treated with pain management, laparoscopic surgery, and/or hormone treatments.



## Endometriosis and Infertility

One cause of infertility is endometriosis, a disease that affects millions of women. This disease appears when tissue similar to the one that can be found inside the uterus is found elsewhere in the body. Endometriosis can be diagnosed in four modes ranging from mild to severe. Women with mild endometriosis are usually fertile, but the disease causes anatomical distortion, especially in its more severe stages. This distortion can cause of infertility if it is severe. The most recent theory says

that women with endometriosis-related infertility lack an enzyme that allows the embryo to attach the uterine wall, which happens in a normal pregnancy. Doctors have different opinions about the link between endometriosis and infertility. Some theories are that it causes infertility by creating hormonal abnormalities, distorting anatomy, altering the pelvic biochemical environment, interfering with sperm function, or influencing the immune system. In conclusion, infertility is one

of the most devastating consequences of endometriosis. This infertility occurs in addition to the pain normally associated with the disease. A woman suffering from infertility caused by endometriosis can sometimes manage to have children. There are treatments for endometriosis, including natural therapies to rebalance hormones, changing the diet to achieve the best health possible, and surgery to correct damage done to reproductive organs. IVF is a solution that can be considered.

itself inside the vagina and to other organs outside the pelvic region. Severe infection may form scar tissues that can block the fallopian tubes and hinder ovulation.

As of now, a sure-fire cure for endometriosis is still being tested. However, modern science has provided us with medications and procedures that may help delay the effects of it. Laser surgery can be made to remove endometrial fragments from where they have attached. Also, there are medications available that will stop the body from producing more estrogen to prevent the endometrial fragments from growing. If you're experiencing the symptoms listed on this article, it is best to visit your gynecologist and have yourself checked.

### Endometriosis Symptoms and Treatments

Endometriosis is a dangerous disease experienced by many women. The symptoms vary from woman to woman, but some common ones are painful, heavy, or irregular periods, fatigue, vomiting, stomach problems, infertility, and pelvic pain.

The most common symptom is pelvic pain. Many women ignore this pain because they think it is simply period pain. This pain usually appears around the normal time of the period, which makes it more difficult to notice. Another problem is the fact that some women actually don't feel this pain at all. Only those that feel this pelvic pain at a time other than the normal period notice it and go to a doctor. The disease

sometimes causes pain during sexual intercourse, most of the times before and after a period. Endometriosis can cause swelling of the lower abdomen and bloody stool during the period or when going to the toilet.

This disease can be treated in several different ways, depending on the level it reached. Pain management and surgery are two of the most common treatments. Pharmaceutical treatments include hormonal treatment using GnRH agonists and danazol (drugs that can cause chemical menopause) and birth control pills that shrink endometriosis lesions by stopping ovulation. Unfortunately, the disease can recur after patients stop using hormone therapy. The most common method of treatment is laparoscopic surgery. The foreign tissue can be removed and organs that may be damaged can be reconstructed and this method can also solve the problem of infertility. In some more severe cases a laparotomy can be used and in even fewer, more serious cases, a hysterectomy may be required. This involves the removal of the uterus and ovaries and leads to surgical menopause. It is very important that women understand what surgery treatments involve before choosing what to do.

Other treatments that have worked include nerve blocks, acupuncture, herbal remedies, aromatherapy, dietary modifications, vitamins, immunotherapy, and others. It is vital to be cautious and informed before deciding what to do.



# PHYSICALLY DEMANDING WORK TIED TO HIGHER MALE FERTILITY

A new study from researchers from Brigham and Women's Hospital, a founding member of the Mass General Brigham health-care system, suggests that men who regularly lift heavy objects at work have higher sperm counts. The study, published in *Human Reproduction*, is part of the Environment and Reproductive Health (EARTH) cohort, a clinical study which aims to explore how exposure to environmental chemicals and lifestyle choices affect reproductive health.

"We already know that exercise is associated with multiple health benefits in humans, including those observed on reproductive health, but few studies have looked at how occupational factors can contribute to these benefits," said first author Lidia Mínguez-Alarcón, a reproductive epidemiologist in Brigham's Channing Division of Network Medicine and co-investigator of the EARTH study. "What these new findings suggest is that physical activity during work may also be associated with significant improvement in men's reproductive potential." The researchers found that men who reported often lifting or moving heavy objects at work had 46% higher sperm concentration and 44% higher total sperm count compared to those with less physical jobs. Men who reported more physical activity at work also had higher levels of the male sex hormone testosterone and, counterintuitively, the female hormone estrogen. While the current study found a relationship between physical activity and fertility in men seeking fertility treatment, it will take further research to confirm if these findings hold true for men from the general population.

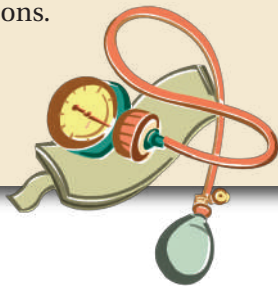
## STRESS DURING EARLY PREGNANCY LINKED TO REDUCED REPRODUCTIVE FUNCTION IN MALE CHILD

Stress during early pregnancy is linked to reduced reproductive function in male offspring. Research has shown that the first few months of pregnancy is when male reproductive organs are at their most vulnerable stage of development. This current study of 643 young men aged 20 found that those who were exposed to at least one stressful life event during early gestation (0-18 weeks) had worse sperm quality and lower testosterone concentrations than those who were not exposed, or who were exposed during later gestation, between 18-34 weeks.

## FROZEN EMBRYO TRANSFERS LINKED WITH HIGH BLOOD PRESSURE RISKS IN PREGNANCY

In vitro fertilization (IVF) using frozen embryos may be associated with a 74% higher risk of hypertensive disorders in pregnancy, according to new research published today in *Hypertension*, an American Heart Association journal. In comparison, the study found that pregnancies from fresh embryo transfers -- transferring the fertilized egg immediately after in vitro fertilization (IVF) instead of a frozen, fertilized egg - and pregnancy from natural conception shared a similar risk of developing a hypertensive disorder.

High blood pressure during pregnancy often signals preeclampsia, a pregnancy complication including persistent high blood pressure that can endanger the health and life of the mother and fetus. In the population analysis, women whose pregnancy was the result of a frozen embryo transfer were 74% more likely to develop hypertensive disorders in pregnancy compared to those who conceived naturally. Pregnancies from fresh embryo transfer did not have a higher risk of developing hypertensive disorders compared to natural conception, neither in population level analysis nor in sibling comparisons.



## Weight loss before fertility treatment may not increase births for obese women

Health care professionals often encourage women with obesity to lose weight prior to trying to conceive or start infertility treatments. But a new nationwide study led by Penn State College of Medicine found that women with obesity and unexplained infertility who lost weight prior to starting infertility treatments did not have a greater chance of having a healthy baby than those who did not lose weight prior to starting therapy. Dr. Richard Legro, professor and chair of the Department of Obstetrics and Gynecology at Penn State Health Milton S. Hershey Medical Center, led a multi-center National Institutes of Health sponsored study of more than 300 women with obesity and unexplained infertility to evaluate whether targeted weight loss prior to fertility treatments could increase their likelihood of delivering a healthy baby.

According to Legro, the results add to a growing body of evidence that healthy births are not more likely to occur in women with obesity who lose weight prior to starting infertility treatment than those who have not lost weight prior to conception.

"Although it differs from current clinical standards of care, there's just not enough evidence to recommend preconception weight loss in women with obesity and unexplained infertility," Legro said.

While it may not increase a woman with obesity's chances of delivering a healthy baby, the researchers noted there may be other health benefits for these women if they lose weight. Some of the women in the weight loss group had decreased blood pressure and a reduction in waist circumference.





# top tips for IVF SUCCESS

IVF is a common method of assisted reproduction in which the egg and sperm of an infertile couple are fertilized in vitro and two or more healthy embryos are transferred to the mother's uterus for further development. The chance of IVF success in women younger than 35 ages is between 35% and 40%, while as the mother gets older, the chance of IVF success decreases.

In addition to age, lifestyle improvements also increase the chances of IVF success.





### TAKE A PROPER DIET

Various studies show that having a Mediterranean diet, 6 months before the start of the IVF cycle, can help improve treatment outcomes and increase the chance of successful IVF by about 50% to 60%.

- Include fresh vegetables and fruits of various colors in your diet.
- Eat more chicken and fish protein.
- Eat whole grains and quinoa.
- Add legumes such as beans, peas, and lentils to your diet.
- Eat a balanced amount of healthy fats such as avocados, olive oil, and nuts.
- Eat red meat only once a week or three to four times a month.
- Avoid sugar, processed and pre-packaged foods.

### WATCH YOUR WEIGHT AND EXERCISE

Research shows that mothers who have a good BMI and exercise have a better uterus for pregnancy. Obesity (BMI > 35) and being underweight (BMI < 19) increase the time of conceiving by 2 and 4 times, respectively. Therefore, being overweight and underweight both negatively affect the success of IVF.

### AVOID EXCESSIVE CONSUMPTION OF CAFFEINE

Some research shows that drinking 5 or more cups of coffee a day can reduce the chance of successful IVF by up to 50%. Therefore, experts recommend consuming a maximum of 1 to 2 cups or less of caffeinated beverages such as coffee and tea daily during the IVF cycle and pregnancy.

### AVOID SMOKING AND DRINKING

Various studies show that smoking and alcohol consumption in men reduce the quality of sperm for fertility and damage sperm DNA. In addition, smoking and alcohol consumption in women reduces the likelihood of implantation of the embryos. In addition, alcohol consumption may interfere with some fertility drugs.

### GET ENOUGH SLEEP

Getting enough sleep increases the chances of

the embryo's implanting and can help with a healthy pregnancy and increase the success of IVF. Therefore, infertility experts recommend that people sleep between 7 and 8 hours at night. You can follow these tips to improve the quality of your sleep:

- Set your bedroom temperature between 16 and 19 degrees centigrade.
- Take a hot shower before bed.
- Avoid caffeinated beverages such as tea and coffee 4 to 6 hours before bedtime.
- Avoid food consumption 2 to 3 hours before bedtime.
- Put lavender in your bedroom diffuser for comfort.
- Listen to soothing music before going to bed.
- Do not use your TV, laptop, or mobile phone 30 minutes before going to bed.

### ABSTINENCE FOR 3 TO 4 DAYS BEFORE SPERM COLLECTION

It is recommended that the man abstains from ejaculation and sexual intercourse 3 to 4 days before collecting sperm. No scientific study prohibits having sex after embryo transfer, but the sexual activity such as deep penetration, should be avoided.

### REDUCE STRESS

Infertility can be very stressful for couples, but it should be noted that reducing stress levels can provide better conditions for pregnancy. Many infertile couples need more than one IVF cycle to succeed in pregnancy, which may improve outcomes from cycle to cycle. Positive thinking and meditation can help you reduce stress.

### AVOID CHEMICALS

It is best to avoid chemicals and devices that contain them during the IVF process. Some of these are:

- Nail polish and some cosmetics, moisturizers, and soaps containing parabens
- Packaging of foods made from BPA and phenol
- Stain-resistant materials or non-stick cookware that contain perfluorinated compounds.

# Nutrition

**M**ost people don't focus on food, unaware of the fact that food and fertility are closely related. When planning for baby it is essential that you eat a healthy diet with a balanced intake of protein, carbohydrates, healthy fats, vitamins and minerals.

**PULSES & LEGUMES:** Pulses and beans are rich in Protein & Iron, which helps increase fertility and libido. They are also called fertility-boosting food.

**BROWN RICE:** Brown Rice is an exceptional source of complex carbohydrates; that will help improve a woman's fertility by promoting regular ovulation. Also, brown rice retains a good amount of Folic Acid that aids in the blood production and is important for preventing Neural Tube Defects in newborn babies.

**WHOLE MILK:** Whole milk retains a good amount of Calcium which is good for reproductive health, as well as bones. Also, whole milk contains fats which are needed for pregnancy. If one does not like whole milk, they can include full-fat ice cream, Yogurt or Cottage Cheese in the diet to get similar benefits.

**Quinoa:** It is an excellent source of B-vitamins, Iron, Phosphorus, Magnesium, Calcium, Potassium, Fiber, Vit-E and Folate. Both Vitamin B12 and Folate are transferred from the blood into reproductive organs, and the concentration of B12 strongly parallels sperm concentration. Vit-E enhances reproductive health and sperm motility.

**FATTY FISH:** Bombay Duck, Pomfret, Surmai, Ravas and Salmon are rich in Protein, Omega-3 Fatty Acids, which may help regulate reproductive hormones and increase blood flow to the reproductive organ, reduce inflammation, and help regulate the menstrual cycle.

**EGGS:** Egg yolks are rich in Vit-D, which help in improving fertility levels in women. Infertile women many a times suffer from Vit-D deficiency. In addition, Eggs are high in Antioxidants and Carotenoids which boost fertility in women. Vit-B12, Folate and Omega-3 Fats in Eggs will minimize possibilities of birth defects.

**OIL SEEDS & NUTS:** Pumpkin seeds, Flax seeds, Sunflower seeds, Chia seeds, Gingili seeds, Garden cress seeds, Walnuts & Almonds are packed with Zinc, Vit-E, and Iron, which have been found to boost sperm count. High source of Zinc helps in egg development.

**BERRIES:** Berries are full of antioxidants which help protect eggs from damage and also increase libido. These natural antioxidants & anti-inflam-

matory Phytonutrients, help boost both female & male fertility.

**BROCCOLI:** Broccoli contains Folic Acid and Vit-C which are needed for good egg and protects the egg from DNA damage. Also, it is rich in Phytonutrients and compound Fibers that help the body to get rid of excess Estrogen.

**SPINACH:** Spinach is a must for fertility diet. It is one of the most nutritious superfoods packed with the antioxidants, Vit-K, A, C, and E, Vit-B2 and B6, Manganese, Folate, Magnesium, Iron, Calcium, Potassium, Dietary Fiber, Copper, Protein, Phosphorus and Zinc.

**AVOCADOS & OLIVES:** Avocados & Olives are a rich source of Vit-E, which is necessary for DNA replication.

**BANANAS:** Banana is one of the most important foods that escalate fertility in women. It is a good source of Vit-B6, Manganese, Vit-C& A, Potassium, Dietary Fiber, Magnesium, Folate, Riboflavin and Niacin.

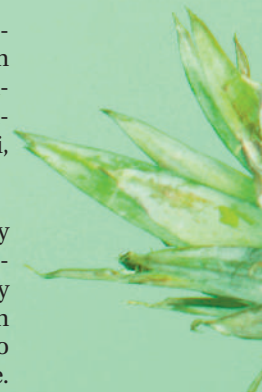
**EAT MORE FIBER:** Fiber helps your body regulate Blood Sugar level which helps reduce fertility issues such as Polycystic Ovary Syndrome (PCOD), decreases immunological issues and promotes healthy hormone balance. Some examples of high fiber foods are fruits, vegetables, dark leafy greens, and beans.

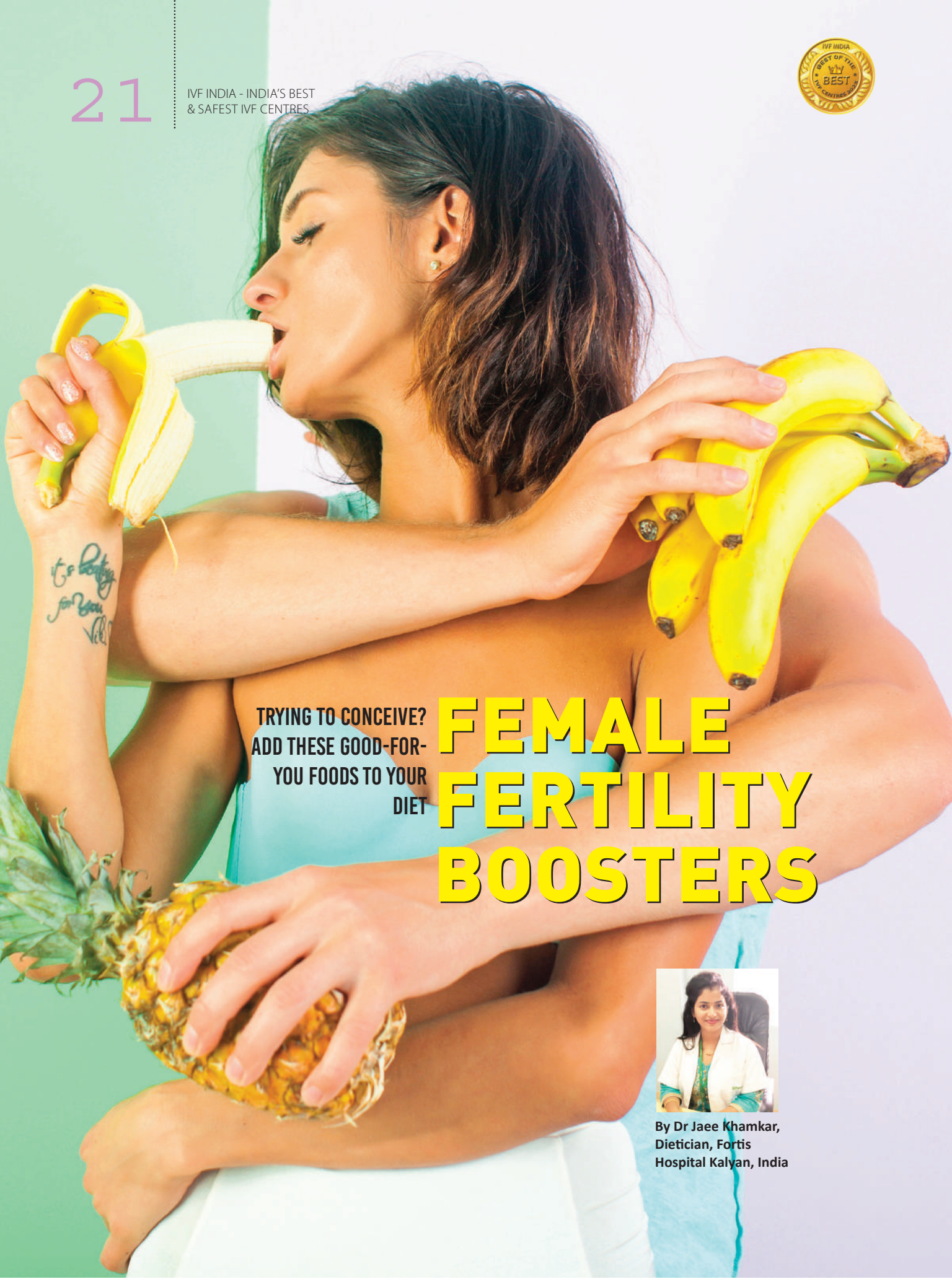
**INCREASE IRON INTAKE:** Consuming Iron supplements and non-heme Iron, which comes from plant-based foods, may decrease the risk of Ovarian Infertility. Sources of Iron-green leafy vegetables, sprouted pulses, beans, Liver, Egg, Bajara, Ragi, Watermelon & Oil seeds.

**AVOID UNFERMENTED SOY PRODUCTS:** Soy foods have been shown to contain Estrogen-mimicking properties. It is best to avoid processed Soy foods such as Soy milk, Soy Burgers, Soy Protein powder, Soy chips, Soy Meats, and Soy Cheeses to avoid a negative impact on your hormonal balance. If you have Hypothyroidism, avoid Soy completely.

**SELENIUM:** Selenium is an antioxidant that helps to protect the Eggs and Sperm from free radicals. Free radicals can cause chromosomal damage, which is known to be a cause of miscarriages and birth defects. Selenium is also necessary for the creation of sperm. In studies, men with low sperm counts have also been found to have low levels of Selenium.

**Food sources:** Liver, Snapper, Cod, Halibut, Tuna, Salmon, Sardines, Shrimp, Crimini Mushrooms, Turkey, Brazil nuts etc.





TRYING TO CONCEIVE?  
ADD THESE GOOD-FOR-  
YOU FOODS TO YOUR  
DIET

# FEMALE FERTILITY BOOSTERS



By Dr Jae Khamkar,  
Dietician, Fortis  
Hospital Kalyan, India



# Mental Wellness

Make your partner your accomplice and share your hopes and doubts with each other. Use this adversity to reinforce the commitment to your relationship.

## PSYCHO LOGICAL

impact of **INFERTILITY**



*By Dr Kedar Tilwe*  
Psychiatrist, Sexologist &  
Geriatric Psychiatrist,  
Hiranandani Hospital,  
Vashi, Navi Mumbai, India.



**I**nfertility usually refers to the inability of a person to reproduce normally. It is estimated that 1/6 couples worldwide and approximately 27.5 million couples in India experience Infertility. Probable cause is attributed to 50% female related factors, 35% male related factors and rest involving both partners. The reasons can vary from hormonal dysfunction (Polycystic Ovary Syndrome, Hypothalamic Amenorrhea, Hyperprolactinemia, etc.), Anatomical abnormalities in reproductive structures, problems with the count and morphology of the sperms, etc. Even now, a very high number of causes remain undetected or are attributable to psychosomatic causes. The experience of infertility can be emotionally draining and psychologically devastating. So significant is the mental burden that childlessness could lead to mood and anxiety disorders in infertile couples.

**PSYCHOLOGICAL IMPACT ON THE PERSON:** In a woman infertility is associated with a sense of 'feeling incomplete'. This leads to lowered self-esteem, self-loathing, self-reproach and steep decline in self-confidence which disturbs all facets of your life. Negative repetitive thoughts and preoccupation

with the 'condition' starts becoming persistent, slowly occupying each minute of the day. As a result, the person prefers social avoidance and starts feeling lonely & helpless.

**PSYCHOLOGICAL IMPACT ON THE PARTNER:** There is a sense of being a bystander – 'unable to help'. This can lead to a lowering of frustration tolerance. Anxiety manifests and the partner finds himself oscillating between the extremes of over-involvement and indifference.

**IMPACT ON MARITAL AND FAMILY DYNAMICS:** Infertility puts a strain on marital bliss. Sex may become mechanical, with focus being exclusively on trying to conceive rather than enjoying physical intimacy. Obsession with the 'calendar' ruins quality personal time and activities are scheduled around the timetable of 'conception days'. The increased stress may sometimes be responsible for complete breakdown of relationships. Couples also have to deal with a nightmarish, unrelenting but often well-meaning pressure from relatives. Constant comparisons are made and magic remedies bordering on inappropriate are thrust upon the couple. In some rigid cultures, the couple are at a risk of getting ostracised.

**IMPACT OF TREATMENT:** Initiation of infertility treatment is associated with an immediate improvement in depressive and anxiety features. However, by 2nd/3rd year of treatment, these conditions worsen significantly. Financial burden associated with it and the prolonged cyclical nature of treatment along with the uncertainty of a positive outcomes, further add to the burden. Sometimes adverse effects may also precipitate behavioural disturbances and Psychosis.





### PSYCHIATRIC MORBIDITY

**ASSOCIATED WITH INFERTILITY:** After diagnosis, it is common to have denial, anger outbursts and crying spells. There is a higher chance of developing Depression and Anxiety, along-with adjustment disorders. Persistent stress may sometimes also lead to self-harm, and even Psychosis.

### COPING WITH INFERTILITY:

Here are a few ways of managing the mental burden associated with infertility;

**Acceptance:** Acknowledging as a couple that you may have a problem is the first and often the most crucial step. It enables you to seek the right advise sooner and that may make all the difference.

**Enlist help:** You are not alone. Seek assistance of your support system including your parents and in-laws. They are usually happy to help and glad for being involved in the process.

**Understand your condition:** Consult your Obstetrician, understand the management plan and your options. Being fully aware of the process reduces the Anxiety significantly.

**Involve your partner:** Make your partner your accomplice and share your hopes and doubts with each other. Use this adversity to reinforce the commitment to your relationship.

**Cover the calendar:** Timetables are made for our convenience. Don't become so mechanical that you become strangers to each other and lose your emotional connect. So, mark the calendars but remember to enjoy yourselves

**Live your life:** Ultimately being a parent is just one (but an important one) amongst the many roles you will essay during your lifetime. So, don't make becoming one the only priority

**Talk:** Help is only available to those who ask for it. So, if you fill stressed or scared; share your concerns with a friend or acquaintance. Reach out to mental health professional if you feel the need to do so

**Psychotherapy:** Supportive counselling will enable you to navigate the troubled waters easily. Cognitive Behavioural Therapy or Inter Personal Therapy can also be immensely helpful.

**Pharmacotherapy:** When the distress experienced is so much that it becomes disabling, one should meet with a Physician at the earliest to understand the required medicines and their dosages.

**Take stock:** Sometimes we are faced with obstacles which can't be overcome. In these situations, it helps to have a candid discussion with your spouse reviewing your priorities and considering your options. Remember that conception is but the first step in the journey of parenthood and you have the choice of adopting a child.

We are lucky to witness the colossal advances in medicine and technology which are enabling us to become better at handling the hurdles posed by infertility. So, if you are one of those approximately 27.5 million couples who have difficulties in conceiving, it is of paramount importance that you remain optimistic and hopeful during these testing and uncertain times; allowing the experience to strengthen your bond and not the other way around!



# Fertility Diet for Women

Pumpkin seeds

Soy

Salmon

Dark leafy greens

Avocado

Lentils and beans

Oysters

Full-fat dairy

Blueberries, Strawberries, and Raspberries

Quinoa

Eggs

Kefir (a drinkable high-protein yogurt)

## Foods to Avoid

- Avoid both red meat and processed meats.
- Excessive alcohol can impair both egg and sperm quality and throw reproductive hormones out of balance.
- Fried foods, spreads, cookies, crackers, salad dressing, frozen foods, cookies, and chips.
- Processed sugar and refined

**GET ENOUGH EXERCISE  
AND SLEEP**



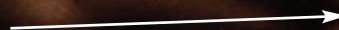
**AVOID EXCESSIVE  
ALCOHOL & DRUG USE**



**QUIT SMOKING**



**AVOID CERTAIN PRESCRIPTION  
MEDICATIONS**



**TAKE A FENUGREEK SUPPLEMENT**



**GET ENOUGH  
VITAMIN D**



**TAKE ASHWAGANDHA**



**EAT MORE ANTIOXIDANT-  
RICH FOODS**



**INCREASE  
HEALTHFUL FAT  
INTAKE**



# BEST WAYS TO INCREASE SPERM COUNT



GET ENOUGH  
FOLATE AND  
ZINC

LIMIT EXPOSURE TO  
ENVIRONMENTAL AND  
OCCUPATIONAL  
CONTAMINANTS

LIMIT THE CONSUMPTION  
OF SOY AND  
ESTROGEN-RICH FOODS

## FOODS WHICH DECREASE SPERM COUNT

- eating high quantities of red and processed meat
- not eating enough polyunsaturated fatty acid
- having a high intake of energy
- consuming low levels of antioxidants
- consuming high levels of saturated fats
- eating limited amounts of fruits and vegetables

# 10 OUTRAGEOUS FERTILITY MYTHS

*Young women underestimate their ability to get pregnant, while women in their 30s and 40s overestimate, and continue to wait. Whichever side of the fertility divide you fall on, there way too many myths floating around that have nothing to do with age. Here are ten of the more inscrutable ones ...*

## MYTH 1: DAILY SEX UPS YOUR CHANCES

Having sex every day, or every other day, will not increase your chances of conception. To up your chances, you should actually aim to have sex during the time in which you're ovulating - generally the 11th to 17th day of your menstrual cycle. How do you know when you're ovulating? If your cycle is fairly regular, you can download a menstrual calendar app to your smartphone, you can order an ovulation kit, or for free, you can keep an eye out for the physical signs of ovulation.



## MYTH 2: DOING HEADSTAND WILL HELP SPERM FIND THEIR WAY

This does not help. No matter what anyone says. After all, sperm cells are chemically programmed to travel in the right direction, no matter where your pelvis is pointing. And even if some sperm leak out post-sex, there are plenty more still in the game.



### MYTH 3: YOU CAN'T GET PREGNANT DURING YOUR PERIOD

While ovulation typically doesn't occur until after you're done menstruating, there's still some chance of getting pregnant while riding the crimson wave. How? Because sperm can survive for up to five or six days, there may be some holdouts waiting for their chance at infamy when you finally start ovulating. If you're eager to start a family, feel free to cross that thin red line without defensive armor.



### MYTH 4: HAVING AN ORGASM WILL SEAL THE DEAL

If you've been trying to get pregnant for awhile, babymaking sex has likely crossed the line from sexy into awkward. Especially if you've been keeping a menstrual calendar, in which case your scheduled sex probably also feels contrived. Because of this, actually experiencing an orgasm during the act is definitely a plus (or perhaps even a miracle). Still, though the contraction of the uterus that occurs during orgasm does help sperm travel more quickly toward the fallopian tubes, your big O does not seal the deal. Once those sperm hit the f-tubes, the rest is up to them.

### MYTH 5: CAFFEINE INHIBITS YOUR PREGNANCY ODDS

Excessive caffeine intake has only been proven to have an adverse effect on fertility with those who have experienced prior fertility issues. The lesson, as always, is to indulge in moderation.





**MYTH 6: ALCOHOL BOOSTS YOUR CHANCE OF PREGNANCY**

Getting a nice buzz on can loosen your inhibitions which, in turn, can lead to greater amounts of hot sex. And greater amounts of sex during ovulation can, indeed, lead to more baby-having. But excessive alcohol consumption has actually been shown to decrease fertility in women, because it affects the body's ability to absorb zinc, a vital nutrient.



**MYTH 7: SWALLOWING SEMEN WILL MAKE YOU MORE FERTILE**

To date, there has been no study that shows swallowing semen has any effect on your ability to get pregnant.

**MYTH 8: EATING YAMS WILL LEAD TO MULTIPLES**

Back in 2001, researchers struggled to figure out why those living in the African village of Igbo-Ora had such a high rate of twin births. The only cultural difference they observed was that residents had a thing for yams. This correlation, however, is still considered suspect. Either way, yams are good for you, and good health can contribute to higher levels of fertility.

**MYTH 9: BEING ON THE PILL CAN HAVE LASTING EFFECTS**

In reality, those who toss their birth control pills only have to wait a few weeks before they start ovulating again. And the same is true for other forms of birth control. In fact, studies show that within one year after stopping the Pill, 80 percent of women who tried to get pregnant succeeded.

**MYTH 10: IT'S ALL IN YOUR HEAD**

Infertility is an actual medical condition of the reproductive system. Stress can result from struggles with infertility ... not cause it.



# EGG FREEZING



## MEDICAL EXAM

First, you'll need to meet with a fertility doctor to discuss your desire to freeze your eggs. Your doctor will schedule an exam where a complete medical history, blood work, and hormone testing will be completed.



## OVARIAN STIMULATION AND MONITORING

You might start this process by taking birth control pills or other medications such as estrogen, lupron, or Aygestin to help synchronize your follicles so that they respond similarly to the stimulation medications that you'll take later. You'll continue to be monitored either with blood tests or ultrasounds to ensure that you begin stimulation injections at the right time. most people will take gonadotropins — follicle-stimulation hormone (FSH) and luteinizing hormone(LH) — which stimulate the ovaries to produce multiple eggs during a cycle. These injections will be administered over about 10 to 12 consecutive days and taken subcutaneously in the belly. During those days, you will be monitored regularly.



## EGG RETRIEVAL

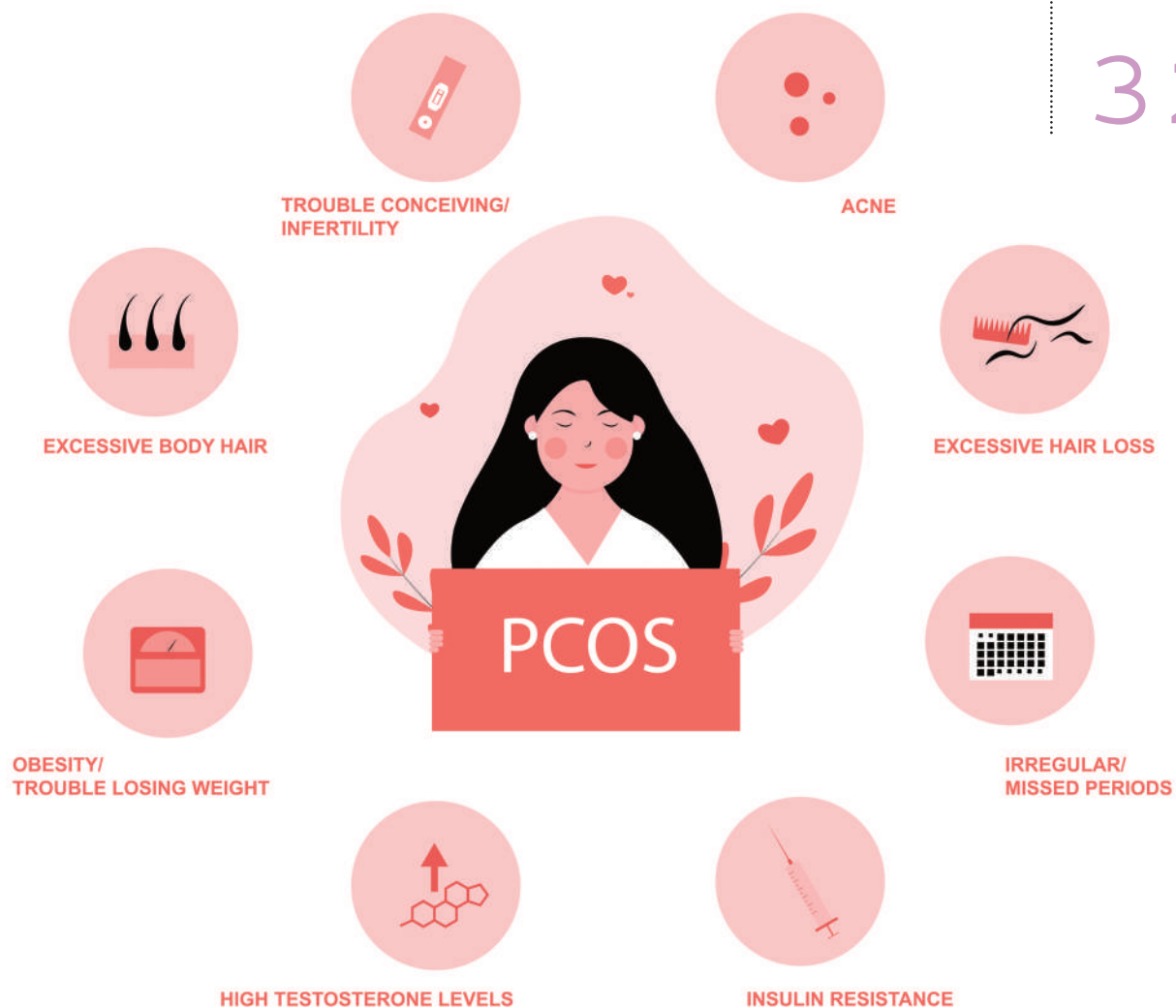
During the egg retrieval, your doctor will use a transvaginal ultrasound probe with a needle, which is inserted into your follicles under ultrasound guidance. The fluid inside the follicles that contains the eggs is aspirated and collected into tubes, which are then given to an embryologist. This is done under general anesthesia. The number of eggs retrieved depends on several variables with age and ovarian reserve being the two most important factors.

## RECOVERY AND EGG FREEZING

It's not uncommon to experience cramping, bloating, constipation, and vaginal spotting during the first 24 hours after egg retrieval. If you experience more severe abdominal pain, feel faint or lightheaded, or have heavy vaginal bleeding, contact your doctor immediately.

Finally, within a few hours of egg retrieval, the mature eggs that were successfully collected will be frozen through a process known as vitrification. This process relies on rapid freezing through the use of liquid nitrogen to minimize the risk of ice crystals forming on the eggs.





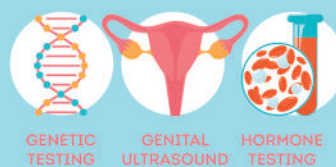
## INFERTILITY SYMPTOMS AND TREATMENT



### RISK FACTORS



### EVALUATION



### TREATMENT

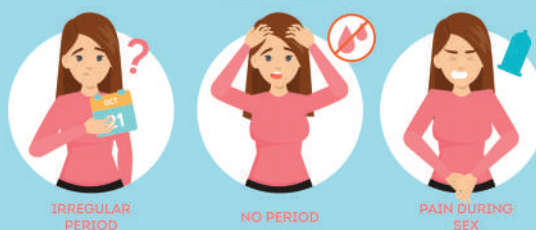


## SYMPTOMS

### MALE



### FEMALE



SAP CODE: 2217258

