

Endometriosis and Fertility

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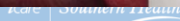
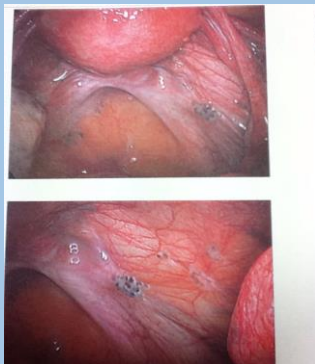
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Endometriosis

- the presence of endometrial tissue outside of the endometrium: glands &/or stroma (Ectopic Endometrium)
- Pelvis, abdominal cavity, other organs
- Two Most common sites Ovaries and Uterosacral Ligaments
- Burden of disease: 11 hours per week lost productivity per woman Global study of Womens Health Nnoaham et al. Impact of endometriosis on quality of life and work productivity: a multicenter study across ten countries. Fertil Steril 2011;96(2):366-373.



Minimal to mild



Moderate to severe



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Classification

REVISED AMERICAN SOCIETY FOR REPRODUCTIVE MEDICINE CLASSIFICATION OF ENDOMETRIOSIS 1995

Patient's Name _____ Date: _____

Stage I (Minimal) 1-5 Laparoscopy _____ Laparotomy _____ Photography _____

Stage II (Mild) 6-15 Recommended Treatment _____

Stage III (Moderate) 16-40



Stage IV (Severe) 41-65

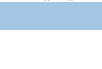

Total _____ Prognosis _____

		< 1 cm	1 - 3 cm	> 3 cm
Endometriosis	Superficial	1	2	4
	Deep	2	4	6
	R Superficial	1	2	4
	Deep	4	16	20
Ovary	L Superficial	1	2	4
	Deep	4	16	20
POSTERIOR COLIC/SAC OBLITERATION		Partial 4	Complete 16	
ADHESIONS		< 1/3 Enchained	1/3-2/3 Enchained	> 2/3 Enchained
Ovary	R filmy	1	2	4
	Dense	4	8	16
	L filmy	1	2	4
	Dense	4	8	16
Uterus	R filmy	1	2	4
	Dense	4	8	16
	L filmy	1	2	4
	Dense	4	8	16
Tubes	L filmy	1	2	4
	Dense	4*	8*	16

*If the free end of the fallopian tube is completely occluded, change the point assignment to 16.

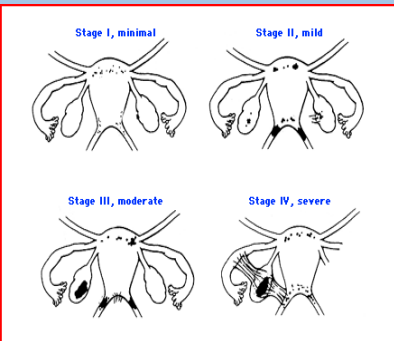
Additional Endometriosis: _____ Anomalous Pathology: _____

To Be Used with Normal Tubes and Ovaries:  

To Be Used with Abnormal Tubes and/or Ovaries:  

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ASRM



Examples of the classification of endometriosis Modified from the American Society for Reproductive Medicine

Symptoms of endometriosis

- Pain mid cycle > periods *dysmenorrhoea*
 Bladder emptying *dysuria*
 Bowel *dyschezia*
 Sexual intercourse *dyspareunia*

Elsewhere, generalised, back, cyclic v chronic

- Subfertility 30-40%
- Abnormal menstrual bleeding
- No symptoms

Pelvic pain E Booklet Susan Evans (Jean Hailes website)

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Most Common

- Severe Dysmenorrhoea
- Deep Dyspareunia
- Infertility
- Chronic Pelvic Pain

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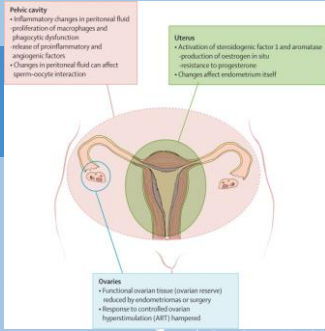
Prevalence increasing?

- Incessant ovulation?
- Forager to farmer
- Fewer children
- Short duration lactation
- Better diagnosis?

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Mechanism of action: E on fertility

Endometriosis and Infertility: Pathophysiology and Management
Dominique De Ziegler et al Lancet
2010;376:730-38

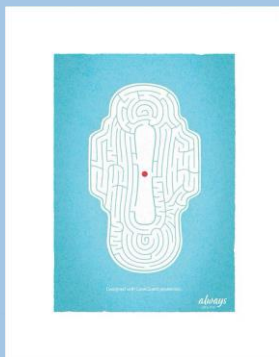


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Management of infertility

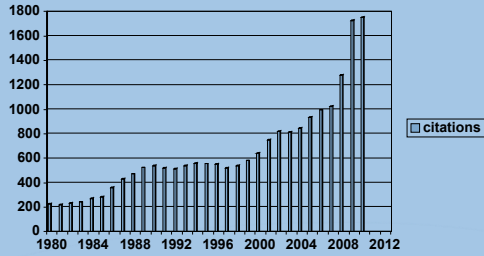
Have we come a long way... ???
(similarly with endometriosis)

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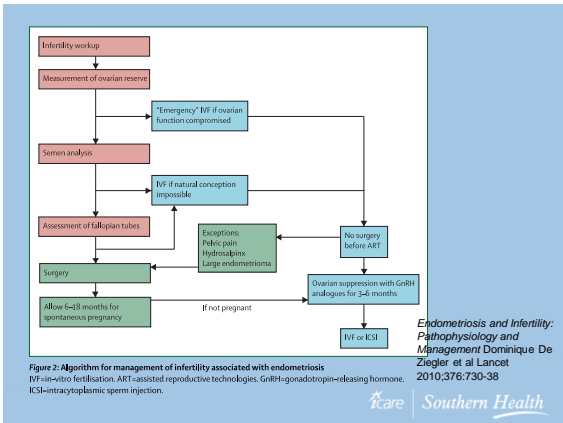


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Medline Citations: *endometriosis*



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Surgery for Endometriosis

Open ↔ Laparoscopic/
minimally invasive

Definitive ↔ Conservative/fertility
sparing

- Nodules: Excisional or Ablative
- Energy: laser, electrosurgery, ultrasound, scissors?
- Cysts: leave, drain or excise?
- Bowel nodules: shave, disc excision, bowel resection?
- Tubes: hysteroscopic occlusion, remove or fix?

Normalise anatomy (incl adhesiolysis)

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Surgery for endometriosis in infertile patient

- Normalize anatomy
- Identify the endometriosis
- Remove the endometriosis
- Enhance fertility
- Manage Endometriomas
 - Watch technique
 - Check AMH Pre and Post Op
- Appropriate timing to IVF

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Evidence for surgery

- Minimal-mild / Stage 1-2
 - Level 1a *Laparoscopic surgery for subfertility associated with endometriosis* Jacobson TZ et al Cochrane Database Syst Review 2010
 - Strong evidence – grade 1
- Moderate to Severe
 - For Endometriomas – RCT and high level evidence to support Excision of Endometriomas over drainage and fulguration
 - In this surgery – preoperative assessment of Ovarian reserve – AMH, AFC and Ovarian Volume
 - Care with surgery – minimize diathermy of ovary to minimize ovarian damage from surgery

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Stage 4 – severe disease

- Surgery should be offered as an option to IVF for the treatment of severe endometriosis
- However no good level evidence exists to recommend surgery over IVF
- Recommendation should depend on Age of Female Partner (35 or <), male factor, tubal factors, size of endometriomas associated with severe rectovaginal endo and AMH
- Should individualize treatment
- Consider surgery for patients who have severe endometriosis and have undergone a number of unsuccessful cycles of IVF

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Endometriosis Fertility Index

Endometriosis fertility index: the new, validated endometriosis staging system
David Adamson and David Pasta Fertility and Sterility 2010 94(5): 1609-15

FIGURE 1
Endometriosis fertility index: surgery form.

ENDOMETRIOSIS FERTILITY INDEX (EFI) SURGERY FORM

LEAST FUNCTION (L.F.) SCORE AT CONCLUSION OF SURGERY

Score	Description	Left	Right
4	Normal	<input type="checkbox"/>	<input type="checkbox"/>
3	Mild endometriosis	<input type="checkbox"/>	<input type="checkbox"/>
2	Moderate endometriosis	<input type="checkbox"/>	<input type="checkbox"/>
1	Severe endometriosis	<input type="checkbox"/>	<input type="checkbox"/>
0	Absent or nonendometriosis	<input type="checkbox"/>	<input type="checkbox"/>

To calculate the EF score, add together the least scores for the least and the right side from the L.F. score and the severity score (e.g., 2 + 1 = 3).

ENDOMETRIOSIS FERTILITY INDEX (EFI)

Factor	Description	Points	Factor	Description	Points
Age	Less than 35 years	2	LAP score	1 to 2 (Stage I-II)	2
Adx	Unilateral	1	LAP score	3 to 4 (Stage III-IV)	1
Sexual history	Unilateral	1	LAP score	5 to 6 (Stage III-IV)	0
Endometriosis	Stage I-II	2	ADx (Total Bilateral)	0	0
Endometriosis	Stage III-IV	1	ADx (Stage I-II)	1	1
Endometriosis	Stage III-IV	1	ADx (Stage III-IV)	0	0
ADx (Stage I-II)	0	0	ADx (Stage III-IV)	0	0
ADx (Stage III-IV)	0	0	ADx (Stage I-II)	0	0
ADx (Stage III-IV)	0	0	ADx (Stage III-IV)	0	0
ADx (Stage I-II)	0	0	ADx (Stage I-II)	0	0
ADx (Stage III-IV)	0	0	ADx (Stage III-IV)	0	0

EF = TOTAL METEOROLOGICAL FACTORS + TOTAL SURGICAL FACTORS

EFI = Total Meteorological Factors + Total Surgical Factors

ESTIMATED PERCENT PREGNANT BY EFI SCORE

Artificial reproductive techniques

- Ovarian hyperstimulation + intrauterine insemination (OI/IUI)
- In vitro fertilisation
- IVF is far superior to OI/IUI
- OI/IUI – of no value after aged 39
 - Is offered but against sensible medical advice
- Careful individualized advice

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Conclusion

- Think about endometriosis
- Need to consider the diagnosis
- Laparoscopy is the gold standard of diagnosis
- Increase awareness
- Need to individualize the infertility treatment for each patient
- Be up to date with evidence

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Resources

- www.Jeanhailes.org.au
- www.Endometriosis.org.au
- www.endometriosis.ca (WES)
- www.ecca.com.au

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