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Endometriosis SHE Trust (UK)
First Floor, The Chestnuts,
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Wednesfield Road
Wolverhampton
WV10 0QP

ENDOMETRIOSIS
she
trust  **UK**

Registered Charity No. 1076843

Tel: 08707 743665
<http://www.shetrust.org.uk/>

Endometriosis SHE Trust (UK) works towards a future position where women's lives and relationships are no longer adversely affected by endometriosis

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Endometriosis SHE Trust UK

www.shetrust.org.uk



- World Endometriosis Congress 1989, 1992, 1994, 1996, 1998, 2000, 2002, 2004, 2006, 2008, 2009, 2011
- American Society of Reproductive Medicine 1997-2011
Chair of the Nutrition Special Interest Group
- ESHRE member
- BANT member MIL0109514
- Complementary and Natural Healthcare Council DoH
- Certified Nutritional Therapist CNHC 000265-C10
- Nutritional Therapy Council member NTC0403
- Governor and Fellow of Institute for Optimum Nutrition
- Fellow of Royal Society of Medicine
- Chair of Endometriosis SHE Trust UK

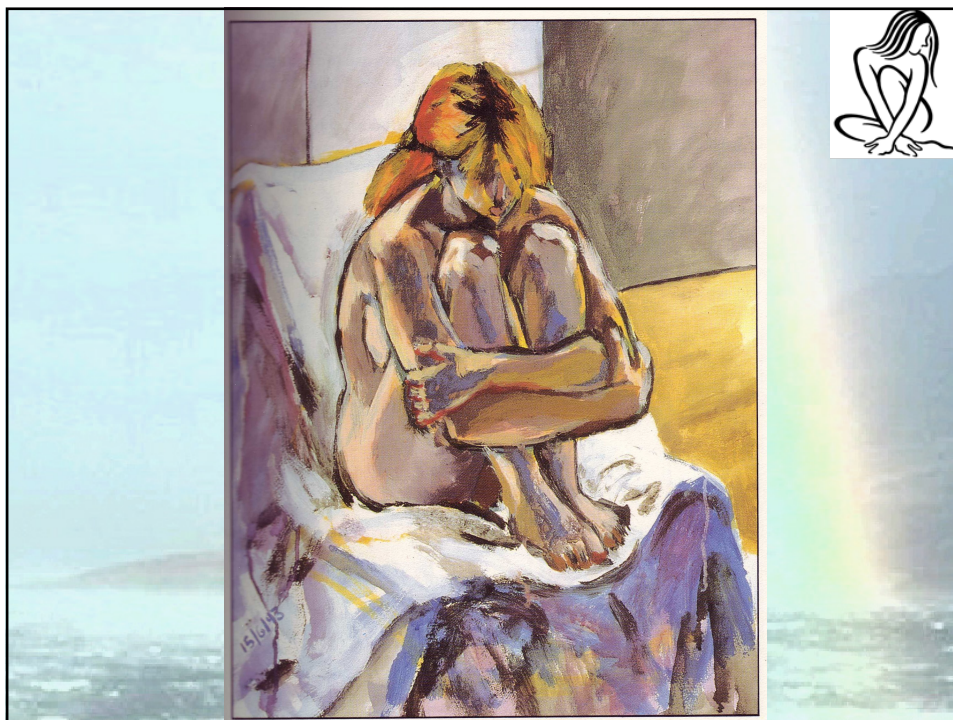
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Endometriosis Awareness Month March 2012



- Join US @ www.shetrust.org.uk
- Lobby your MP for better treatment for women with endometriosis
- In London 8/10 women in one endometriosis group have had their sickness benefit stopped have been told to work - many can't stand up 2 out of 4 weeks!
- Lobby your local Hospital to become a Centre for Endometriosis Expertise - with highly specialised surgical expertise required by the surgeons - accreditation with RCOG, ESHRE or ASRM

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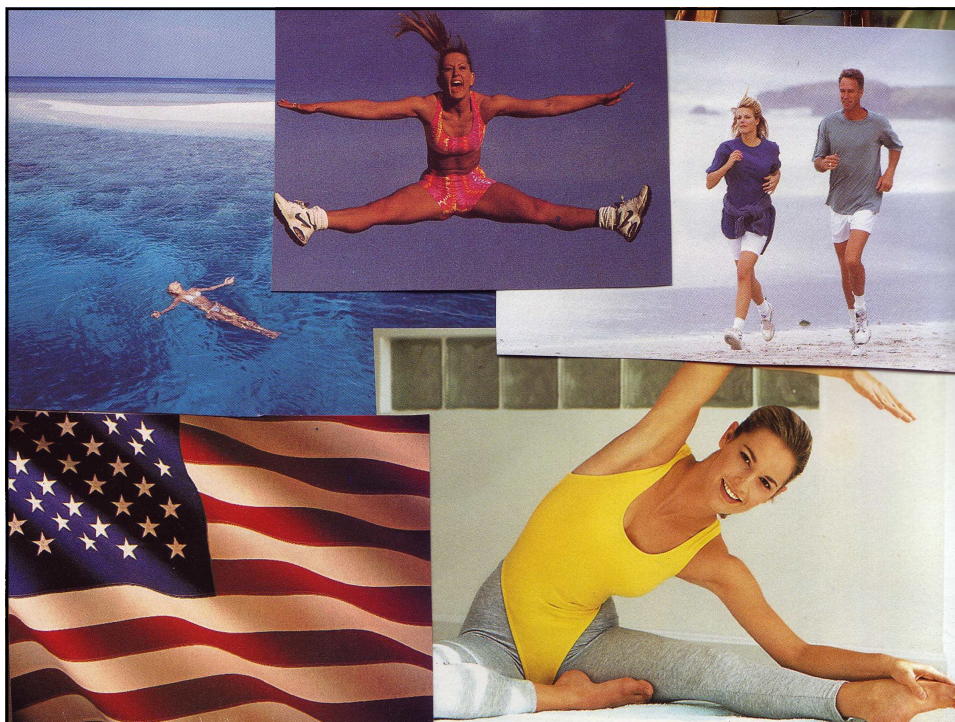


Be quiet and listen to the patient:
she is trying to tell you
what is wrong with her

•Sir William Osler

SHE wants a good quality of life,
not a living death

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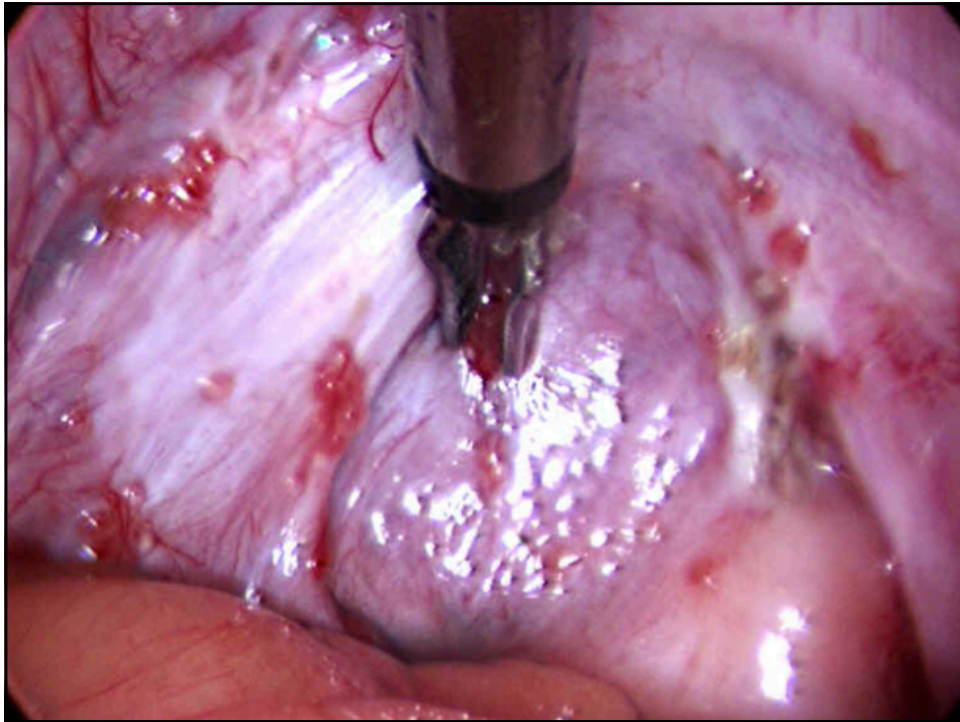


What is endometriosis?



- An auto-immune disease?
- A disease which proliferates in presence of oestrogen?
- A disease of inflammation?
- A disease with extreme levels of pain and fatigue?
- A disease which compromises fertility?
- A disease with high level of prostaglandin PGE2?
- A disease which affects atopic/allergic women?
- A disease which affects skin and membranes?
- A disease which affects the digestive tract?

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Endometriosis Symptoms

| | |
|--|-----|
| Dysmenorrhoea and/or pain throughout menstrual cycle | 95% |
| Fatigue | 87% |
| Diarrhoea, etc w/menstruation | 83% |
| Abdominal bloating | 84% |
| Heavy/irregular bleeding | 65% |
| Dyspareunia | 64% |
| Nausea, etc w/menstruation | 64% |
| Dizziness/headaches w/menses | 63% |
| Low resistance to infection | 43% |
| Infertility | 41% |
| Low-grade fever | 32% |



From 4,000 case histories from the Endometriosis Association Research Registry - compiled 1998

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House of Commons APPG Data 2006



- Age of 1st period pain 16.3 years
- Age at diagnosis 27.6 years
- On average it takes 9.11 yrs to be diagnosed
- Average 5.11 yrs to be referred by GP to OBGYN
- 15% give up work due to symptoms
- 68% were misdiagnosed
- 30% couples are sub-fertile due to endometriosis
- 20% women in UK have hysterectomy by age 55yrs.

• 7500 women online questionnaire 2006 ©The Endometriosis and Fertility Clinic

Endometriosis Definition



- Endometriosis, is an enigmatic inflammatory condition characterized by lesions of endometrial type tissue outside of the uterus in the presence of typical clinical symptoms of pelvic pain and infertility, affects an estimated 176 million women of reproductive age world-wide

• Adamson D. et al. J Endometriosis 2010

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Gold-Standard Diagnosis



- The gold-standard diagnosis remains the laparoscopic visualisation of lesions, preferably with histologic confirmation
- (in the absence of histological sampling, the false positive rate with laparoscopy visualisation alone may approach 50%)

• Wykes JES ET AL, 2004 BJOG)

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Centres of Excellence



- Centres of Excellence - expert teams of advanced surgeons, having undergone specific training in treating endometriosis and who have agreed to commit to collaborative research
- A multi-disciplinary network of health care experts, accredited and skilled, giving an informed choice of treatment options
- Women with endometriosis usually require individualised care over a long period of time
- Treatment priorities change as severity of the disease develops over time
- Symptoms change as different treatment options progress

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Endometriosis



- Endometriosis diagnosis and management should be primary health care
- Adolescent girls who display period pains which do not respond to pain killer medication or the OCP - they should be investigated for endometriosis
- NZ research shows that from that group of girls 93% had stage 3-4 endometriosis on laparoscopy

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Prevalence of Endometriosis



The prevalence of endometriosis in the female population is said to be “8 - 10% of women in reproductive years and 20-50% of women with infertility”

Eskenazi B, Warner ML, Epidemiology of endometriosis. *Obstet Gynecol Clin North Am* 1997;24(2):235-258

Medical literature ranges endo from 6-45%
2 million women in UK:
70m EU: 176m worldwide

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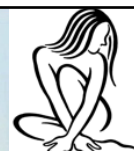
Causes of Endometriosis



- Retrograde flow of menstrual blood
- Mullerian cell rests
- Immune failure
- Cellomic metaplasia
- Viral infection effect
- Failure of the endometrium

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Risk Factors for Endometriosis



- Family history
- Early menarche
- Lean BMI at 18 years
- DES exposure
- Environmental exposure to pesticides/chemicals
- Family/personal history of allergy
- Inflammatory disease in family history
- Short menstrual cycles
- Pain and heavy bleeding
- Irritable bowel syndrome
- Family history of thyroid disease

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Family History of Endometriosis



- Endometriosis has been reported to be 5 to 9 times more likely in individuals from families with diagnosed cases
- In addition, the disease is more severe and the symptoms more likely to begin at a younger age
- These factors are often taken as evidence that the disease is genetic
- Kennedy S, Mardon H, Barlow DH. Familial Endometriosis: Journal of Assisted Reproductive Genetics 1995;12(1):32-34

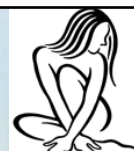
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Prevention is better than cure

What is endometriosis?

What are we trying to cure?

What are the trigger factors?



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- The body is not a set of disparate organs that can be compartmentalised
- Body cells work together and have message receptors
- We have to work to correct health in the whole body

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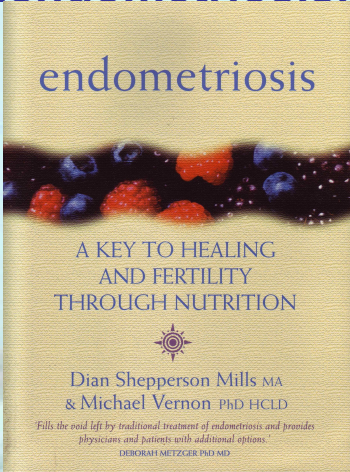


How can diet impact the symptoms of the disease endometriosis?

Does what we eat have an effect on endometriosis, pain and our fertility?

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Healing With a Nutritional Approach
www.endometriosis.co.uk



endometriosis

A KEY TO HEALING
AND FERTILITY
THROUGH NUTRITION

Dian Shepperson Mills MA
& Michael Vernon PhD HC LD

Fills the void left by traditional treatment of endometriosis and provides physicians and patients with additional options.
DEBORAH METZGER PhD MD

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**Dis-ease is a disturbance
in body biochemistry**

- Research shows that 35% of all cancers are diet related
 Doll R, & Peto R **Causes of cancer**. Oxford, Oxford University Press, 1981
- 71% of adults questioned believe that the most important thing they do to protect health involves eating well
 World Health Organisation 1994

©The Endometriosis and Fertility Clinic

Truth



- Nutrients give life to all living things
- Primary Healthcare

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Nutrition



- Nutrients are essential to life and health
- Eating is something we all do every day
- Sound food choice sustains us and keeps us healthy
- Poor food choice can make us unhealthy

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Body Systems Depend on Nutrients



- Hormones and enzymes are made from nutrients you eat, proteins and fats/oils
- Reproductive system
- Digestive system
- Immune system
- Nervous system
- We have to work to correct the whole body

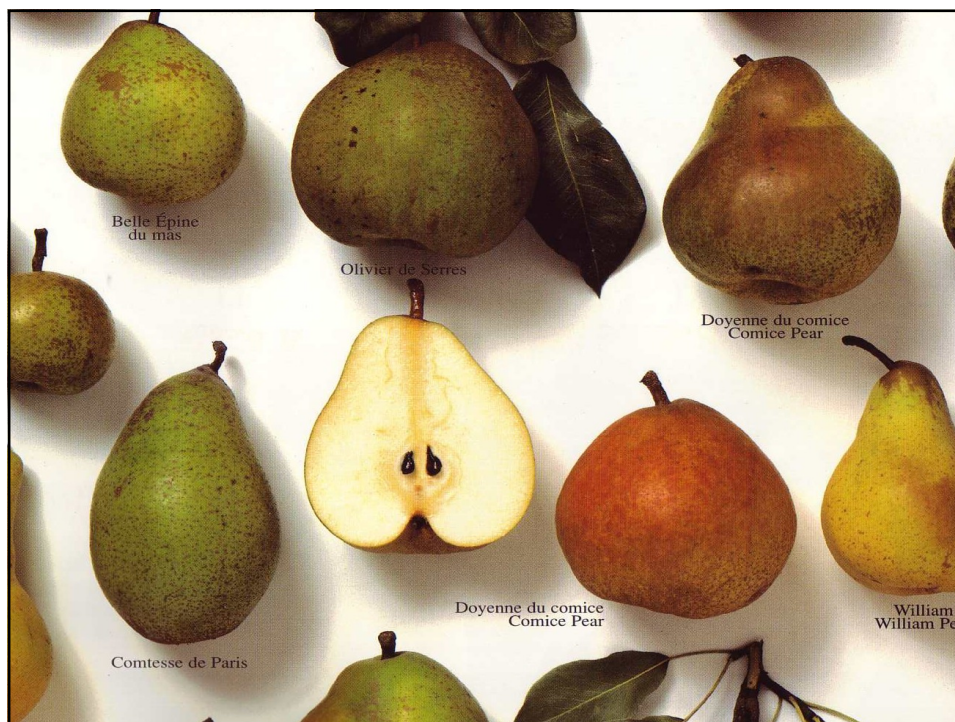
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Poor Nutrition



- Research into restricted calorie intake at the University of Pittsburgh discovered that “fasting for one day alone can change the suppression of luteinizing hormone”
- The implication for slimmers is that even short-term deficiency can have a profound effect on endocrine/reproductive function
- Cameron JL, 'The Menstrual Cycle and its Disorders'. Eds. KM Pirke, W Wuttke and U Schweiger, Springer Verlag, Heidelberg, pp.66-78, 1989
- If you are restricting nutrient intake in order to lose weight, you may be damaging your chances of becoming pregnant

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Lifestyle Factors



- Random Controlled Trials (RCTs) show that dietary intervention following endometriosis surgery in the form of vitamins, minerals, salts, lactic ferments and fish oils appears to be an effective alternative to hormone treatment that is associated with similar pelvic pain reduction and quality of life improvement
- Sesti 2007, Sesti 2009
- In dysmenorrhea in the absence of proven endometriosis, one small trial showed fish oil (omega 3 fatty acids) to be more effective than placebo for pain relief
- Proctor et al, 2001
- Dietary support for 3 month prior to any operation may well support improved healing after surgery
- At Guy's and Barts Hospital vitamin C and zinc are given to speed up healing

Lifestyle Factors



- Dietary factors have been the focus of a growing number of endometriosis patient directed books and web sites
- A hospital based Italian case-controlled study (N=504) observed a statistically significant protective effect of current green vegetable (OR=0.3 CI=0.2-0.5) and fruit consumption (OR=2.0. CI=1.4-2.8) and a significant risk of endometriosis with greater red meat consumption (OR=2.0.CI1.4-2.8)
- Parazzini F, Chiaffarino F, Surace M, et al. Selected food intake and risk of endometriosis. Hum Reprod 2004

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Nutrient Supplementation



- Limited evidence suggests that vitamins B1 and B6 are beneficial
 - Proctor 2004
- The use of magnesium shows some evidence
 - Proctor 2001
- **Dietary advice to women to eat a healthy balance of nutrient-dense foods should be regarded as Primary Health Care for women with endometriosis**

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A Comparison of Foods 1939 and 1991



Magnesium

| Food | 1939 | 1991 | % change |
|-------------|------|------|----------|
| Raw carrots | 12 | 3 | -75% |
| Celery | 10 | 5 | -50% |
| Potatoes | 25 | 17 | -32% |
| Tomatoes | 11 | 7 | -36% |

McCance and Widdowson 1991

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Magnesium



- Magnesium has an anaesthetising effect on the central nervous system; therefore adequate magnesium 'is an important preventative against miscarriage and painful contractions of the uterus muscle'.
- Magnesium is rich in green leafy vegetables and fresh fruits, nuts and seeds.

Muller, P. First International Symposium on Magnesium Deficit in Human Physiology. 1971

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1936 American Senate Warning



- The alarming fact is that foods (fruits, vegetables, and grains) now being raised on millions of acres of land that no longer contains enough of certain minerals are starving us - no matter how much of them we eat
- No man of today can eat enough fruits and vegetables to supply his system with the minerals he requires for perfect health

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Oranges



- To obtain as much Vitamin A from an orange as your grandmother absorbed from one orange - you need to eat 8 oranges

- Tim Lange
- Professor Nutrition
- University College London

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National Diet and Nutrition Survey

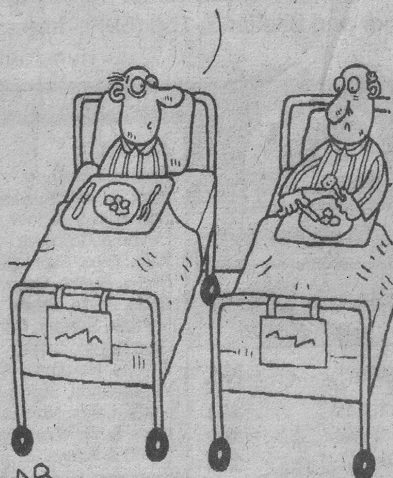


- 84% of women fail to achieve the RNI reference nutrient intake for folic acid
- 74% of women are falling short on nutrients from their diet
- 80% decrease in intake of omega 3 fatty acids from fish
- 50% more saturated fats are eaten than the recommended level
- 15% of women and 13% of men fail to eat 5 fruit and vegetables daily

• Hoare J, et al 1999. The National Diet and Nutritional Survey: adults aged 19-64 years', Vol. 5 Summary Report, HMSO, London.

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I THOUGHT THE
BARIUM MEAL WAS
TASTIER THAN THE
CAULIFLOWER CHEESE



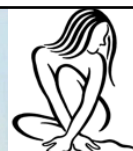
Trans fats are linked to an increased risk of endometriosis



- A large study has found that trans fats (hydrogenated oils) are linked to an increased risk of endometriosis and that Omega 3 rich foods are linked to a lower risk
- Women whose diets are rich in foods containing omega 3 rich-foods (such as oily fish, walnuts, flax seed oils, hemp oil, nuts and seeds, green leafy vegetables), might be less likely to develop endometriosis, whilst those women whose diets are heavily laden with trans fats might be more likely to develop the disease, (manufactured cakes, biscuits, pastries, confectionery, puddings/desserts)
- 120,000 US nurses 25-42 years of age not diagnosed with endometriosis were tracked over 12 years. Those who developed endometriosis were eating diets higher in trans fats

Missmer SA, Chavarro JE, Maispeis S, Bertone-Johnson ER, Hornstein MD, Spiegelman D, Barbieri RL, Willett WC, Hankinson SE. A prospective study of dietary fat consumption and endometriosis risk. Hum Reprod 2010; Epub 2010 Jun 11. [Hand Fertility Clinic](#)

Vitamin E-binding protein afamin is significantly altered in the peritoneal fluid of women with endometriosis



242 reproductive age women in a case control study
Afamin levels were altered significantly in the peritoneal fluid of women with endometriosis compared with disease free controls, correlated with vitamin E levels, and are consistent with increased oxidative stress in the peritoneal cavity of women with endometriosis
Vitamin E is found in green leafy vegetables, avocado, extra virgin olive oil, nuts, seeds,

Seeber BE, Czeck T, Buchner H, Barnhart KT, Seger C, Daxenbichler G, Wildt L, Dieplinger H. The vitamin E-binding protein afamin is significantly altered in the peritoneal fluid of women with endometriosis. ESHRE presentation July 6-9, 2008 Barcelona, Spain. Fert Steril Pub. 17 June 2010 online.

Serum markers of oxidative stress in infertile women with endometriosis and controls



- Oxidative stress has been implicated in the pathogenesis of infertility related to endometriosis
- A positive association between advanced endometriosis stage and increased serum levels of hyperperoxides suggesting an increased production of reactive species in women with endometriosis III/IV
- This study showed decreased levels of glutathione
- Donabela FC, Andrade AZ, Rodrigues JK, Dib LA, Jordan AA, Navarro PA, Serum markers of oxidative stress in infertile women with endometriosis and controls Fert Steril S40:Vol94, Sept 2010.

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Oxidized lipoproteins are the alleged pain molecules in the peritoneal fluid of women with endometriosis



- The study for the first time identifies oxidized lipoprotein as an additional source of pain in women with endometriosis which can be treated with an antioxidant supplement
- They showed that antioxidant supplementation in women with endometriosis decreased both inflammatory markers in the peritoneal fluid and their pain scores
- The PF contained pain-inducing prostaglandins (PGF2) and the endometrial tissue was innervated with nociceptors
- Antioxidant supplements contain SeACE and must be yeast-free
- Santanman N, Fahrman C, Cook H, King B, Egleton BL, Dawley BL, Edwards School medicine, Marshall Univ. WV Fert Steril S144:Vol94, Sept 2010.

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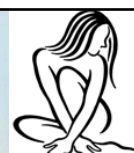
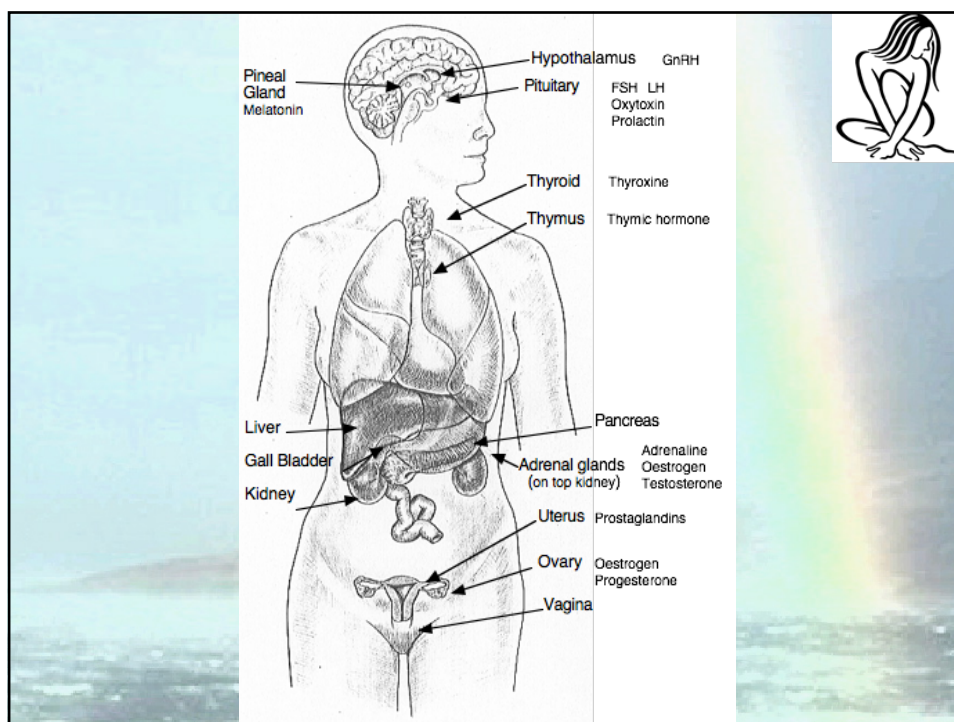
Series 2 Prostaglandins



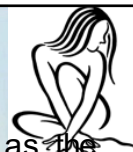
One piece of research does show that women with severe pain, infertility, and endometriosis had raised levels of PG Series 2 (from arachidonic acid) in their peritoneal fluid, and this could be the trigger for the inflammation

- Halme JK, Role of peritoneal inflammation in endometriosis associated with infertility. Endometriosis Today: advances in research and practice – The Proceedings of the Vth World Congress on Endometriosis, Yokohama, Japan Oct 1996 pp 132-135. Parthenon Publishing.

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Normal Menstrual Flow

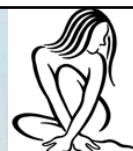


- Women often accept very heavy menstrual flow as the norm because that is what they have come to expect.
- Dr. Casmir Funk, the man who isolated vitamin B1 in 1912...described the effect of vitamin B complex in reducing the length of time of a woman's menstrual flow from five or six days to three or four days.
- He reported that menstruation came on 'completely without warning' (i.e. no premenstrual symptoms - PMS) while these women were on B complex vitamin therapy. He treated PMS successfully through nutrition, not drugs.

Fredericks C, 'Guide to Women's Nutrition: Dietary Advice for Women of all ages.' Perigree Books, New York. 1989

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Blood Flow



- The amount of blood lost at menstruation is usually 60ml (2 fl.oz)

Katchadourian H, 'The Biology of Adolescence', WH Freeman, San Francisco, p18, 1997

Your period should consist of

1. Red blood for 4 days
2. Small or no clots
3. No pain or very mild cramps

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Blood Clots



- Large blood clots may be prevented when vitamins C and E are used together with evening primrose and fish oils as
- 'these all have oestrogenic properties, and certain oestrogens produce changes in blood clotting'

• Ambrus J L, 'Estrogens and clotting factors', in Concensus on Menopause Research, eds PA Van Keep, RB Greenblatt, M Albeau-Fernet, MTP Press, Lancaster, 1976

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Painful Periods



1. the blood is brown sludgy/black tarry blood for 7+ days
2. you have excruciating pain
3. the blood is extremely heavy or flooding
4. If you are unable to work, pass out or vomit

See your GP and **insist** upon referral to a specialist endometriosis gynaecologist

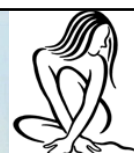
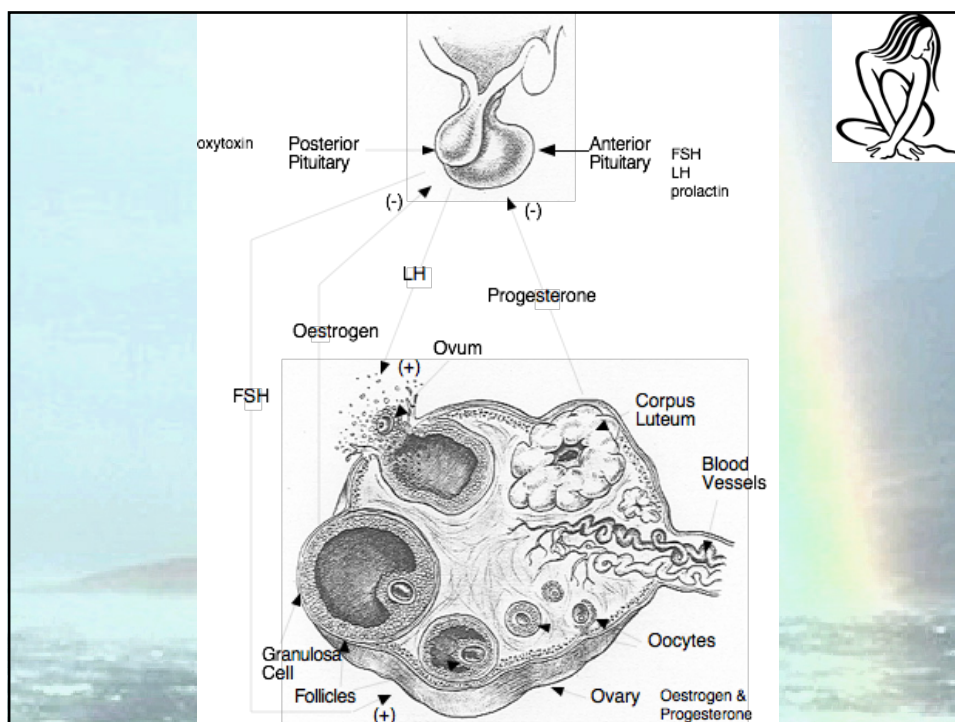
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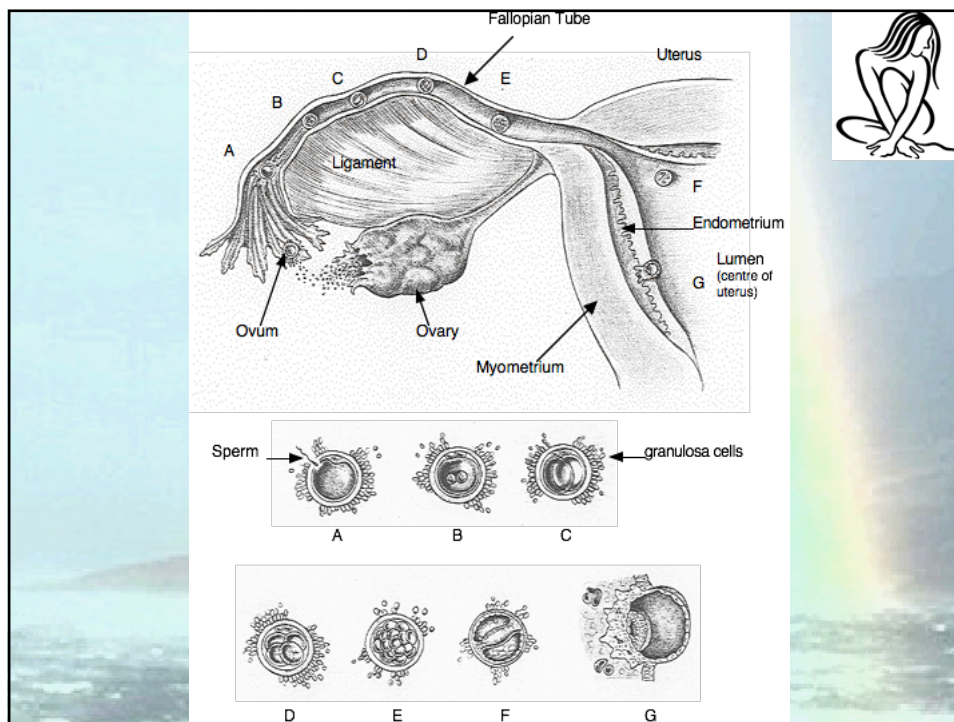
Cysts trigger factors



- Excess dairy intake and eggs are felt from research to trigger cysts in some women
- Mormon women were used as controls
- Research shows that B vitamins aid the ovaries to control excess oestrogen, but sugars reduce the ability of B vitamins to work
- Fredericks C. *Guide to Women's Nutrition* Perigree, New York 1989
- High copper levels are linked to ovarian cyst formation

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What causes pain and inflammation?

1. Blood vessels dilate
2. Blood flow increases
3. Area goes red and inflamed
4. Mast cells release histamine and prostaglandins PGE2 which burn
5. Histamine tightens muscles/contracts
6. Blood vessels leak fluid into spaces between cells - fluid retention/swelling

Nutrients Known to Relieve Pain

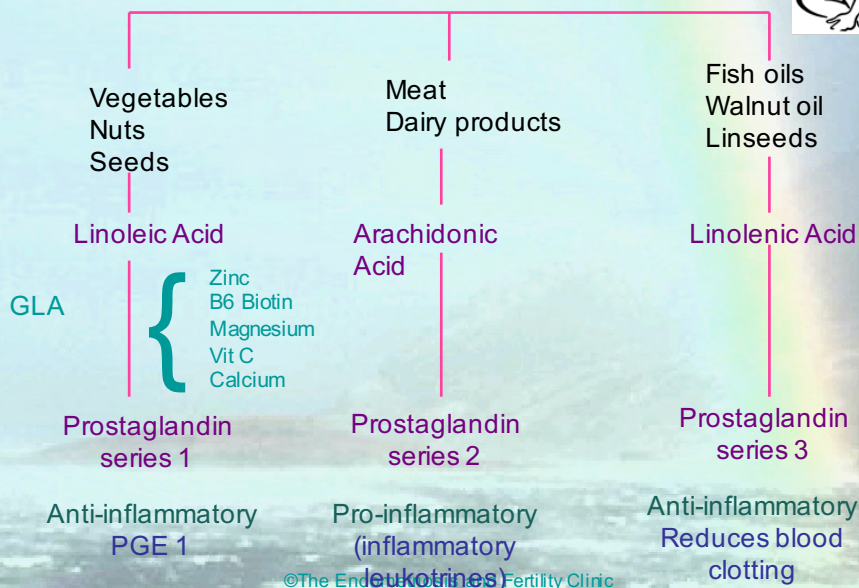
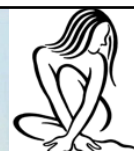


- Vitamin C
- Vitamin E
- Vitamin K
- Zinc and selenium
- Essential Fatty Acids
- B1 + B6 + B12
- Magnesium
- DL Phenylalanine

Mills, D. 'The value of nutrition in the management of pain due to endometriosis', in Progress in the Management of Endometriosis, Proceedings of the 4th World Congress on Endometriosis, ed. EM Coutinho, Parthenon Press, London, pp409-20. 1994

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Fats and Oils



Fish Oils



Research looking at the effects of fish oils on endometrial implants showed positive results in that the sites of endometrial tissue shrank when fish oils were fed to rabbits with surgically induced endometriosis.

• Covens A, et al. The effect of dietary supplementation with fish oils fatty acids on surgically induced endometriosis in the rabbit. *Fertility and Sterility* 1988;49:696-703.

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Omega 3 and Omega 6 essential fatty acids and pain reduction



- In a group of Danish women, a higher intake of omega 3 fatty acids or a higher ratio of omega 3/omega 6 fatty acids was associated with reduced menstrual pain.
- Deutch B. Menstrual pain in Danish women correlated with low omega 3 polyunsaturated fatty acid intake. *Eur J Clin Nutri* 1995;49: 500-16
- Women should reduce their saturated and trans fatty acid intake by half - then oestrogen levels will be around 20% lower
- Use oily fish, nuts and seeds, dark leafy vegetables, cold-pressed extra virgin olive and walnut oils

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NUTRIENTS TO RELIEVE PAIN



- Vitamin C inhibits secretion of prostaglandin's which trigger inflammation ¹
- 300iu per day of vitamin E has shown to reduce muscle cramps and pains in the lower back ²
- Vitamin E also protects lysosome membranes from histamine damage and serotonin damage ³

1. Kornhansen E. *et al. Formular for Life*. William Marrow, New York, 1989
2. Cathcart RF, *et al.* Leg cramps and vitamin E. *J Am Med Assoc.* 1972, 219:316-17
3. Kammaurs M. Anti-inflammatory effects of vitamin E. *J Vitaminol* 1972, 18:204-9

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NUTRIENTS TO RELIEVE PAIN



- When vitamin B12 is taken with B1 and B6 they can produce significant dose-dependent pain relief and inhibit inflammation, comparable to the action of standard analgesic treatments in orthodox medicine, but without the side effects

Greenwood J, Optimum vitamin intake as a factor in the preservation of disc integrity, *Med Ann DC*, 33: 274, 1964

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Proanthacyanadins



- Anti-inflammatory effects
- Flavonoids
- Berry fruits, grapeseed, pine bark-pycnogenol, red wine
- Increase vitamin C levels in cells
- Decrease capillary wall leakage
- Scavenge free radicals/prevent damage at cell wall

Masquelier J, Pycnogens: Recent advances in the therapeutical activity of procyanidins. Nat Prod Med Agents, 1981; 1:243-256

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Nutrient Depletion



- NSAIDs deplete the body of folic acid and iron
- OCP deplete the body of folic acid, vitamin B2, vitamin B6, vitamin B12, vitamin C, magnesium and zinc
 - Pelton R, LaValle JB, Hawkins EB, Krinsky DL, 'Drug-Induced Nutrient Depletion Handbook. 1999.Lexi-Comp. Clinical Reference Library. P419, 420, 424.
- OCP 10 years age to when ?
- Take a basic multi-vitamin-mineral alongside the OCP to balance the depletion

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Bowel Health

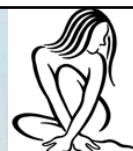


- Every tissue in the body is fed by the bloodstream which is supplied by the bowel
- When the bowel is dirty, the blood is dirty and so are the organs and tissues
- It is the bowel that must be cared for first

Lindsay Duncan
Clinical nutritionist

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Gut Flora



- 2-4 lbs of gut bacteria live in the intestines
- 100 trillion organisms make up this flora
- 400-500 different species provide an active metabolic action equivalent to the liver
- 10^{10} immunoglobulin producing cells per metre of small bowel account for 80% of all immunoglobulin cells in the body
- They provide a protective atmosphere and are a critical factor in immune stimulation
- Antibiotics, oral contraceptives, hormone replacement therapy and steroids, non-steroidal anti-inflammatories and aspirin all disrupt gut flora

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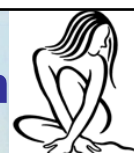
Stool Findings



- 73% Gluten sensitivity
- 78% Decreased beneficial bacteria
- 26% Yeast overgrowth
- 46% Resistant yeast
- 68% Pathogenic bacteria
- 73% Antibiotic resistance

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The Immune/Digestive System Link

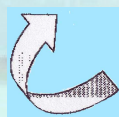


Healthy gut flora is the key to good health

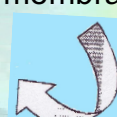


Immuno-globulins needed for immune system to fight infection

Gut flora produces B vitamins for gut membrane



Gut membrane produces 80% of body's immuno-globulins



SHBG binds to cell receptors to aid oestrogen excretion

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Lactobacillus acidophilus and oestrogen



- This is crucial to inhibit the faecal bacterial enzyme which converts oestrogen to more toxic forms
- Acidophilus helps reduce the re-absorption of excreted, detoxified oestrogen
- Soluble fibre absorbs degraded oestrogen and helps eliminate them from the body
- e.g. pectin in fruits, alginates in seaweed, oat bran, vegetables, nuts, seeds

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Gastrointestinal flora and the liver



- The liver detoxifies oestrogen via attachment of glucuronic acid to oestrogen and excreting it in the bile
- Beta-glucuronidase is a bacterial enzyme and it uncouples the bond between the excreted toxin and glucuronic acid - (which can increase cancer risk)
- The activity of this enzyme can be reduced by establishing proper bacterial flora using a probiotic of 4 billion viable L acidophilus and B bifidum
- Eat foods such as onions, asparagus, bananas, maple syrup to encourage good gut flora

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Control of oestrogen is a nutritional process disturbed by:

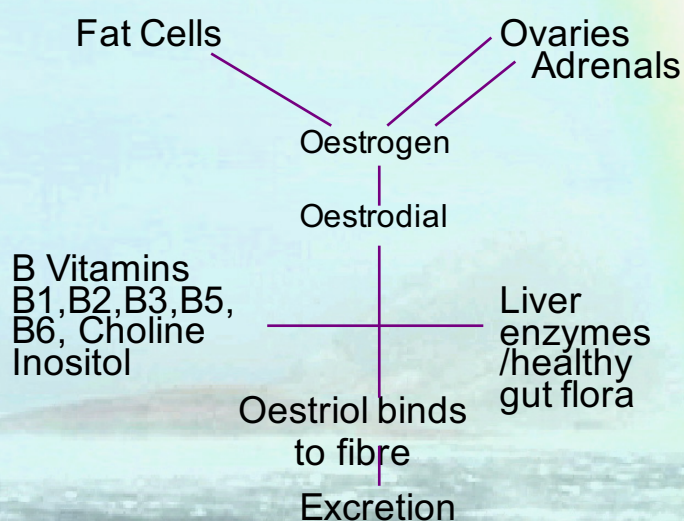


- Lack of vitamin B complex, B1 B2 B3 B5 B6 Choline Inositol (Eat Green Vegetables)
- Too little protein - eat 30gm per day - legumes, nuts, seeds, white meat, fish, wholegrain cereals, non-bovine dairy food, organic eggs
- Too much refined sugar = deficiency of B3 zinc and chromium = malfunction of blood sugar levels = Hyperinsulinism PCO?Endo?

Fredericks C. *Guide to Women's Nutrition* Perigree, New York 1989

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Oestrogen Breakdown



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Factors which Raise Oestrogen Levels



- Excess wheat intake
- Excess soya intake
- Excess citrus fruit intake
- Excess vitamin C intake
- Excess folic acid intake
- Excess Korean ginseng intake
- Environmental levels of PCB's, dioxins, hormones in meat and dairy foods
- Too little fibre intake
- Too little protein intake
- Too little B vitamin intake

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Vegetarian diet and oestrogen metabolism



- Vegetarian women excrete 2-3 times more oestrogen in their stools and have 50% lower free oestrogen in their blood compared to meat eaters
- High fibre diets may help explain the lower PMS symptoms as excess oestrogen binds to soluble fibre then it can be excreted from the body

Goldin BR et al, 1982 NEJM, 307, 1542-1547

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Cruciferous vegetables and oestrogen control



- Broccoli, Brussel Sprouts, Cabbage
- Contain Indole -3 carbinol (I#C) which prevents the receptor binding of 'stronger' oestrogens
- Sex Hormone Binding Globulin (SHBG)
- Controls oestrogen and testosterone
- Phytoestrogens stimulate SHBG
- Vegetarians have greater faecal excretion of oestrogens

Martin HE, et al. 1996 Life Science, 58, 429-436

Goldin BR et al, 1982 NEJM, 307, 1542-1547

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Indole-3-carbinol (I3C)



- Glucosinolates such as indole-3-carbinol (I3C) found in the brassica vegetables (cabbage, kale, Brussel sprouts, cauliflower) can upregulate the activity of CYP1A1, thereby increasing the levels of the precursor for 2-methoxyestrone and providing a powerfully protective anti-oestrogen

- Hays B. 2005. Female Hormones: the Dance of the Hormones, part 1. In. D.Jones (ed). The Textbook of Functional Medicine. Gig Harbour, WA. Institute for Functional Medicine

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Dioxins and Sub-fertility



- In Belgium Koninckx et al (1994) noted that the incidence of endometriosis in women presenting at clinics with infertility is 60-80 per cent
- The TCDD concentrations in the breast milk are among the highest in the world (WHO environmental series (1992)').
- This association between human endometriosis and PCB's was first suggested by Gerhard and Runnebaum in 1992.

- Rier Set al. 2001. 'Serum levels of TCDD and dioxin-like Chemicals in Rhesus Monkeys Chronically Exposed to Dioxin: Correlation of Increased Serum PCB Levels with Endometriosis'. *Toxicological Sciences* 59, 147-159

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Oestrogenic pesticides in the foods we eat



- Dioxins, polyhalogenated biphenyls PCB's, hexachlorobenzene, dibenzofurans
- Phthalates and bisphenol A are chemicals used to soften plastics
- These can concentrate in the prostate and gonads and lead to health problems
- Meat and dairy foods should be free of synthetic hormones and pesticides
- In atmosphere they come from incinerators and factories, fall from sky so even organic vegetables have them on the outside. Inside GM crop seeds
- Choose to eat pasture fed meat, organic when possible

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Avoiding Pesticides in Foods



- Cut down on full cream milk and high fat foods, e.g. butter, cheese, meats
- Reduce processed food as it contains hidden trans fat
- Fish from unpolluted water?
- Peel all vegetables even organic as dioxins stick to the oil skin surfaces
- If you diet do it gradually otherwise you release too much dioxin

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Normal Menu



- Breakfast - cereal, milk, toast and jam, tea
- Mid Morn - chocolate and coffee
- Lunch - cheese sandwich, cake
- Mid Day - tea and biscuits
- Dinner - pizza and Cola, ice-cream
- Supper - crisps

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New Food Choice



- Breakfast - fresh fruit smoothie, herb tea
- Mid Morn - nuts and water
- Lunch - Salmon Salad, fruits, tea with lemon
- Mid Day - oat and nut bar and water
- Dinner - Chicken in lemon sauce, Broccoli, Grilled tomato, New potatoes, Berries and Crème fraiche
- Supper - seeds and elderflower cordial

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Free oxidising radicals



- These are produced naturally in the body and also by burnt food, fried foods, industrial fumes, barbecued food, tobacco smoke, household chemicals
- They cause damage to cell membranes and DNA
- SOD superoxide dismutase - releases an electron to neutralise FoR - copper, zinc, manganese dependent
- Glutathione peroxidase gives up an electron and stops FoR damage - selenium, riboflavin
- Catalase also neutralises FoR - iron

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Antioxidant Nutrients



- Selenium
 - Vitamin A
 - Vitamin C
 - Vitamin E
 - Co enzyme Q10
 - L taurine
 - L cysteine
 - L glutathione
- Copper
 - Manganese
 - Zinc
 - Iron
 - Riboflavin

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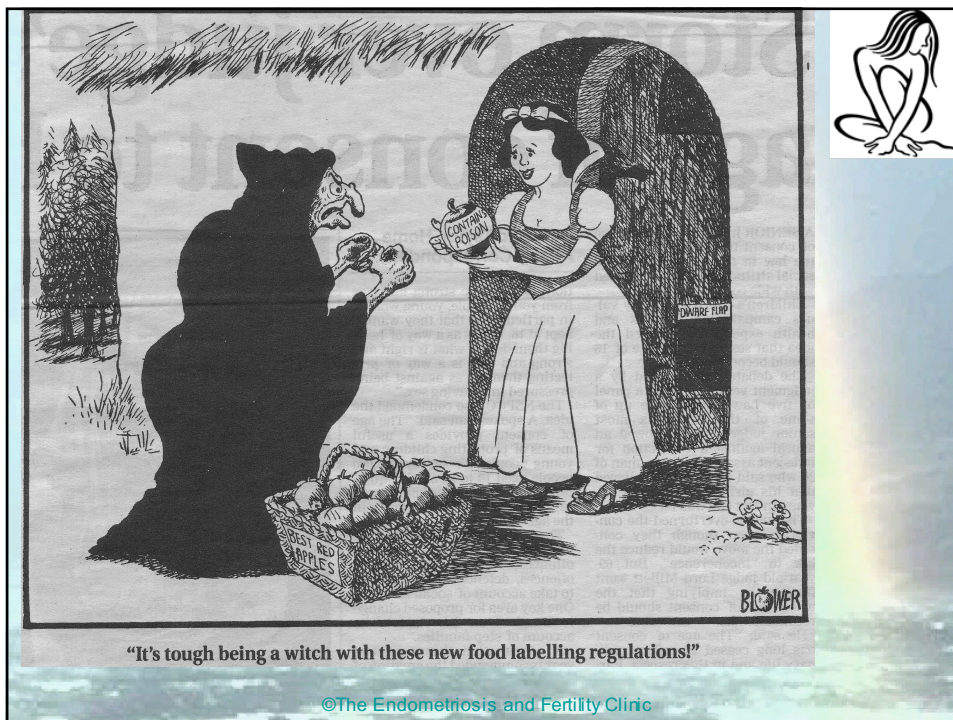
Women with Endometriosis are more likely to have:



- Auto-immune disorders - lupus, RA, MS
- CFS - 100 times more likely
- Fibromyalgia - twice as likely
- Hypothyroidism - seven times more likely
- Asthma, allergies and eczema

Sinau N, et al, 2002 Human Reproduction, 17, 10, 2715-24

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96% Food allergies and intolerances in women with endo

- One man's meat is another man's poison
- Try a 1 month exclusion diet
- Avoid coffee and citrus as major gut irritants
- Avoid aspartame, mono-sodium glutamate

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Thyroid disease and endometriosis



- Auto-immune diseases such as those involving the thyroid, are thought to be involved in fertility
- “44% of women who miscarried were seen to have antibodies implicated with anti-cardiolipin, it has also been speculated that thyroid auto-antibodies are involved with reproductive failure”
- Oestrogen and thyroxine are antagonistic hormones
- “Thyroid auto-antibodies are used to predict women at risk for miscarriage”

Singh A, Dantas ZN, Stone SC and Asch RH, 'Presence of thyroid anti-bodies in early reproductive failure: biochemical versus clinical pregnancies' in *Fert & Steril*, 63 (2): 277-81, 1995

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Hypothyroid



- Symptoms: low thyroid, weight gain, low energy, hair loss, insomnia, thickening skin, constipation
- Reduce goitergenic foods - turnip, cabbage, soya, wheat, tapioca, peanuts, pine nuts, millet, broccoli, carrots, mint, horseradish, cauliflower, spinach, pear, peaches
- Eat cooked not raw

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Infertility and Gluten



- Women diagnosed with coeliac disease may fall pregnant but have increased rates of miscarriage
- Men with coeliac disease show reduced male hormone levels and reduced sperm count
- Both have immunological and hormonal abnormalities
- Coeliac disease should be tested for and ruled out with infertility
- Thyroid disease should also be tested for and ruled out

- Jones PHR. Celiac Disease: a hidden epidemic.
- Collins 2006

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Wheat Intolerance / Gluten Sensitivity



- Vary carbohydrates for 1 month
- Avoid wheat if you suffer from abdominal bloating, constipation or diarrhoea, mucus on stools (malt, maltodextrin, dextrin, rusk, bran, etc)
- Try small amounts of oats, as they contain low gluten levels - avenin
- Avoid gluten: wheat, rye, barley, spelt, kamut
- Eat a variety of rice, corn, buckwheat, quinoa, millet, tapioca, arrowroot, chestnut and banana flour

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Coeliac Disease

a gluten-free diet is the cure



- Avoid all gluten foods ALWAYS
- Diarrhoea, constipation, IBS, malabsorption, crypt hypertrophy, inflammatory bowel, protein-losing enteropathy, malignancy-bowel, thyroid cancer
- 1:100 adults 1:60 children
- Unexplained reproductive problems in men and women
- Dermatitis Herpetiformis, Thyroid disease, Hashimoto Disease, Graves disease, Sjogrens syndrome, Addison's disease, Auto-immune liver disease, Cardiomyopathy, Alopecia areata, Lupus, Rheumatoid arthritis, Fibromyalgia, Aphthous Stomatitis, Multiple Sclerosis, ADHD, Dental enamel defects, Raynaud's Syndrome,
- Auto-immune disease patients have a 25% chance of having coeliac disease.
- The risk factor is reduced after 3-5 years on a gluten-free diet

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Milk Intolerance



- Vary dairy or avoid bovine dairy foods TYPE A1 milk for 1 month if you suffer indigestion, diarrhoea, mucus/blood on stools.
- L-Histidine the amino acid in the A1 milk protein triggers inflammation
- Try using goats, sheep, buffalo TYPE A2 milk
- L-Proline the amino acid in this A2 milk reduces inflammation
- If problems persist use a mixture of soy, rice, oat, almond, hazelnut milk products
- Casein the protein in milk, A1 beta casein in bovine milk, seems to cause digestion problems for sensitive people
- Lactose the sugar in milk cannot be digested if you are missing the enzyme lactase

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Health Strategies



1. Breakfast like a King, lunch like a Prince, dinner like a pauper
2. Regular 3 unhurried meals, 2 snacks a day
3. Shopping frequently for fruits and veggies
4. Daylight walk for zinc absorption to aid ovaries
5. Unrefined, cold-pressed unhydrogenated oils e.g. extra-virgin olive
6. Drinking plenty of fresh filtered or mineral water.
7. Chose organic or pasture fed meat, not from pellet fed animals kept in sheds
8. Organic, as fresh as our Hunter-Gatherer ancestors ate.

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Foods to Enjoy



- Vegetables of all kinds: dark green leafy, legumes (peas, beans, lentils), red coloured veg, roots and tubers
- Raw fresh fruits in moderation, especially berries
- (avoid orange/grapefruit)
- White and oily deep sea fish 3X wk, and organic lean meat pasture-fed, organic eggs, low tofu
- Snack on nuts, seeds, sugar-free bars, corn tacos, popadoms, fruits, crudites
- Hunter-Gatherer foods - high in nutrients

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Foods to Reduce or Avoid



- Chocolate, sweets, candies, ice-cream
- Wheat? - bread, cakes, cookies, pasta
- Bovine dairy? - cheese, cream, milk
- Coffee, alcohol, fizzy drinks, aspartame, MSG
- Red meat, pork, lamb, beef - use organic only
- Hidden trans-fats in refined foods
- Edible-food-like-substances from Labs

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Important Phytochemicals



- Dark green leafy vegetables -flavonoids,indoles
- Red vegetables -carotenoids
- Blue-black-red berries/fruits- proanthocyanidins
- Oily and white fish - eicosapentanoic acid
- Lean meat free from hormones ie.organic preferred
- Nuts, seeds, pulses - ellagic acid
- Fish oils, linseed, olive- unhydrogenated
- Phytochemicals are protective
- Lycopene - carotenoid antioxidant - does not produce Vit A in the body, but is protective against cancer
- Canthaxanthin - carotenoid family, protects against cancer
- Lutein - antioxidant carotenoid in tomato, red pepper, pink grapefruit

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Nutritional Supplements

3-6 months - whilst correcting the diet.

Nutrients must be yeast, wheat, gluten, dairy and sugar free and natural (not petroleum based)

1. Multi-vitamin/mineral, (low or no vitamin A 2000iu only)
2. Evening primrose and fish oils 1-2000mg
3. Magnesium 300mg (to relax smooth muscle, promote sleep, calm nerves)
4. Acidophilus 4 billion (to rebalance gut flora)

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Supplements to aid digestion

- Slippery elm tablets to heal the gut membrane
- Vegan digestive enzyme with dinner
- Caprylic acid, Pau D'Arco, Biocidin
- Vitamin C with bioflavonoids 500mg
- Vitamin E 300iu
- Proanthocyanandins or Turmeric to reduce inflammation

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Nutrition Consultations



- 1st One Hour - Nutrition Questionnaire, 15 page patient pack, Patient History, MYMOP2 - Measure Yourself Medical Outcome Profile from MRC UK
- 2nd Half Hour - Review of Diet and Supplements, Making changes according to progress, MYMOP
- Tests - Sweat analysis, Lactose and Gluten intolerance, Hormone profile, Stool analysis

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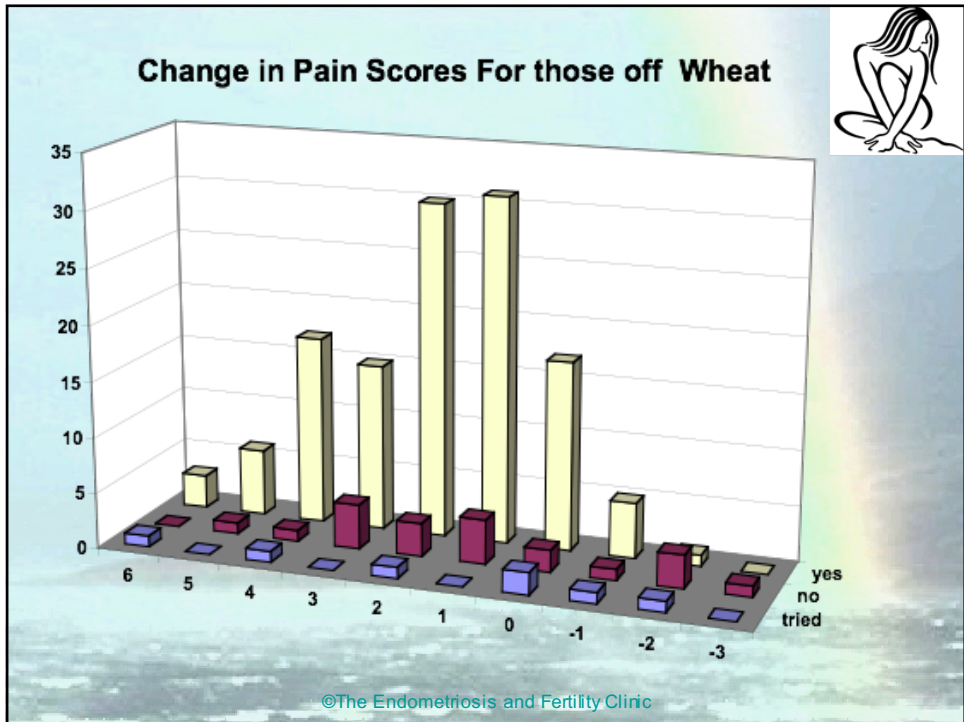
MYMOP

Measure Yourself Medical Outcome Profile



- MRC Clinical Audit Dr. Charlotte Paterson
- Symptom 1
- Symptom 2
- Activity
- Well-being
- Symptom 3 (from 2nd appointment)
- Medications
- Nutritional Supplements
- Dietary changes and adverse events

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Results 198 Women

Measure Yourself Medical Outcome Profile



- Over 6 months the women reported an average 50% reduction in their pain scores
- 34% reported infertility as a problem
- 52% of the sub-fertile group fell pregnant
- 26% of the rest fell pregnant
- 82% reported adverse reactions from wheat
- 55% reported adverse reactions from bovine dairy food

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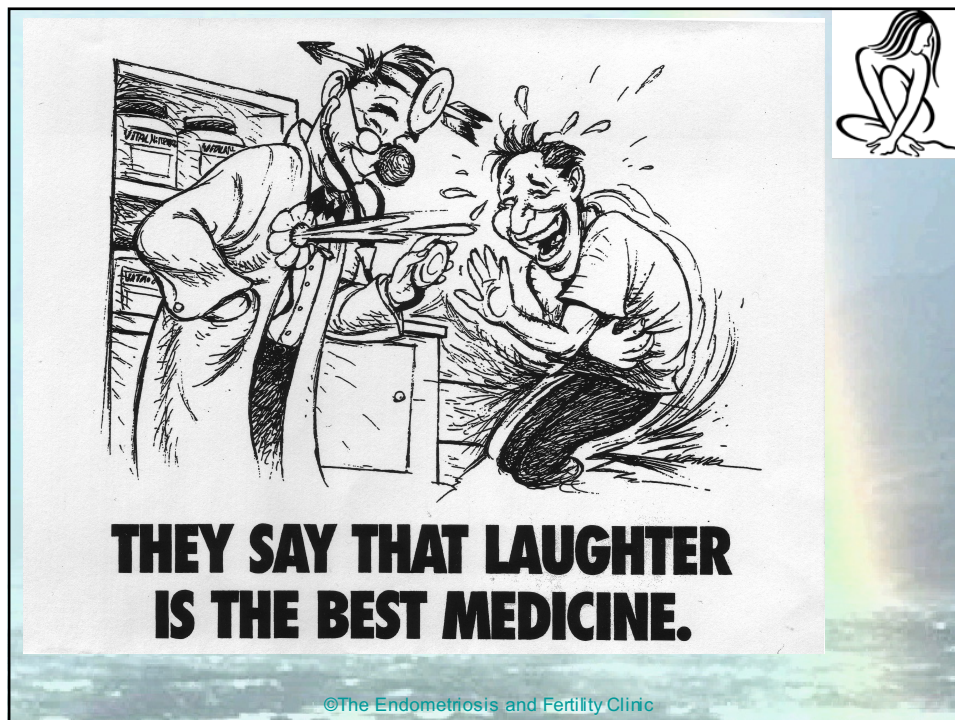
Results 100 Women

Measure Yourself Medical Outcome Profile



- Over 3 months 93% of the women reported a reduction in pain, 85% after 6 months
- 41% reported infertility as a problem
- 24.39% of the sub-fertile group fell pregnant
- 11.8% of women fell pregnant who did not report fertility as a problem
- 70% reported adverse reactions from wheat
- 66% reported adverse reactions from bovine dairy food

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From Lynne in Scotland

- My message is quite simple, healing through nutrition works, thanks to Dian I have what everyone wants. I have my life back and so much hope for my future

dian@endometriosis.co.uk

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Endometriosis SHE Trust UK



- Silver Oaks Farm
- Waldron
- Heathfield
- East Sussex
- TN21 0RS
- Please send a SAE A5 size for your leaflet pack
- JOIN US

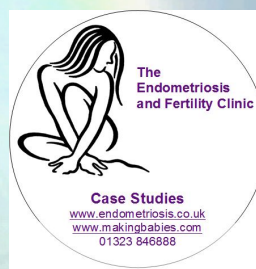
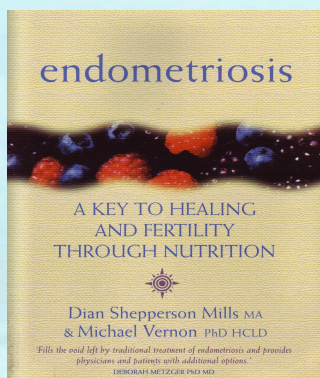
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Healing With a Nutritional Approach

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www.endometriosis.co.uk Clinic 0207 631 0156

www.makingbabies.com



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Barker Hypothesis



- The concept that exposure of the foetus to adverse conditions in the womb may result in the developmental adaptation that permanently alters the structure, physiology, metabolism and postnatal growth of the offspring. This could trigger epigenetic changes in the ova, sperm, foetus and blastocyst.
- Erkkisson JG, et al. The Barker Hypothesis. Diabetologia 2003. 46:190-94
- Transgenerational changes can affect three generations, grandmother to daughter to granddaughter.
- What did our grandmothers eat, drink, smoke when pregnant with your mother?
- What environmental toxins were around her? The egg that is you was formed then

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Environmental Toxicants



- Alterations in the mother's thyroid status is thought to alter development of the reproductive tract in the foetus
- Sharara F, Seifer D, Flaws J. Environmental toxicants and female reproduction. Fertility and Sterility 1998;70(4):613-22
- Studies show that the children of hypothyroid mothers may be more sensitive to sex hormones
- Mandl AM, Factors influencing ovarian sensitivity to gonadotrophins. J Endocrinology 1957;15:448

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Healthy Nutrition Healthy Babies



- Nutrition during pregnancy has epigenetic, multi-generational effects just as toxins do

- Wynn AHA, Wynn M. The Case for Preconceptual Care in Men and Women. Bicester England ABA Publishers 1991:32-3

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MicroRNA cross-kingdom regulation



- Our bodies are highly integrated ecosystems and our understanding of co-evolution, a process in which genetic changes in one species trigger changes in another is in its infancy
 - Research in China is showing that genetic material from our food makes its way into the innermost control centres of our cells, taking charge of fundamental gene expression. Blood samples from 21 patients for the presence of microRNA from crop plants - rice, wheat, potato, cabbage. It was seen to alter cell function
 - Zhnag CY, Exogenous plant MIR168a specifically targets mammalian LDLRAP1: evidence of cross-kingdom regulation by MicroRNA. J Cell Research . 20 Sept 2011. Doi:10.1038/cr.2011.158
 - This has profound implication for mankind eating GM and nanotech foods
- What are you eating?

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