



**EFFECT OF
Yogic Practices
on Infertility
Related to
PCOD**

A research project under Guidance

of

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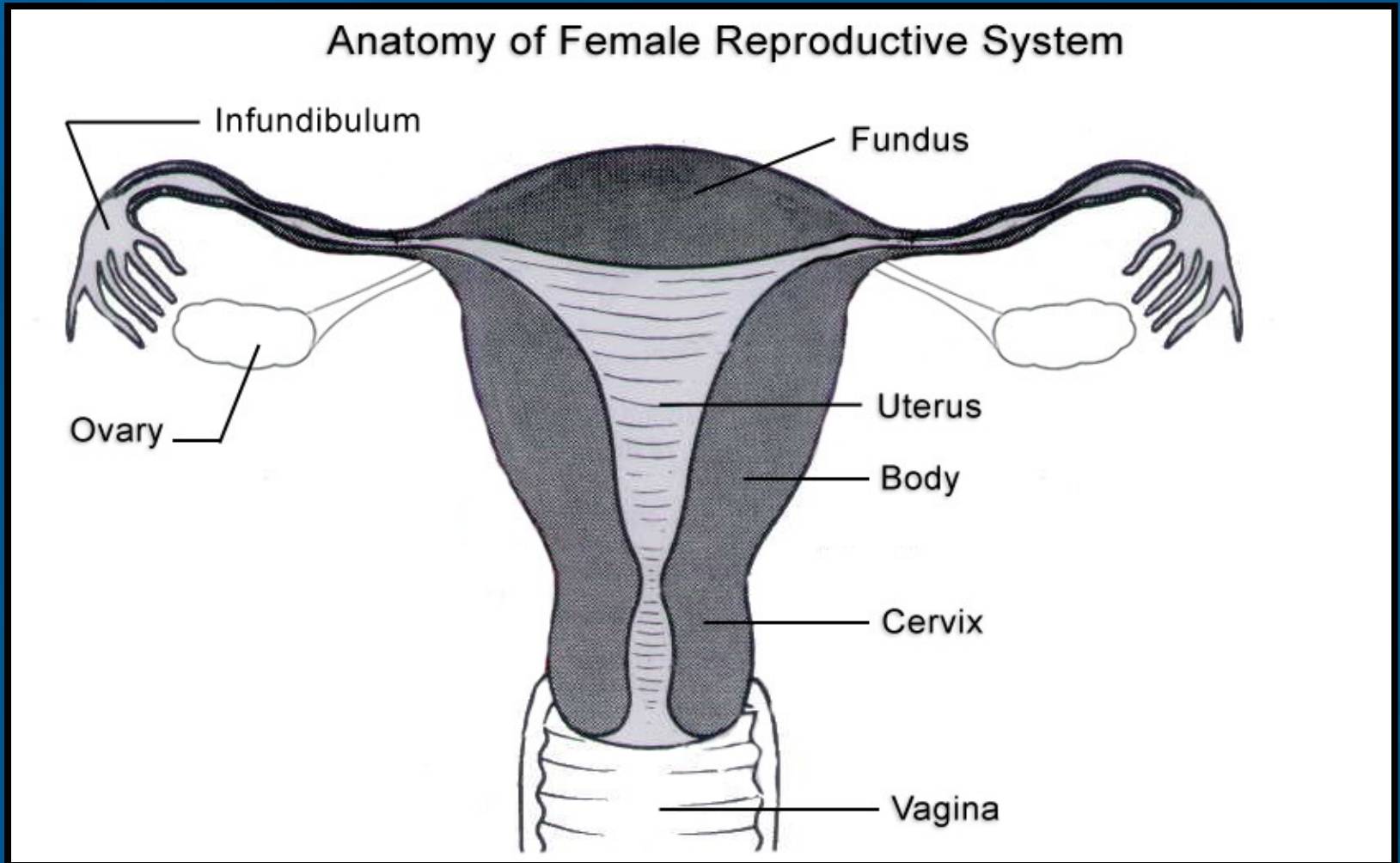
Defining.....

- **Infertility**
- **PCOD**
- **Yoga**
- **Then co relate the benefits of yogic practices for PCOD**

Infertility....

- Inability to conceive within one year in spite of an unprotected intercourse.
- Causes are many but ovulatory disorders are one of the most common reasons why women are unable to conceive, and account for 30% of women's infertility.

Physiology of ovulation



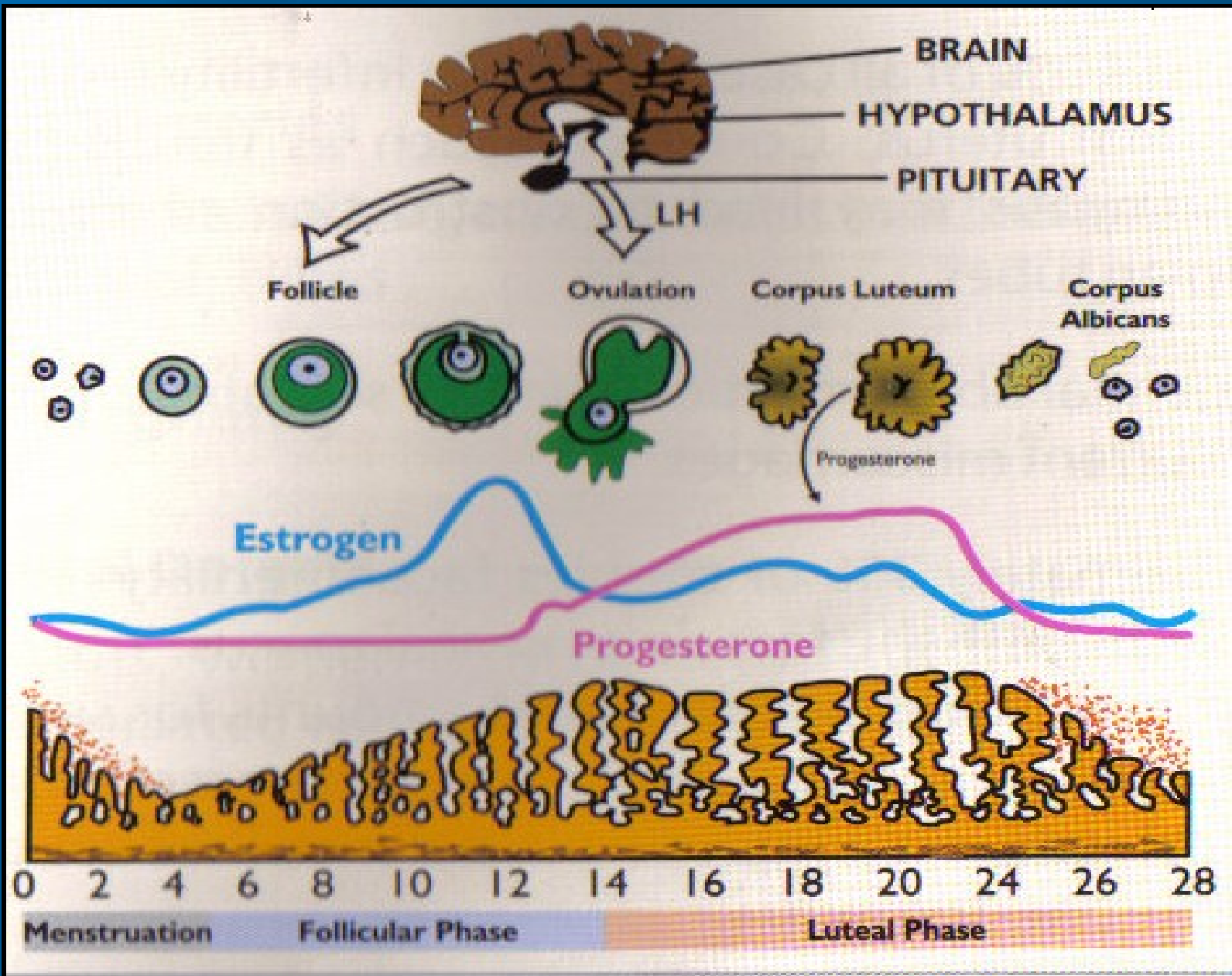
Ovulation is the process in the menstrual cycle during which there is a discharge of ovum by mature ovarian follicle in the ovary. Ovulation is the result of a maturation process that occurs in the hypothalamic-pituitary-ovarian (HPO) axis. It is under the control of neuroendocrine cascade that terminates in the ovaries. Any alteration results in a failure to release a mature ovum, leading to anovulatory cycles. Anovulation may be defined as the absence of ovulation due to immaturity, post-maturity, pregnancy, oral contraceptive pills or dysfunction of the ovary. Anovulation may manifest in a variety of clinical presentations, from luteal insufficiency to oligomenorrhea. Anovulation is not a disease but a sign of some major disease.

Ovulation

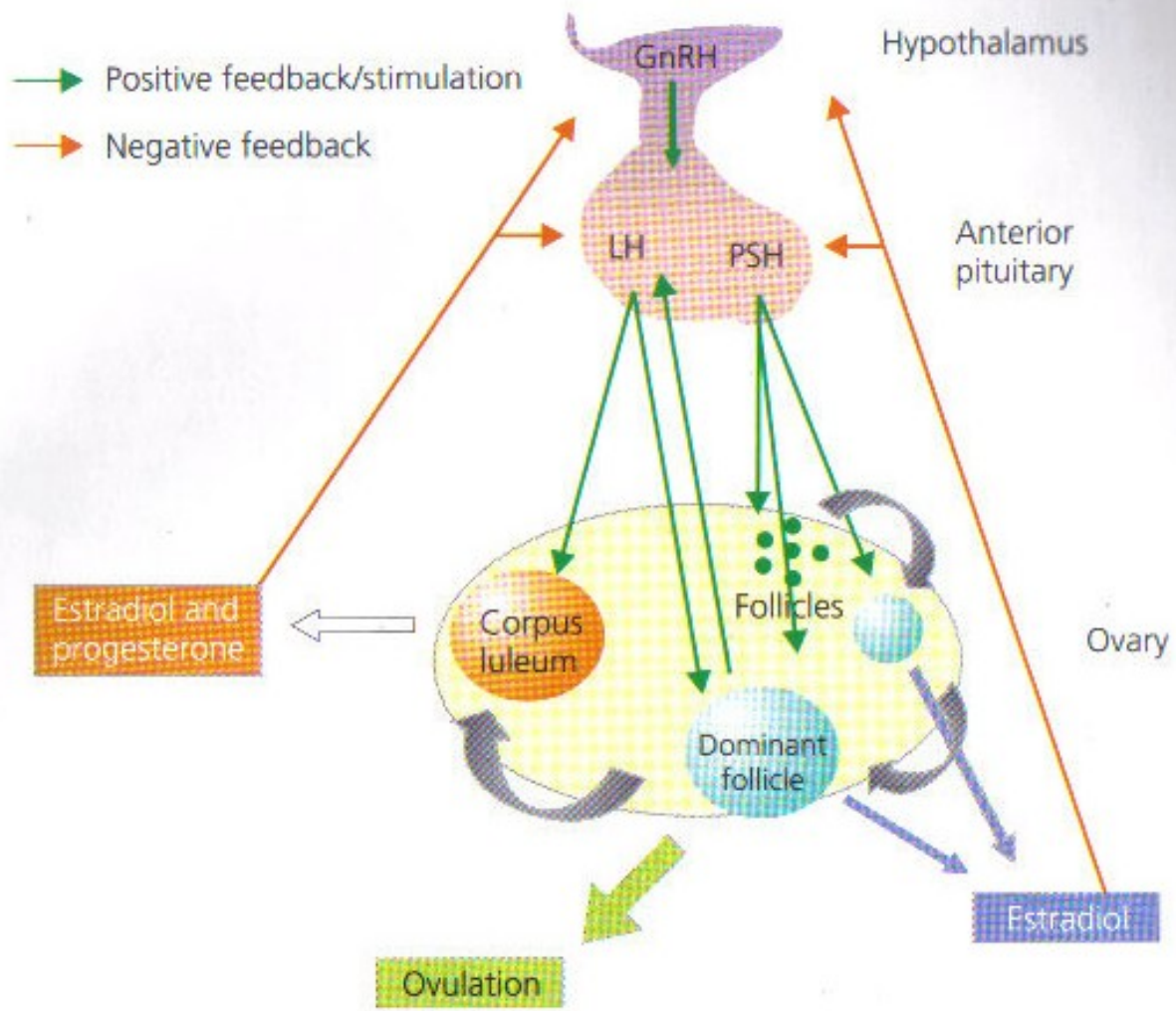
- Luteinizing hormone (LH) is the physiologic signal necessary for ovulation, which is mediated by a concomitant surge in estrogen
- Cohort of granulosa cells acquire the necessary receptors to respond to LH
- Approximately 16-24 hours after LH peak, ovulation occurs (with the extrusion of mature graafian follicles) and formation of corpus luteum.

Salient features

- Ovulation is the culmination of well-coordinated interplay between hormones and their appropriate receptors, proteolytic enzymes and prostaglandins acting in concert with one another, all directed by the HPO axis.
- The system is so sensitive that even the slightest alteration in any of these factors may lead to anovulation.

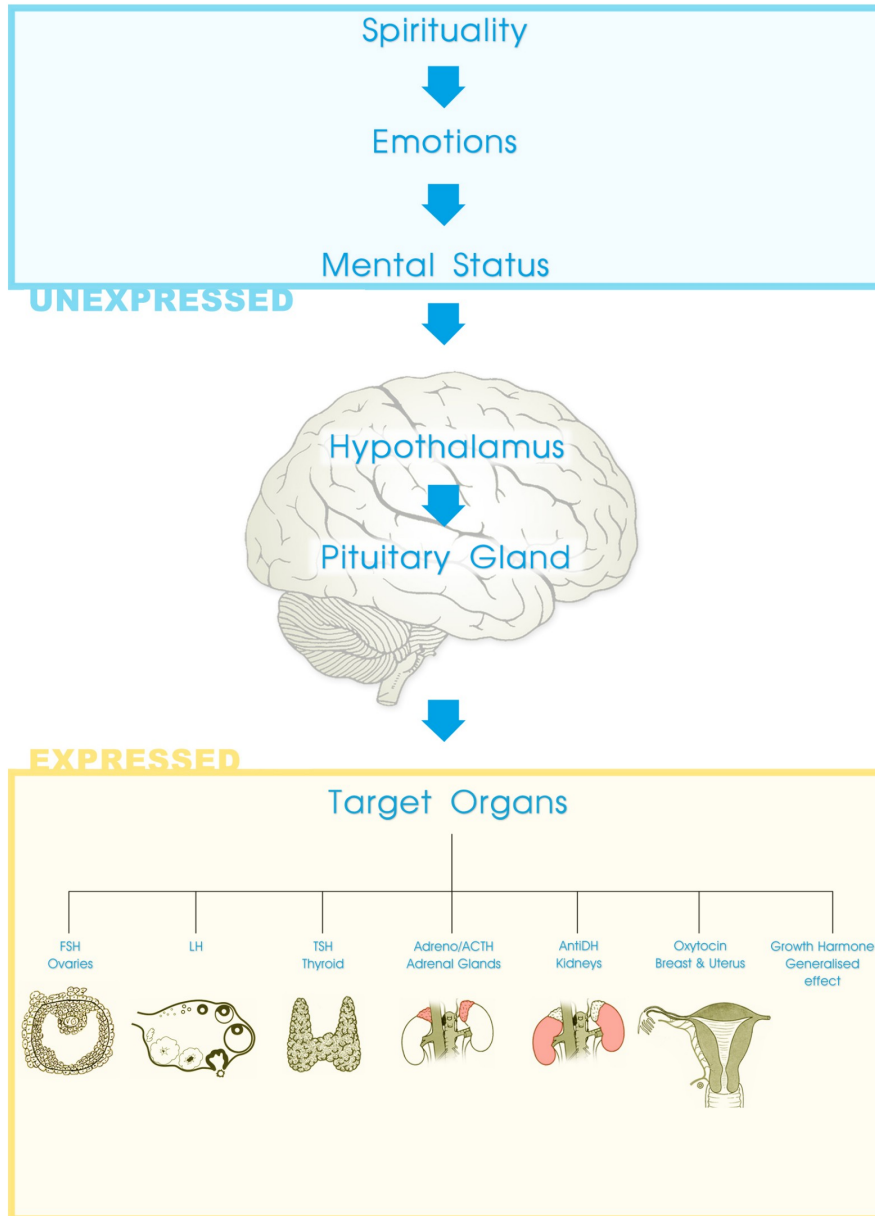


Menstrual Cycle and Ovulation



Feedback Mechanism in Ovulation²²

Effect of stress on H-P-O axis



One of the major causes of anovulation is PCOS

PCOS is the most common endocrinopathy in women of reproductive age, with a prevalence of approximately 4-6%. Recently reported figures are 20% to 33%

- **Cardinal features:** Hyperandrogenism and polycystic ovaries
- **Clinical features:** Menstrual irregularities, hyperandrogenism, hyperinsulinemia, and long-term metabolic disturbances, such as diabetes mellitus, cardiovascular disease, and dyslipidemias.

PCOS is a complex condition that affects the ovaries. The ovaries are bigger than average, and the outer surface of the ovary has an abnormally large number of small follicles. The follicles remain immature, never growing to full development or ovulating to produce an egg capable of being fertilized. In this, the woman rarely ovulates and so is less fertile. The symptoms of the disease are irregular periods, obesity and excess body hair.

Causes of PCOS

- Overweight
- Stress
- Irregular life style
- Faulty diet
- Genetic basis

Hormonal abnormalities

- Raised luteinising hormone (LH) in the early part of the menstrual cycle.
- Raised androgens (male hormones usually found in women in tiny amounts)
- Lower amounts of the blood protein that carries all sex hormone-binding globulin).
- Small increase in the amount of insulin and cellular resistance to its actions.

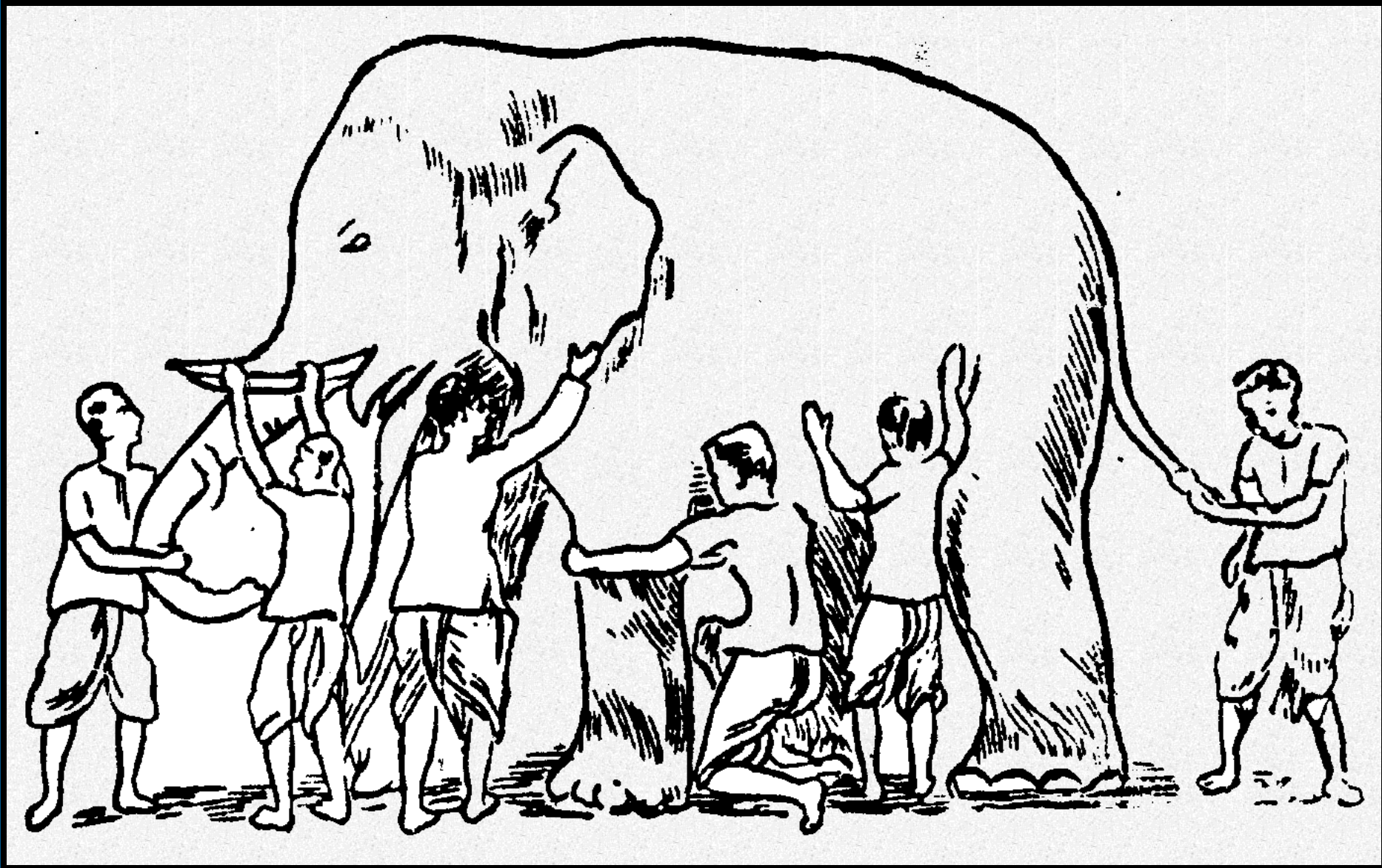
Treatment Options

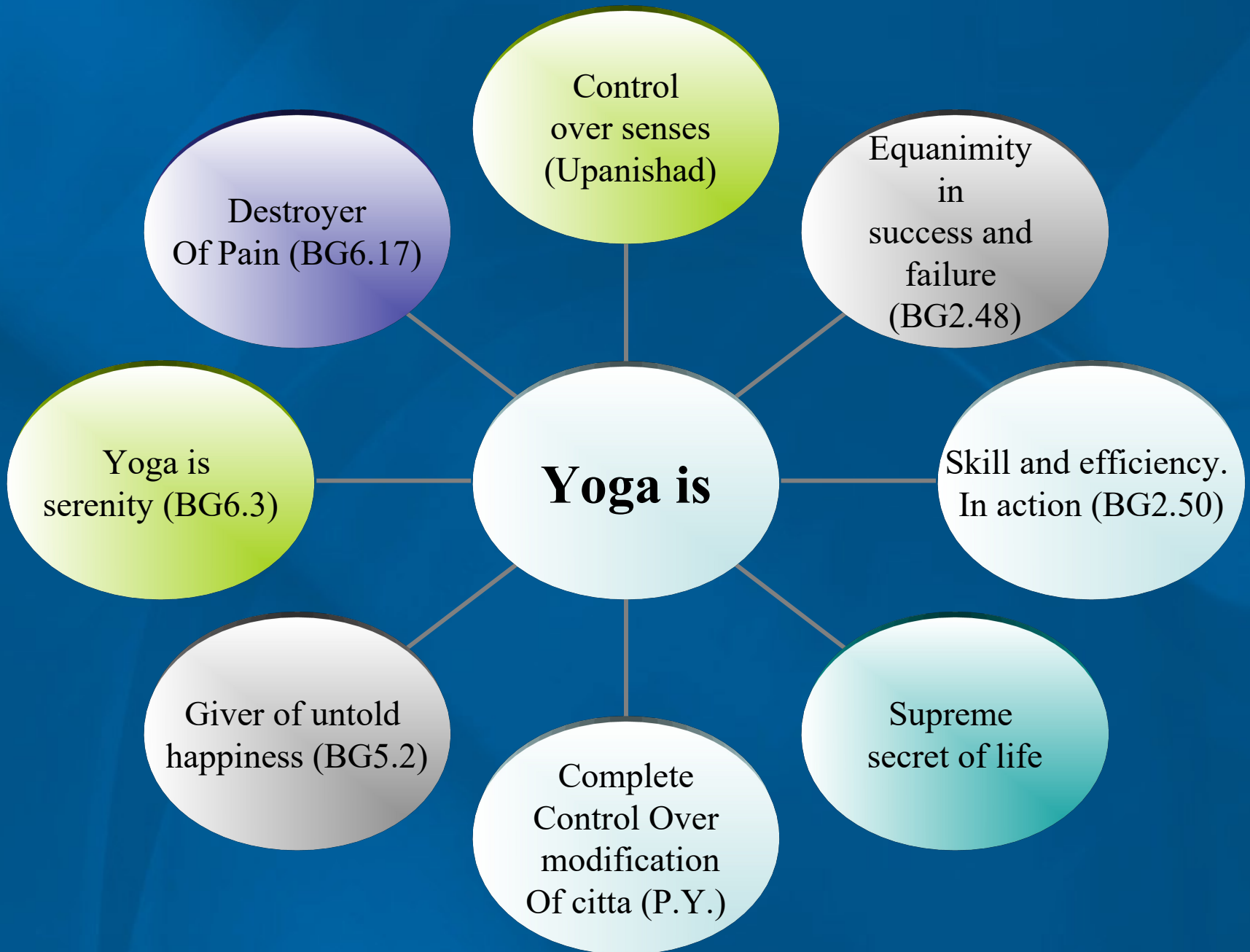
- Ovulation induction with tablets or injections
- Laparoscopy for PCO drilling
- Weight reduction / exercise
- Yogic practices

Yoga Sadhana



Yoga Is Perceived & Interpreted As...





Concept of Panchakosha



1. Annamaya kosha
2. Pranamaya kosha
3. Manomaya kosha
4. Vijnanamaya kosha
5. Anandamaya kosha

Relation of Stress with Obesity & PCOD

- High level of chronic stress brings about raised levels of steroids in blood.
- This results in increased fatty acid flux outside fat cells and inside muscle.
- This excess fat leads to stereochemical changes in the membrane receptors resulting in genesis of insulin resistance.
- Thus stress leads to a combination of obesity with raised serum triglycerides and raised blood sugar level.

Yoga Can Help in PCOD related infertility by many ways.

Correction of life style related stress

1. Control of emotions
2. Training Hypothalamic centers (S-E-M-H-P-O)
3. Treatment of Associated problems
4. Attitudinal change with changed food habits
5. Correction in hormonal status resulting in spontaneous ovulation or reduction in dosage of drugs required to induce ovulation.

Thus Yoga can be an effective means of heterostasis.

Effect Yoga practices on different levels

Level	Remedy	Effect
1) Physical	Asanas, Kriyas, Shawasana	reconditioning, cleansing, purifying loosening and relaxing
2) Mental	Pranayama	slowing, relaxing
3. Emotional	Mantra, Japa Devotional songs	Silencing, relaxing
4. Spiritual	Dharana, dhyana	Tranquilizing
5. Social	Counseling Satsang	Improving inter personal relationship
6. Dietary	Balanced, moderate Vegetarian diet	Controlling disease, changing thinking pattern

Effect of Yogic Practices

