

Introduction to Obstetrics and Gynecology

Introduction to Obstetrics and Gynecology

Core concepts, key terminology, and foundational principles for medical students and health?care professionals.

1. Scope of the Specialty

Discipline	Primary Focus	Typical Clinical Settings
Obstetrics	Pregnancy, childbirth, and the postpartum period	Antenatal clinics, labor & delivery units, maternal?fetal medicine centers
Gynecology	Health of the female reproductive system (uterus, ovaries, cervix, vagina, vulva)	Outpatient gynae clinics, surgical suites, cancer centers

- **Combined practice:** Most physicians are trained in both fields (OB?GYN) and manage women's health across the lifespan—from menarche to menopause and beyond.
 - **Sub?specialties:** Maternal?Fetal Medicine, Reproductive Endocrinology & Infertility, Gynecologic Oncology, Urogynecology, Minimally Invasive Surgery.
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2. Basic Anatomy & Physiology

Structure	Function	Clinical Relevance
Ovaries	Produce oocytes; secrete estrogen & progesterone	Disorders of ovulation, ovarian cysts, tumors
Fallopian Tubes	Transport oocyte; site of fertilization	Ectopic pregnancy, tubal factor infertility
Uterus	Implantation & support of embryo/fetus; menstrual shedding	Fibroids, adenomyosis, uterine malformations
Cervix	Passage for sperm; barrier to pathogens; dilates during labor	Cervical dysplasia, incompetent cervix
Vagina	Birth canal; microbiome reservoir	Vaginal infections, prolapse
Placenta	Nutrient/gas exchange; hormone production	Placental insufficiency, previa, abruption

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Structure

Function

Clinical Relevance

**Mammary
Glands**

Lactation

Mastitis, breast cancer

- **Hormonal regulation:** Hypothalamic?pituitary?gonadal axis (GnRH ? LH/FSH ? ovarian steroids).
 - **Menstrual cycle:** Follicular (estrogen?dominant), ovulation, luteal (progesterone?dominant), menses.
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3. Obstetric Care Continuum

Phase	Objectives	Typical Interventions
Preconception	Optimize health before pregnancy	Folate supplementation, chronic disease control, vaccination
Prenatal (Antenatal)	Monitor fetal growth, maternal wellbeing, detect complications	Routine visits (every 4?wks ? every 2?wks ? weekly), ultrasound, labs (CBC, glucose tolerance, TORCH)
Intrapartum (Labor & Delivery)	Safe progression of labor, fetal monitoring, manage emergencies	Cervical exam, partogram, electronic fetal monitoring, analgesia, operative delivery
Postpartum	Support recovery, lactation, mental health	Uterine involution assessment, contraception counseling, postpartum depression screening

- **Key milestones:** First?trimester dating scan, anatomy scan (18?22?wk), glucose tolerance test (24?28?wk), group B Strep screening (35?37?wk).
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4. Common Gynecologic Conditions

Condition	Pathophysiology	Presentation	First?line Management
Dysmenorrhea	Prostaglandin?mediated uterine contractions	Crampy pelvic pain during menses	NSAIDs, hormonal contraception

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Condition

Pathophysiology

Presentation

First-line
Management

**Polycystic Ovary
Syndrome (PCOS)