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رسالة

# Assisted Reproductive Techniques

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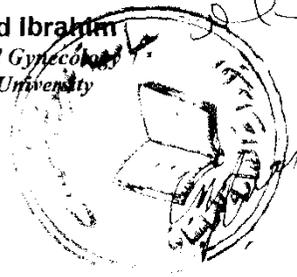
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To

*The soul of my father...*

To

*Emad, my beloved brother,  
by him & with his beautiful artwork,  
this excellent *Page Layout* of this work is  
created.*



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**ABBREVIATIONS**

ART	Assisted reproductive technology.
BBT	Basal body temperature
BSA	Bovine serum albumin.
CC	Clomiphene citrate.
DES	Diethylstilbestrol.
DHEA	Dehydroepiandrosterone.
DPI	Direct intraperitoneal insemination.
E2	Estrogen.
ELISA	Enzyme-linked immuno-sorbent assay.
FSH	Follicle stimulating hormone.
GH	Growth hormone.
GIFT	Gamete intra-fallopian transfer.
GnRH	Gonadotropin releasing hormone agonist.
hCG	Human chorionic gonadotropin.
hMG	Human menopausal gonadotropin.
HPF	High-powered microscopic field.
HSG	Hysterosalpingography.
ICSI	Intracytoplasmic sperm injection.
IGF-I	Insulin-like growth factor I.
ITI	Intratubal insemination.
IUI	Intrauterine Insemination.
IVF-ET	In vitro fertilization and Embryo transfer.
LH	Leuteinizing hormone.
LHRH	Leuteinizing hormone-releasing hormone.
LUF	Leuteinized-unruptured follicle.

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MAF	Mechanically assisted fertilization.
OHSS	Ovarian hyperstimulation syndrome.
P4	Progesterone.
PROST	Pronuclear stage tubal transfer.
PZD	Partial zonal dissection.
SO	Superovulation.
STD	Sexually transmitted disease.
SuZI	Subzonal injection.
TET	Tubal embryo transfer.
UET	Uterine embryo transfer.
US	Ultrasonography.
ZIFT	Zygote intra-fallopian transfer.

*Introduction*

**INFERTILITY**

**DEFINITION  
& WORK-UP**



## Chapter one

**INFERTILITY AND EVALUATION OF THE  
INFERTILE COUPLE**

The desire to reproduce is an intensely motivating human force. It is through children that we have continuity with the past and future ; in this respect, children are our immortality. Couples may also experience strong religious, cultural and societal pressures to conceive. It is, therefore understandable that when people have difficulty conceiving, most perceive their infertility as a major life crisis. Fertility is the ability of a man and a woman to reproduce. Similarly, infertility is an involuntary reduction in the ability to have children (*Seibel, 1993*).

The diagnosis of infertility is made when conception dose not occur after 12 months of regular, unprotected sexual intercourse in a couple trying to achieve a pregnancy (*Tietze, 1956*).

The term "Primary Infertility" means that the couple has never achieve a pregnancy. "Secondary Infertility" implies when at least one previous conception has taken place. The term "Sterility" should be used only if no available therapy can correct the defect. (e.g., gonadal dysgenesis, congenital absence of uterus, azoospermia) (*Davajan and Mishell, 1988*).

**I. INCIDENCE OF INFERTILITY**

It has been estimated that about 10 % of all married couples are infertile, with an annual incidence of 1.6 per 1000 couples (*Hull et al. 1985*).

According to data obtained from "1976 - *National Survey of Family Growth*", about 10 % of all U. S. couples in which wives were aged between 15 to 47 years were infertile (*Mosher, 1982*).

However, **Behrman and Patton (1988)** stated that : "The number of married couples unable to conceive has climbed from 15 to 18 to 20 percent in the past decade." The different American life style and foremost the change in the society's attitude towards sex and marriage, all have contributed to the increased number of infertility patients seen by physicians. They also added coincident with that change was a virtual epidemic of venereal disease, often unrecognized resulting in increased pelvic inflammatory disease and subsequent tubal sterility.

*Age as a determinant factor :*

Increasing age exerts a deleterious effect on conception rates (**Taylor and Kredentser, 1993**).

Fertility rates studies in women population who don't practice contraception reveal a substantial decline in the fertility after the age of thirty, with a greater after the age of thirty-five (**Teitze; 1957**).

In study for evaluation of outcome of infertility therapy and the effect of women age, **Kliiger (1982)**, found that among 493 infertile couples who were followed up for one or two years, the chance of becoming pregnant were greater in women younger than 30 years (37 %).

In another study (table 1-1), the expected percentages of non-sterile currently married women who will conceive in 12 months of unprotected intercourse decline steadily and markedly with advanced age (**Hendershot et al., 1982**).

TABLE 1-1

Expected percentages of nonsterile currently married women who will conceive in 12 months of unprotected intercourse	
Age group	Conceiving in 12 months (%)
20-24	86
25-29	78
30-34	63
35-39	52

From Hendershot GE, Mosher WD, Pratt WF. Infertility and age : An unresolved issue. Fam Plan Perspect 14, 287, 1982.