



NORTHEASTERN OHIO FERTILITY CENTER

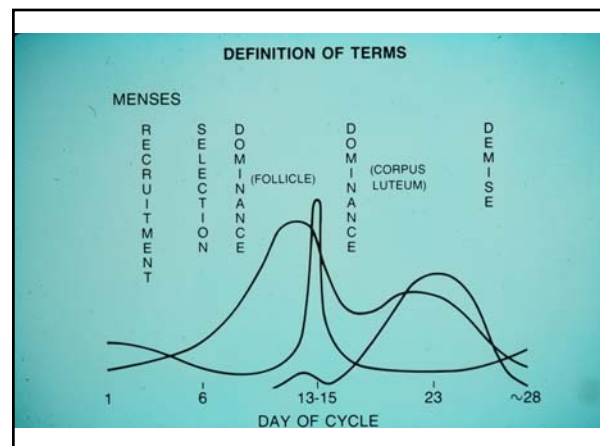
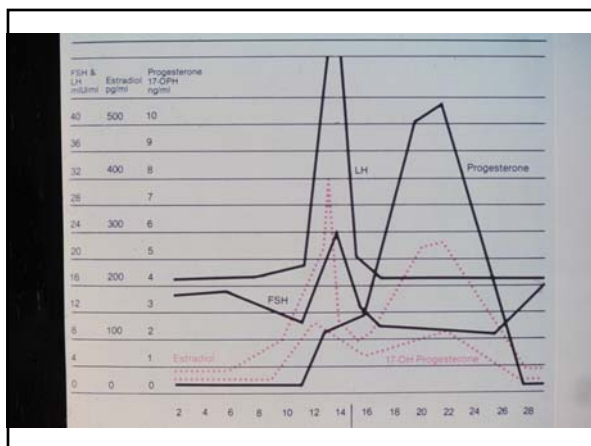
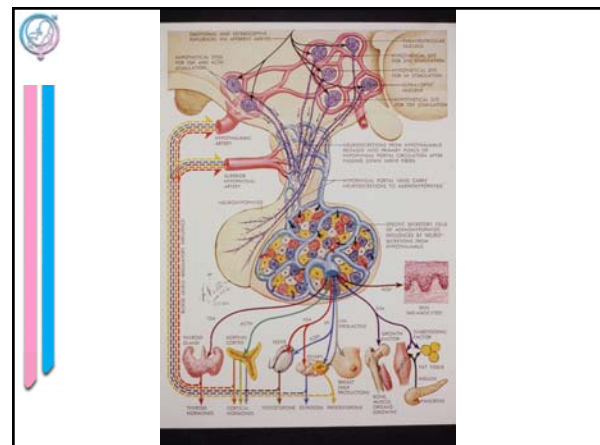
Infertility for the PCP

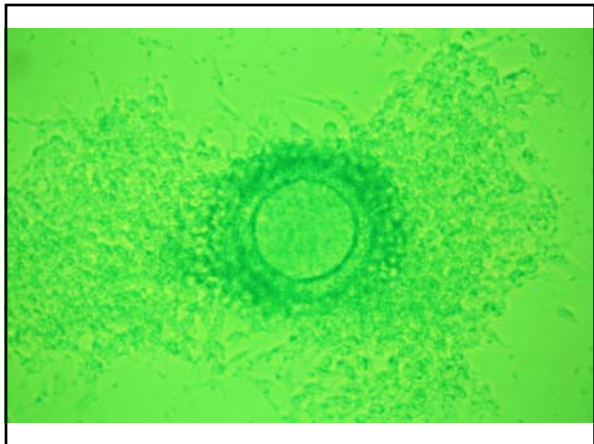
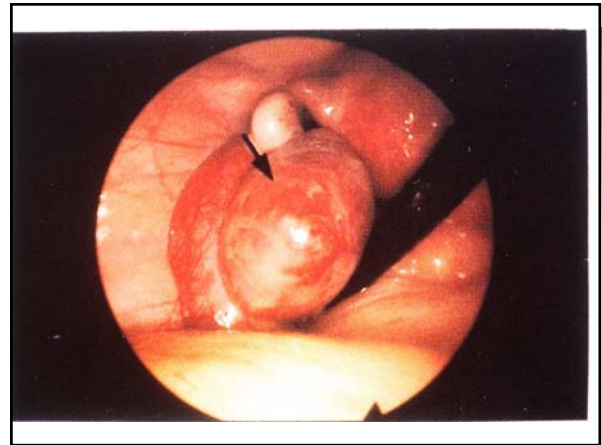
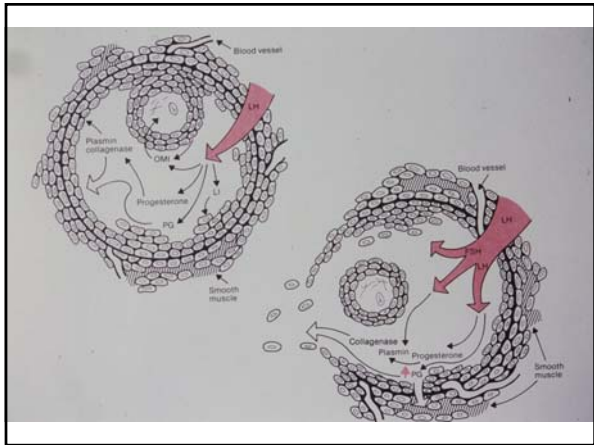
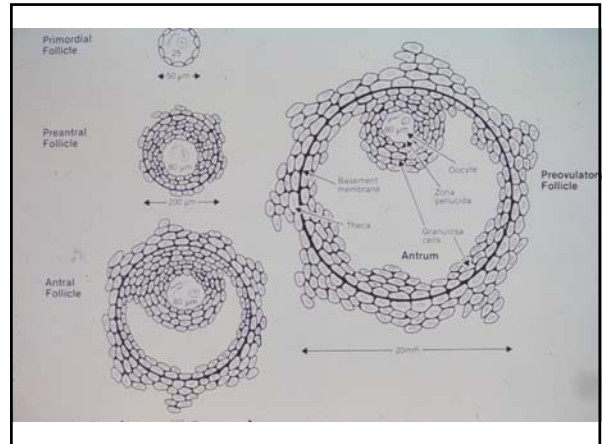
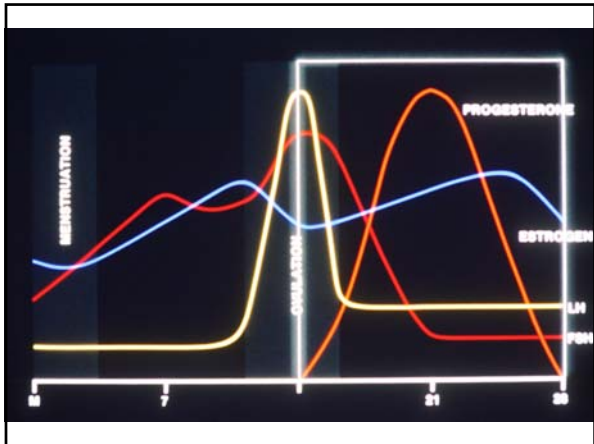
Dr. Nicholas Spirtos
Northeastern Ohio Fertility Center
Akron, OH

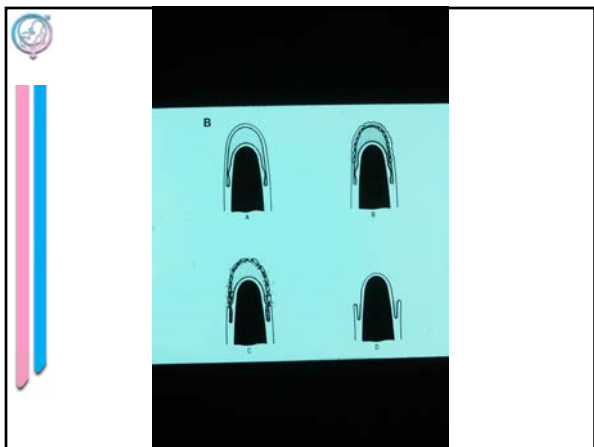
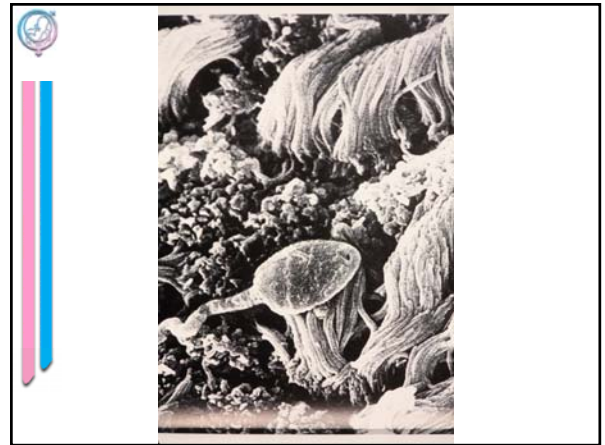
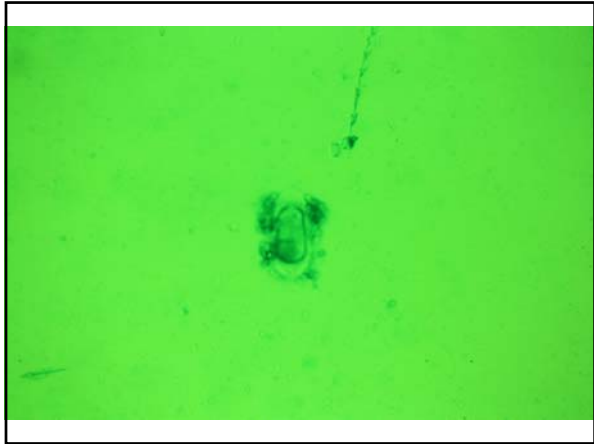
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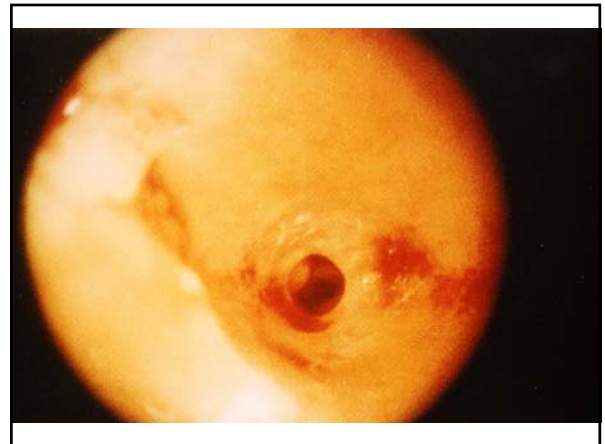
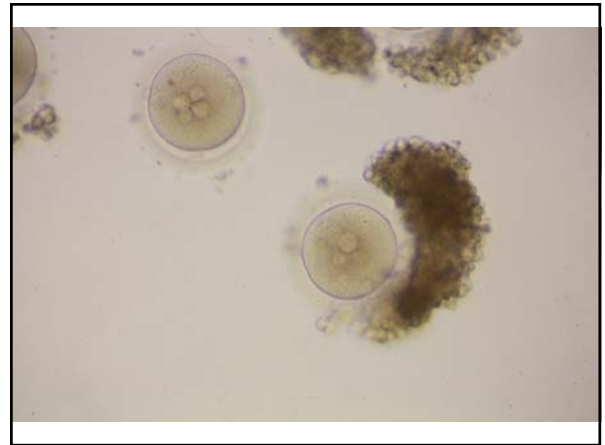
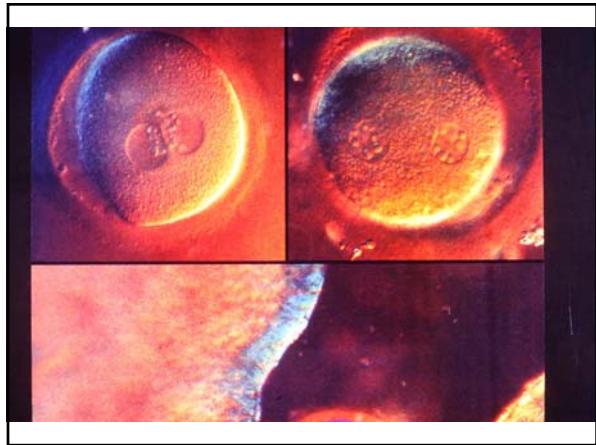
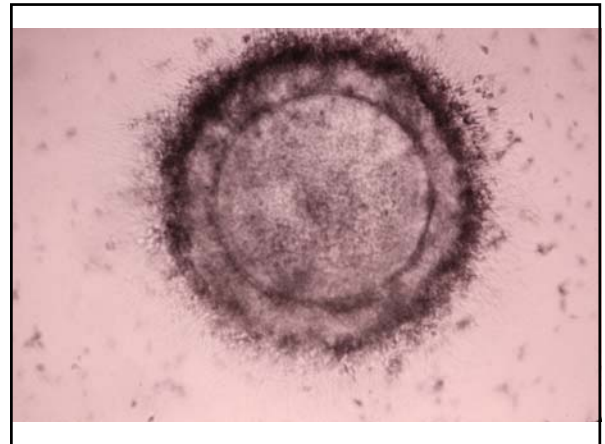
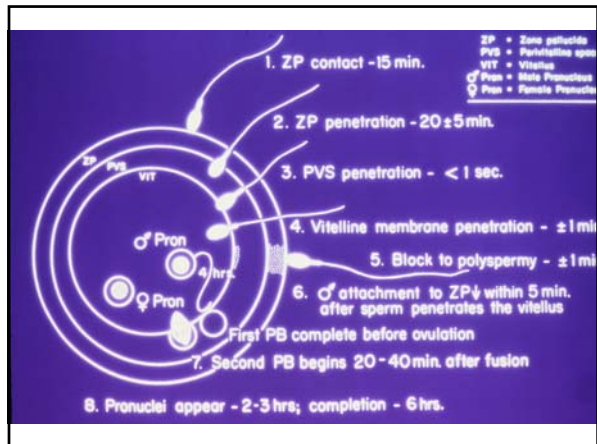
Learning Objectives

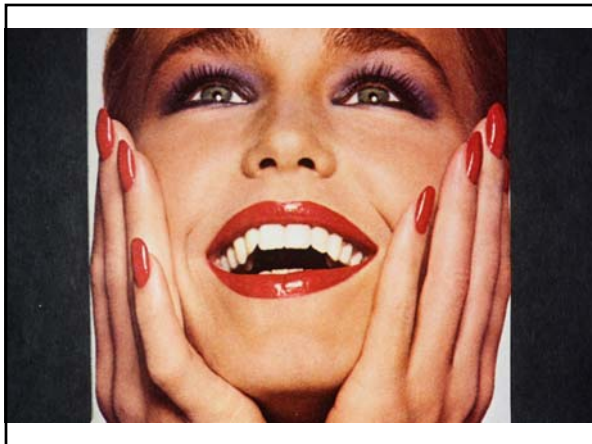
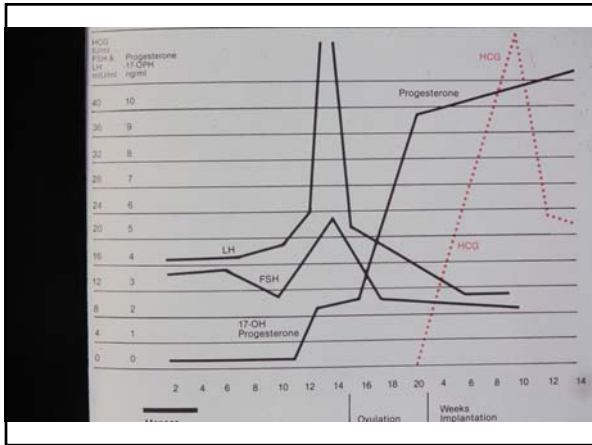
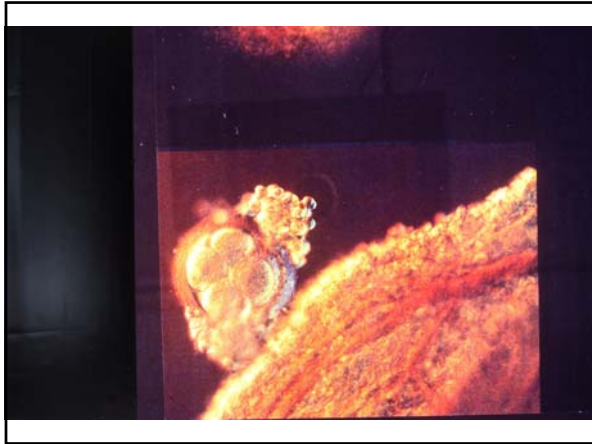
- Basic understanding of the menstrual cycle
- Basic understanding of the physiology of reproduction
- Basic understanding of male and female infertility testing
- Basic understanding of polycystic ovarian disease
- Basic understanding of infertility treatments including ovulation induction and in-vitro fertilization

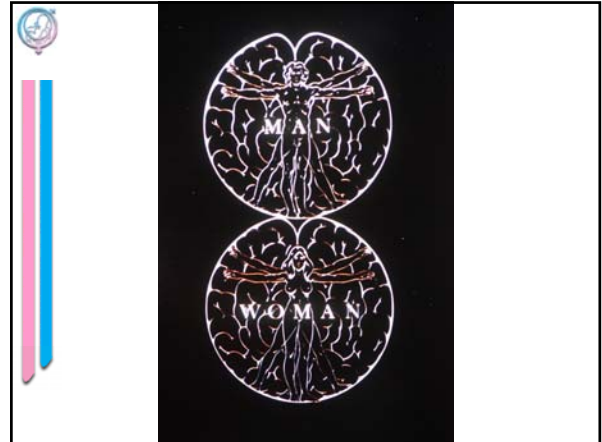








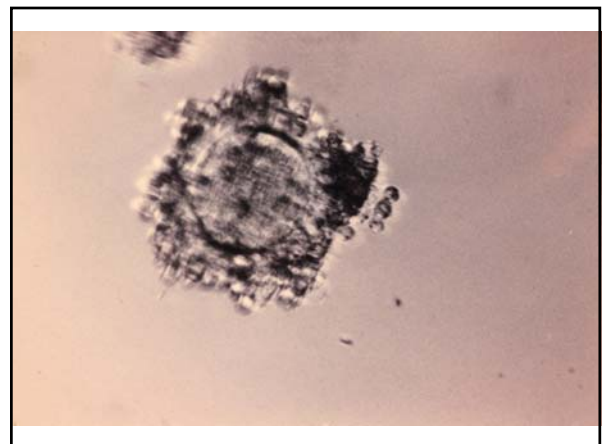
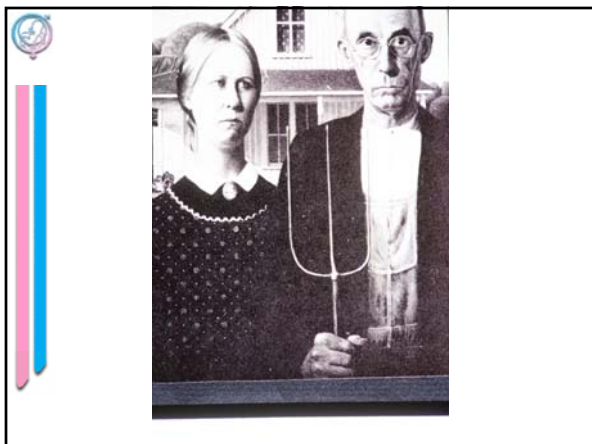


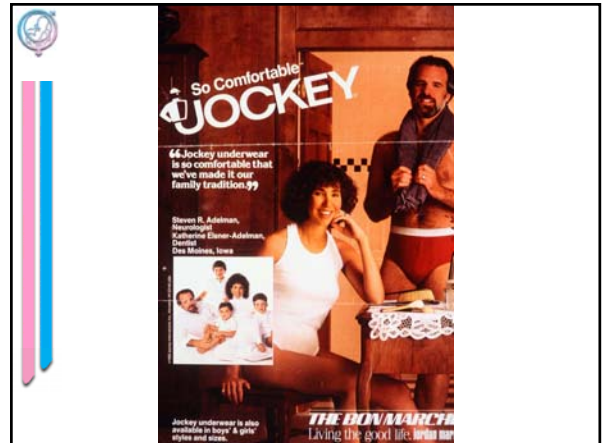
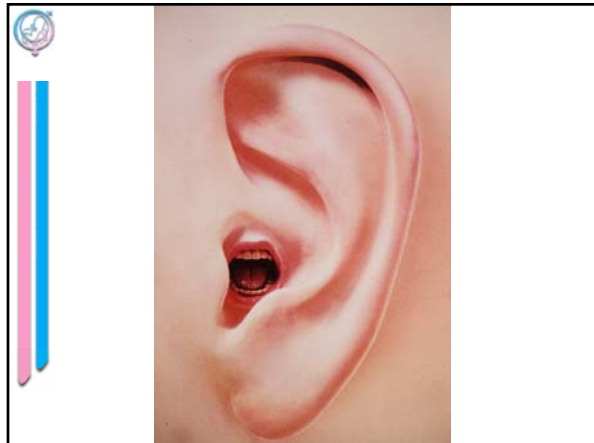
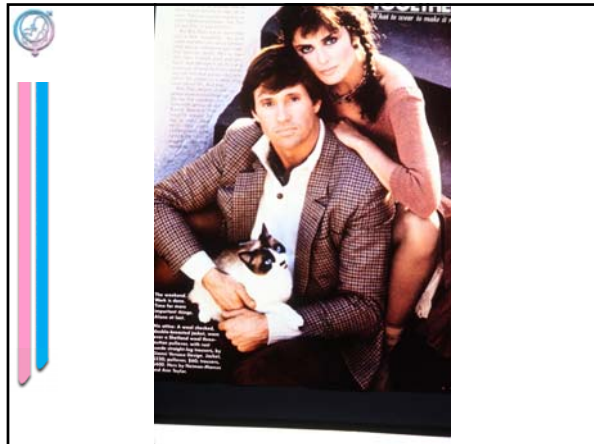


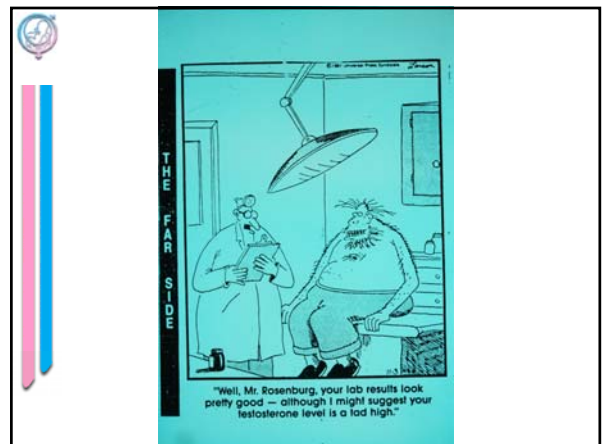
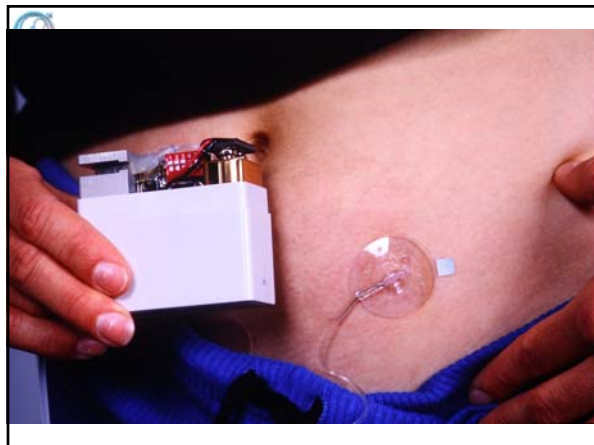
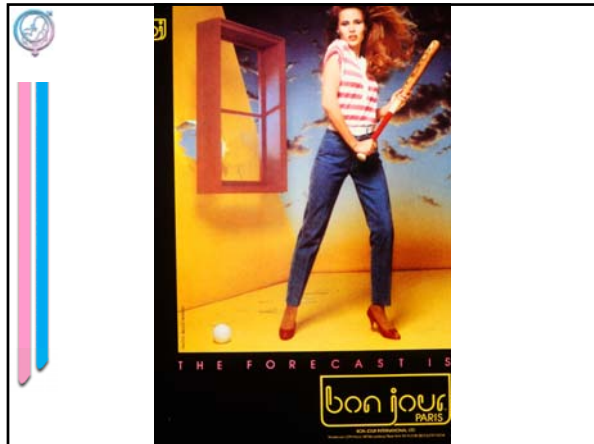
MALE/FEMALE FACTORS

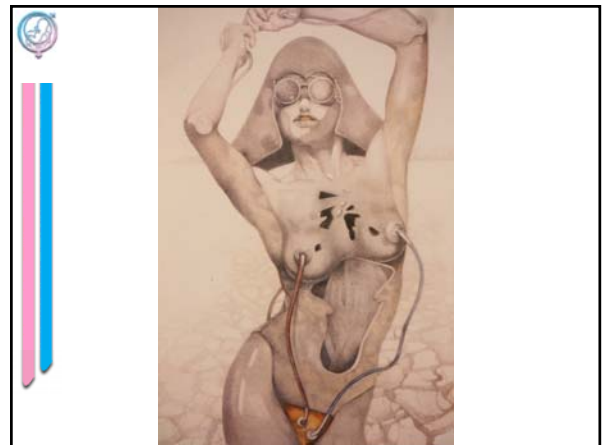
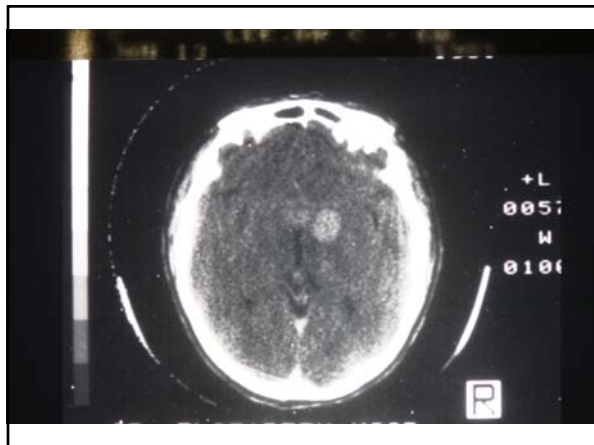
- Male Factor Only – 35%
- Female Factor Only – 35%
- Male & Female – 25%
- Unexplained – 5%

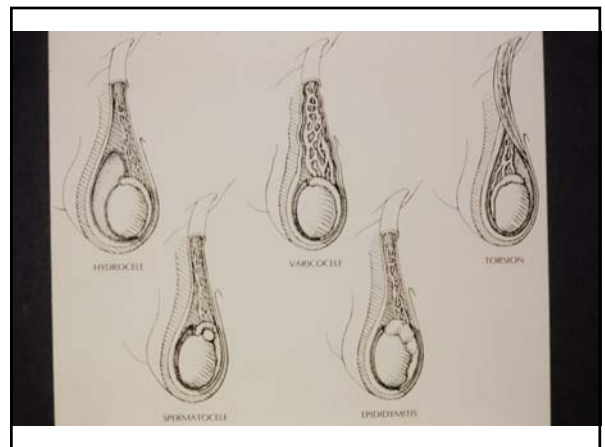
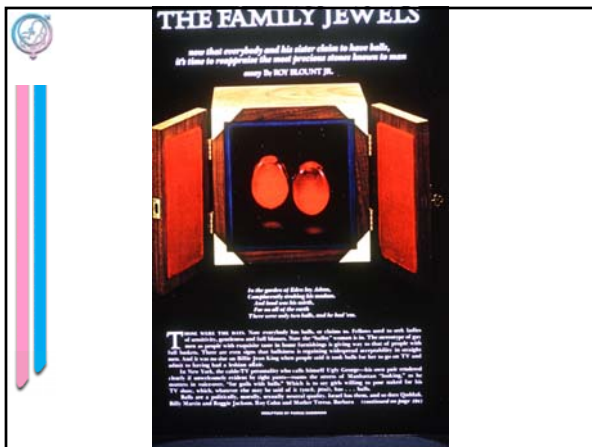
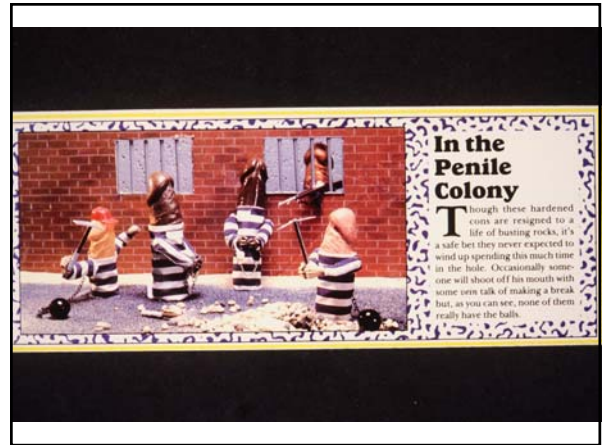
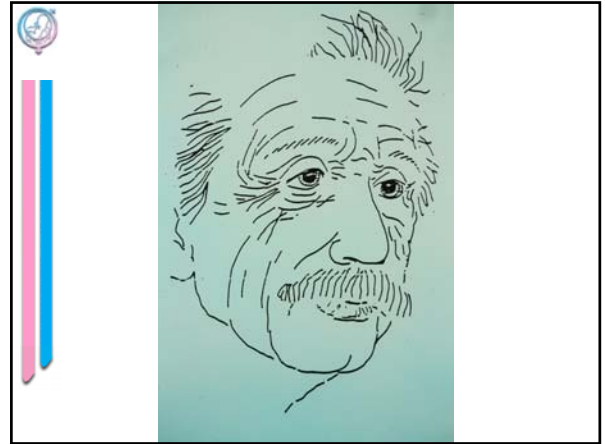
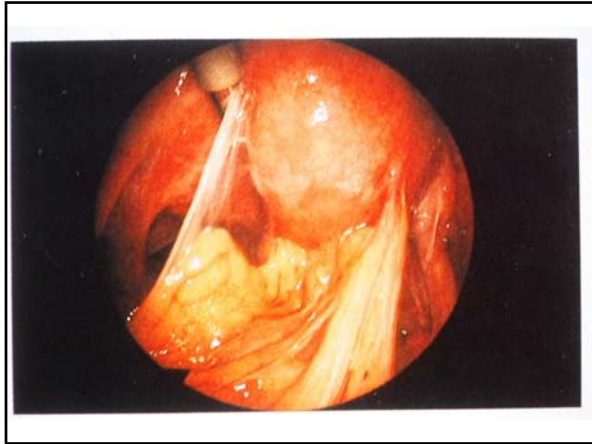
Time Required for Conception (25)	
Months of Exposure	% Pregnant
3 months	57%
6 months	72%
1 year	85%
2 years	93%

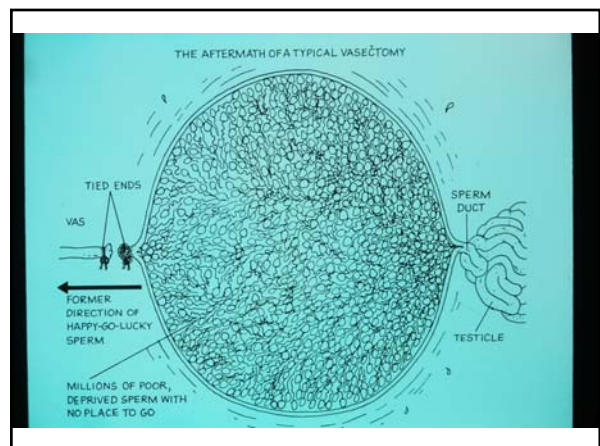


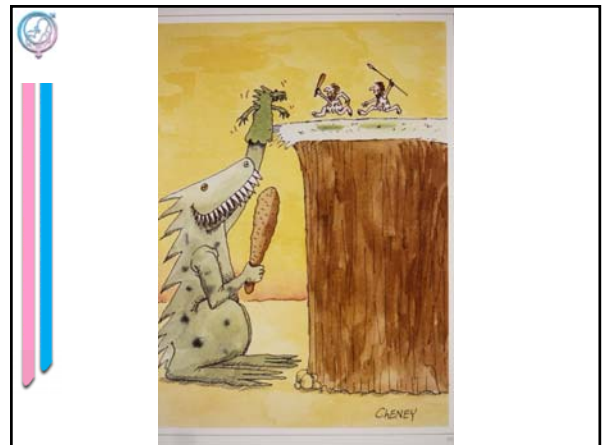
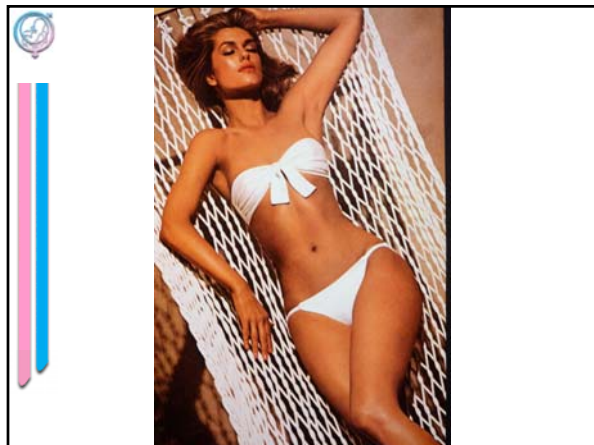
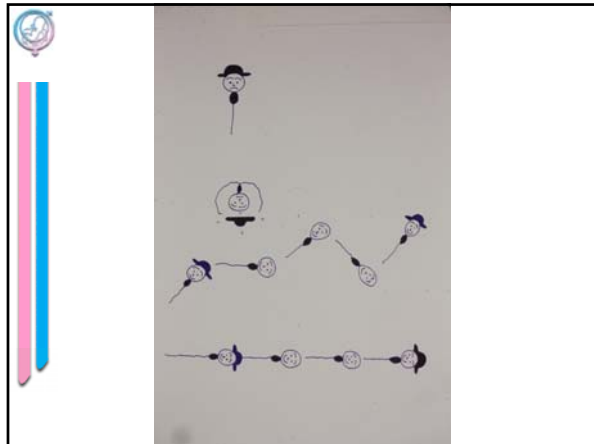


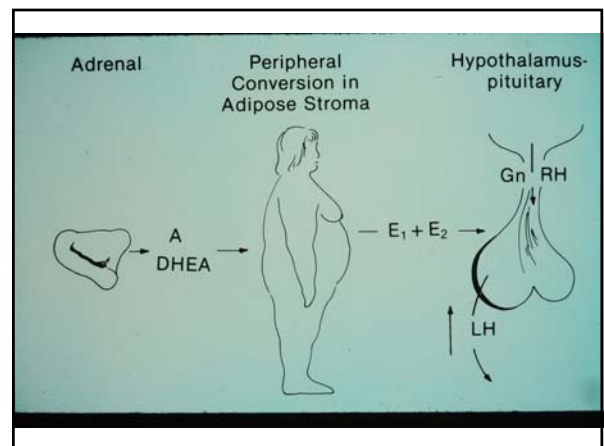
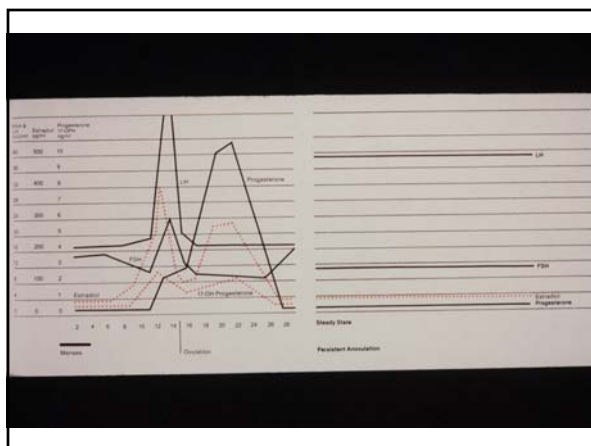
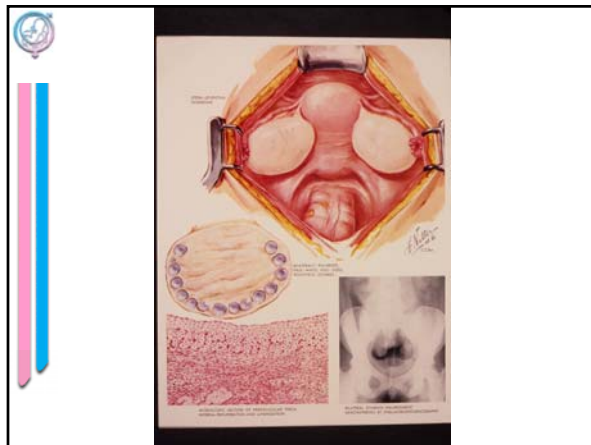
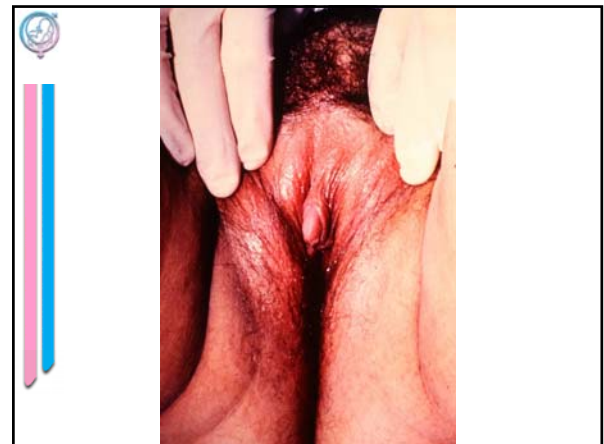
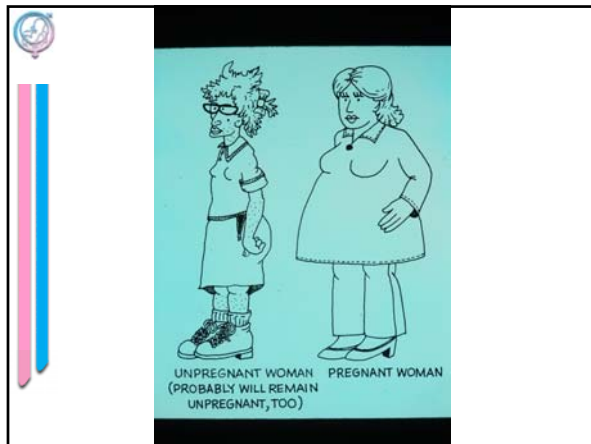


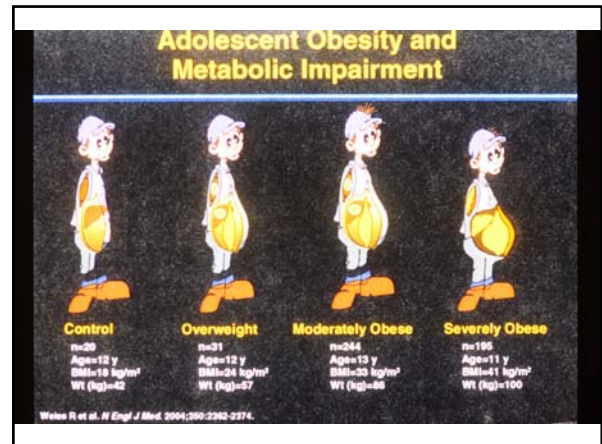
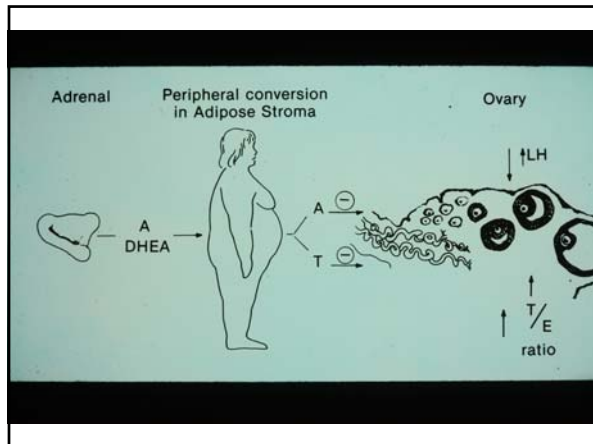












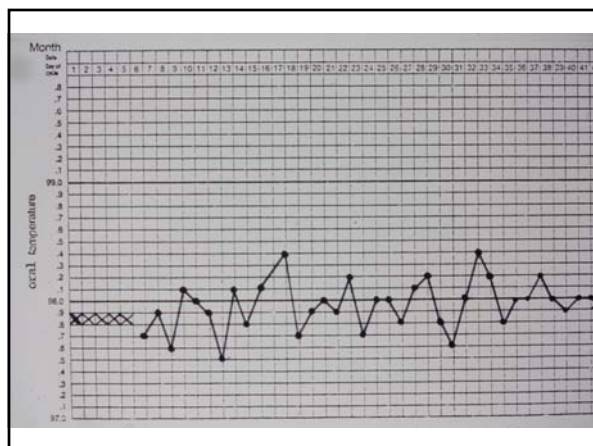
GOALS TO BE ACHIEVED

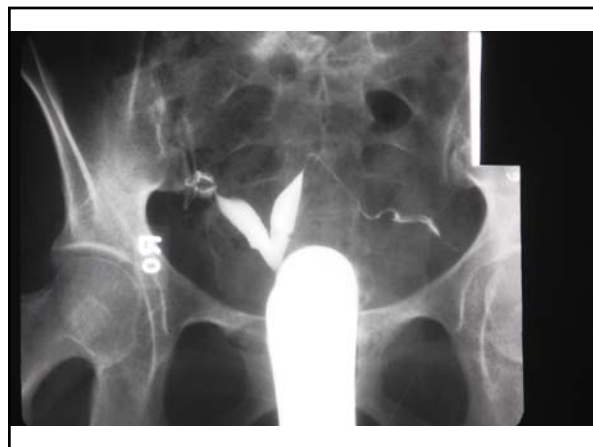
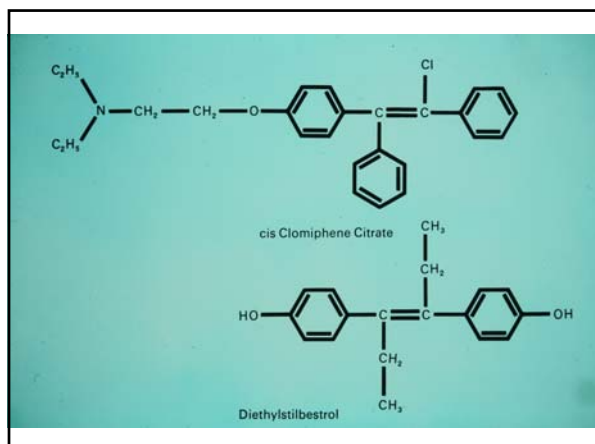
90% BENEFIT TO HEALTH STATUS WITH ONLY 5-7% REDUCTION IN BODY WEIGHT

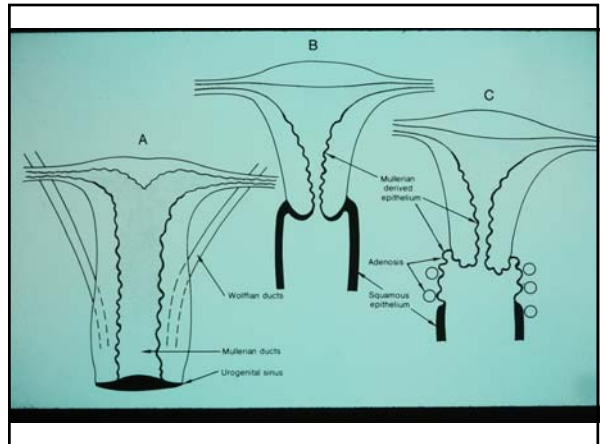
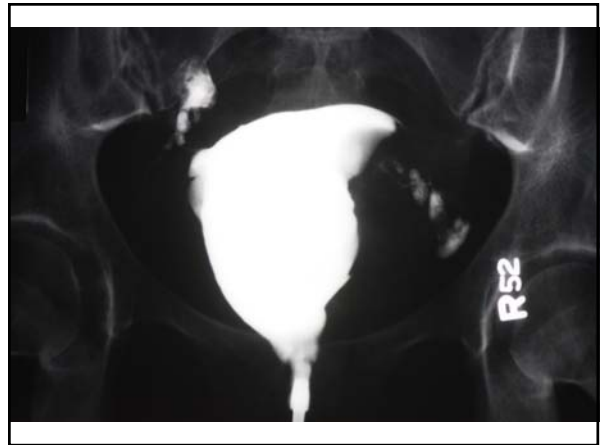
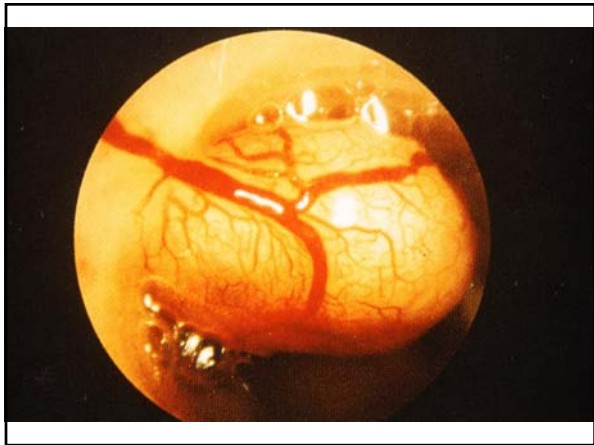
- LOW CALORIE, LOW CHOLESTEROL DIET
- SMOKING CESSATION
- DRINKING ALCOHOL IN MODERATION
- "REGULAR" EXERCISE

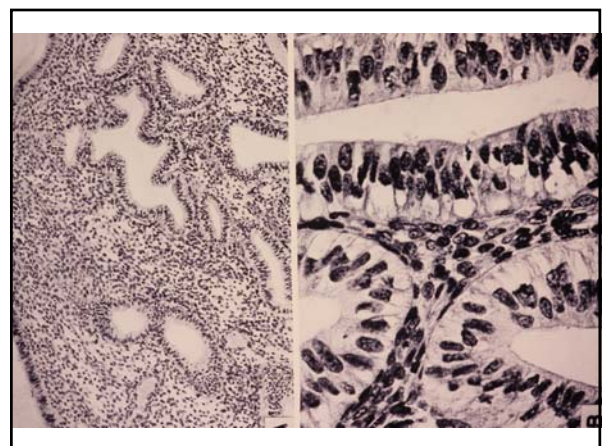
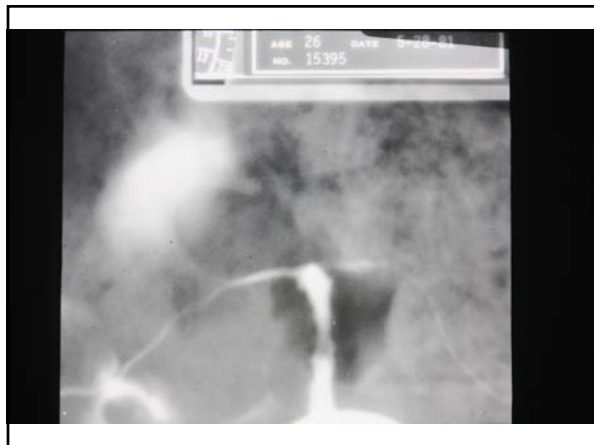
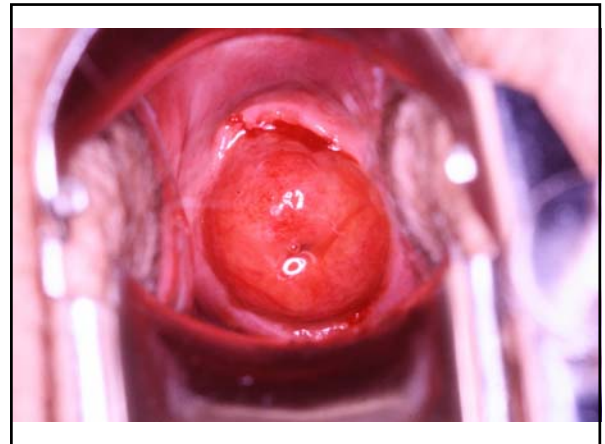
E-P-T'S OF METABOLIC SYNDROME

- E = EDUCATION
- P = PREVENTION
- T = TREATMENT









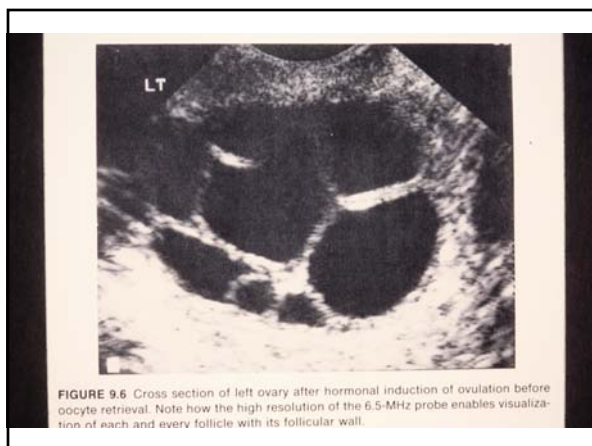
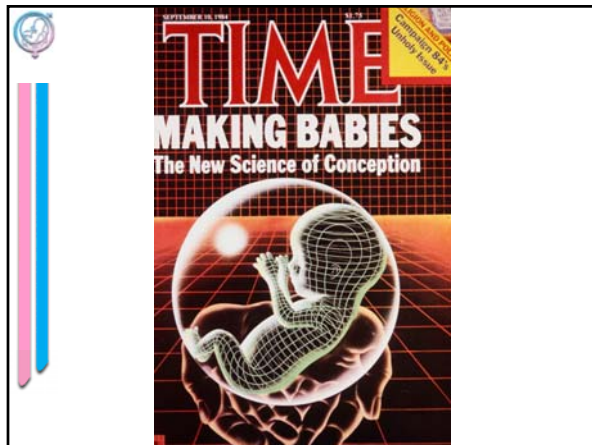
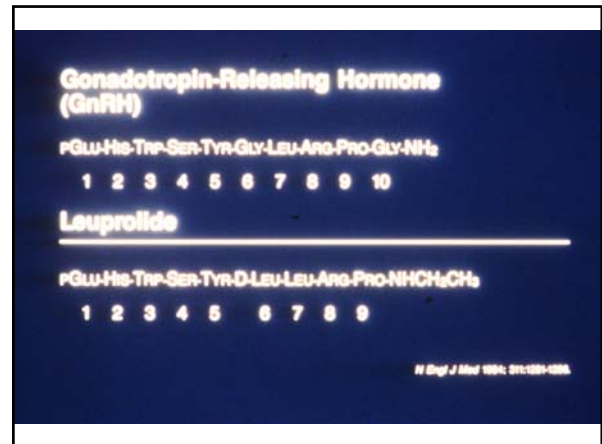
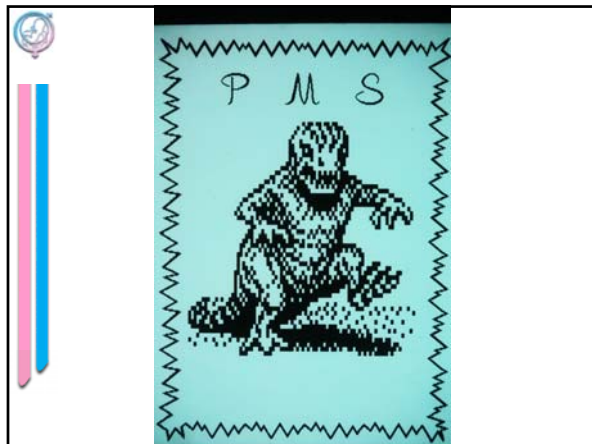
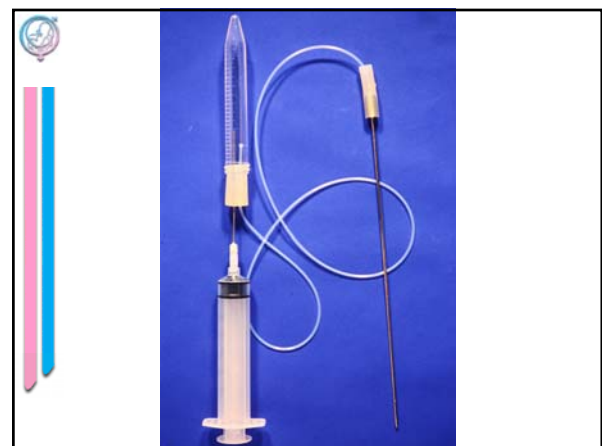
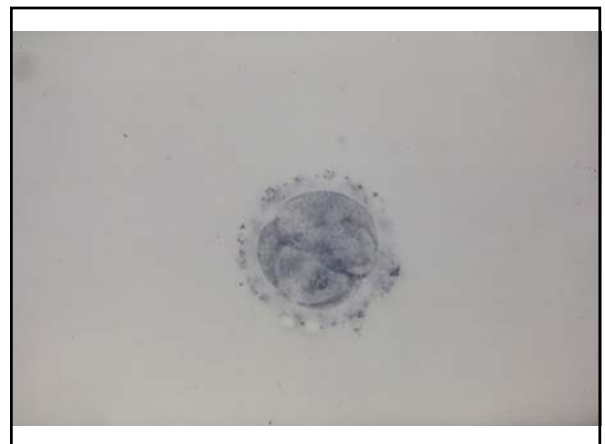
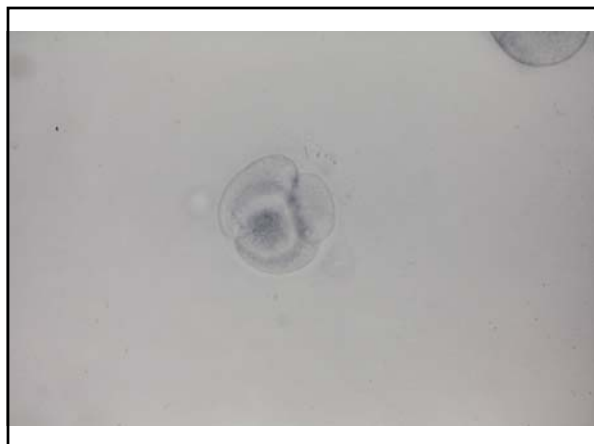
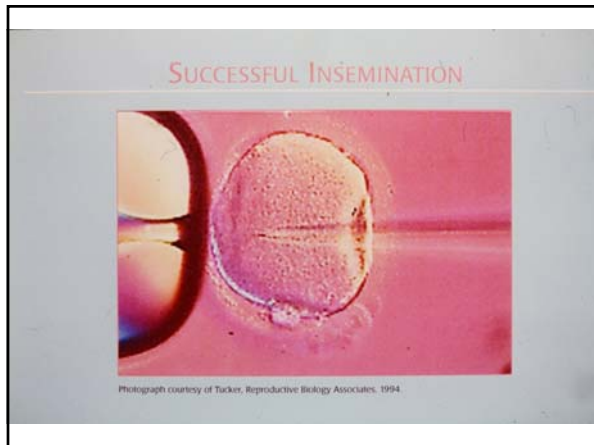
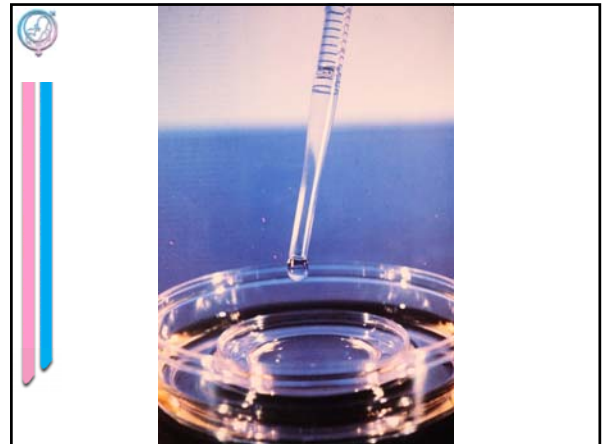
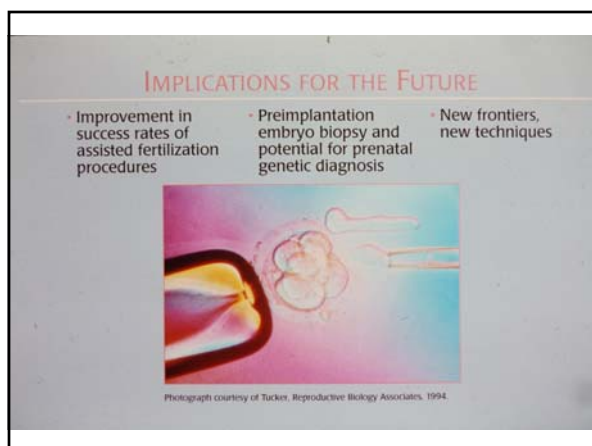
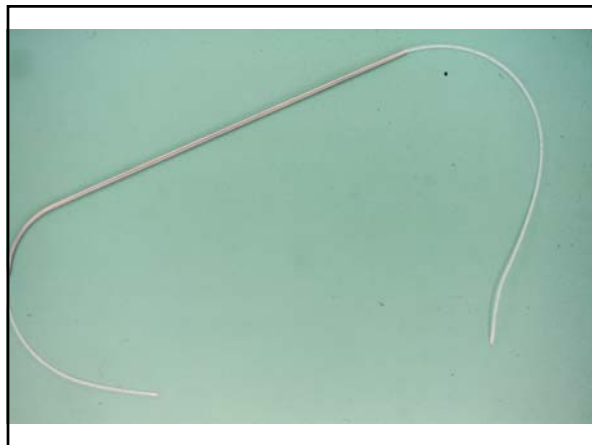
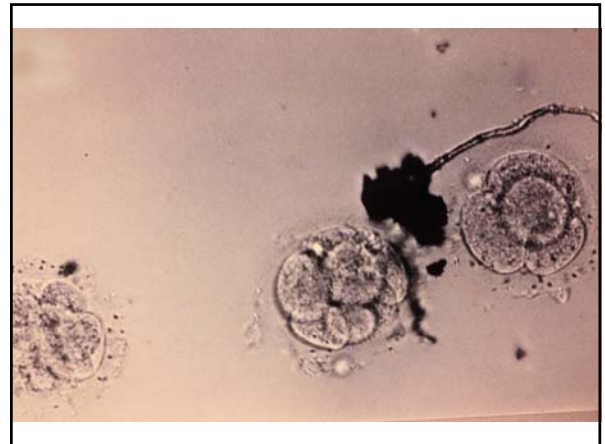
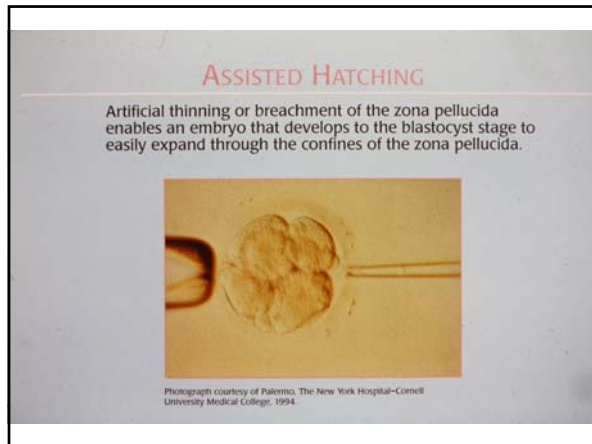


FIGURE 9.6 Cross section of left ovary after hormonal induction of ovulation before oocyte retrieval. Note how the high resolution of the 6.5-MHz probe enables visualization of each and every follicle with its follicular wall.









CASE STUDY---- L.B. IS A 33 Y/O WMF G1 P1 AB O SEEN FOR SECONDARY INFERTILITY ON AUGUST 21, 2006

PMH—MENARCHE AGE 17 WITH SEVERE OLIGOMENORRHEA
 -CONCEIVED SPONTANEOUSLY 6 WEEKS POST BCP'S
 -PRIMARY C/SECTION OF BABY 5 POUNDS 12 OUNCES
 -HAS BEEN GIVEN NUMEROUS COURSES OF PROGESTIN
 -LMP MAY 18, 2006
 -LEEP PERFORMED FOR PAP SMEAR ABNORMALITY 2002
 -ENDOMETRIAL BIOPSY 8-18-06—PROLIFERATIVE TISSUE
 -GAINED 60# SINCE HER DELIVERY

FAMILY HISTORY
 -FATHER, MOTHER & GRANDMOTHER – HYPERTENSION
 -GRANDMOTHER – BREAST CANCER
 -FATHER, GRANDMOTHER – ARTHRITIS
 -FATHER, GRANDMOTHER & GRANDFATHER – DIABETES
 -GRANDMOTHER – HEART DISEASE

CASE STUDY CONTINUED:

PHYSICAL EXAMINATION
 HEIGHT 5'0" AND WEIGHT 279#
 NO ACANTHOSSIS, ACNE, ALOPECIA, VIRILIZATION
 MILD HIRSUUTISM OF CHIN
 SEVERE CENTRAL OBESITY
 FEMALE ESCUTCHEON
 NO OBVIOUS SIGNS OF CUSHING'S DISEASE
 BODY MASS INDEX – EXTREMELY ABNORMAL

LABORATORY TESTING
 ULTRASOUND – POLYCYSTIC OVARIES BILATERALLY
 FASTING GLUCOSE = 102 MG/DL (65-99) & REPEAT 91
 INSULIN = 34 U/ML (LESS THAN 17) & REPEAT 46
 PLASMA CORTISOL = 77 NG/ML (4-43) & REPEAT 62
 CHOLESTEROL = 173
 HDL = 32 (OVER 40)
 CHOLESTEROL/HDL RATIO = 5.4 (LESS THAN 4.4)
 LDL = 96
 TRIGLYCERIDES = 225 (LESS THAN 150)
 OVERNIGHT DEXAMETHASONE SUPPRESSION TEST
 CORTISOL LESS THAN 0.5 MCG/ML
 TOTAL TESTOSTERONE = 61 NG/DL
 THYROID STUDIES NORMAL
 DHEAS = 91 MCG/ML
 LH/FSH RATIO 2.6/1 (NORMAL LESS 2.5/1)
 PROLACTIN = 8 NG/ML
 AUTOIMMUNE PANEL NEGATIVE

HYSTEROALPINOGRAM – UTERUS NORMAL & TUBES PATENT

LIFESTYLE IMPROVEMENTS

- DECREASE INSULIN RESISTANCE
- DECREASE "LDL" CHOLESTEROL LEVELS
- DECREASE TRIGLYCERIDE LEVELS
- LOWER BLOOD PRESSURE LEVELS
- ELEVATE HDL CHOLESTEROL LEVELS
- IMPROVE CARDIOVASCULAR FUNCTION
- DECREASE CORONARY HEART DISEASE RISK
- INCREASE LONGEVITY

"WHEN THE GOING GETS TOUGH, THE TOUGH GET GOING"

- LOOK BETTER-FEEL BETTER
- LIVE LONGER

SOME OF US SPEND HALF OF OUR LIVES SAYING "I'm too young to worry about this or do that"

AND THE SAME PEOPLE THEN SAY "well, now I'm too old to worry about that or do this"

PLEASE!!!!!!GET REAL

CASE STUDY CONTINUES:

RECOMMENDATIONS

NUTRITIONAL CONSULT
WEIGHT LOSS
AEROBIC AND ANAEROBIC EXERCISE
REDUCTION IN LIPIDS

TREATMENT

- 1/ PROGESTIN WITHDRAWAL AFTER NEGATIVE HCG
- 2/ ORAL CONTRACEPTION & RUBELLA VACCINATION
- 3/ METFORMIN 1000 MG/DAY
- 4/ PRENATAL VITAMINS
- 5/ AROMATASE INHIBITOR, LETROZOLE 5 MG/DAY ON
CYCLE DAYS 3-7
- 6/ NO LH SURGE BUT ULTRASOUND ON CYCLE DAY 21
REVEALED 19 X 19 MM FOLLICLE, E2 = 111, P4 = 2
- 7/ SEXUAL RELATIONS FOLLOWED BY POOR POSTCOITAL
TEST
- 8/ ULTRASOUND CYCLE DAY 22 REVEALED EARLY
HEMORRHAGIC CORPUS LUTEUM, P4 = 3
- 9/ LUTEAL PHASE PROGESTERONE SUPPOSITORIES 200MG/DAY
- 10/ HCG 2 WEEKS LATER = 168
- 11/ ULTRASOUND REVEALED VIABLE TWINS