

Chapter 16 How to use contraceptives

In general, there are 2 types of oral contraceptives, one is “Single-Phase”, and another is “Multi-Phase”.

1. Multi-Phase: contains both of estrogen and progestin.
2. Single-Phase: contains only progestin.

Mixed pill contains both of estrogen and progestin, in which:

1. With fixed dosage is called “Single-Phase”;
2. With various changes of 2 or 3 phases is called “Multi-Phase”.

Mechanism of Contraception

Oral contraceptive is a low-dose compound female estrogen, which functions as below:

1. Major function is to inhibit ovulation, and then will not get pregnant.
2. Change of endometrium is to interfere implantation.
3. Change of cervical mucus is to block sperm passing through.

Effectiveness

The ratio of failure is 0.1%.

Pros

1. Taking medication correctly, the effectiveness of success almost reaches 100%.
2. No need for precautions prior to sexual intercourse.
3. To regularize menstrual period, reduce menstrual bleeding, and relief of menstrual cramps pain as well.
4. Suitable for just-married couple and single women.

Cons

In the beginning of medication, few women may have symptoms, such as dizziness, nausea, uncomfortable, spotting, gaining weight. These symptoms will be disappeared in 2 or 3 months.

Cautions

1. Patients with the following diseases are not allowed to take oral contraceptives: e.g. heart disease, diabetes, hypertension, vascular embolism related diseases, liver dysfunction, and genital or breast cancers history, etc.
2. Breast-feeding women are forbidden to take oral contraceptives.
3. Age over 35 and heavy smokers have better not to take oral contraceptives.
4. First-time users are required to receive physician's diagnosis and prescription.
5. Oral contraceptives must be taken every day, otherwise it will result in contraceptive failure.
6. When forgetting to take it in scheduled time, patients should make it up according to the package inserts or other contraceptive measures.
7. It is required to revisit physician 3 months after taking contraceptives, and take gynecological examination periodically every 6 months.
8. Contraceptives medication together with Ampicillin might result in contraceptive failure.

Chapter 17 Safe medicine use for pregnant women

Safety Class for using medicine while pregnant

Pregnant women should avoid unneeded medicine, and should use either food therapy or change their lifestyle.

Class A: Clinical trials have shown it is safe for pregnant women

Class B: No clinical trials control, animal trials show safety or without adverse reaction, clinical trial control shown no problem

Class C: Animal trials showing teratogenicity, but no human trials control or lack of clinical trial information

Class D: Has teratogenicity, but can be used if “pros outweigh cons” medically

Class X: Absolutely forbidden for pregnant women

Deciding factors on influencing fetus by pregnant women using medicine

1. Medicine causing teratogenicity, whether medicine will combine with proteins, the metabolism method for medicine
2. During which period of pregnancy was the medicine used
3. The length of time of medicine use and dosage
4. How medicine was given
5. Status of bleeding in uterus of pregnant women
6. The mother’s metabolic capacity, body fat amount

Influences of Medicines on Fetus

Influence of medicine on the fetus: according to development stage of fetus, are as follows:

Preimplantation	0-2 weeks	Normally will not lead to fetus deformity
Embryonic	3-8 weeks	Critical period,organs forming stage, will lead to fetus deformity or death
Fetal period	9-16 weeks	May cause cleft lip and female fetal genital masculinization
Fetal period	16 weeks just before birth	Fetus growth completed,may cause abnormality in physical functions of fetus

Treatment of frequently seen symptoms of pregnant women

1.Nausea:

Cause: symptom frequently occurring during early stage of pregnancy will normally disappear after 12 weeks.

Treatment: Maintaining enough and stable amount of Vitamin B6 as supplement.

2.Sense of heartburn in stomach:

Cause: Rising of Abdominal and diaphragm leading to stomach being pushed upon.

Treatment: Eating less amount and more meals, avoiding soft drinks, using suitable amount of Stomach milk, stomach milk tablets.

3.Constipation:

Cause: Expanding uterus, pushing on intestines causing

slowing of intestinal peristalsis.

Treatment: Taking appropriate amount of water, appropriate amount of exercises, expansive laxatives or lubrication laxatives.

4.Hemorrhoids:

Cause: Veins near the rectum, and obstruct blood flow by the enlarged uterus oppression.

Treatment: Use of hemorrhoid cream to facilitate defecation or Analgesic suppositories.

5.Cold:

Treatment: Drink more water, rest more, and do not buy over the counter medicine. Most cold and respiratory medicines are Class C.

Principles of Pregnant Women Using Medicine

- 1.Without guidance of doctor or pharmacist, pregnant women should not add or stop medication.
- 2.Use less medicine, especially in the first three months of pregnancy, and to discuss and do evaluation with doctor.
- 3.When visiting doctors, should tell doctor or pharmacist if pregnant or possibly be pregnant.
- 4.For those on medication, should discuss with doctor or pharmacist on whether to stop medication.

Effect of commonly used medicine on fetus

Medicine	Effect on Fetus
Tetracyclines	Blocks development of bones, teeth changing color
Sulfa drugs	Kernicterus
Chloromycetin	Gray baby syndrome
Antithyroid preparations	Development of fetus intelligence sluggish
Too much vitamin A	Development of fetus intelligence sluggish, Increased intracranial pressure
Too much vitamin D	Development of fetus intelligence sluggish, Hyperkalemias.

Will using medicine leading to fetus deformity always lead to babies with problems?

1. Not necessarily, but children with defects ranges between 3-6%. Fetal deformity increases the risk by over 5 times.
2. If using medicine that leads to fetal deformity, must stop medicine for a period of time before getting pregnant again.
3. The antiepileptic disorder drugs, anti-thyroid drugs belong to Class D, but the diseases damage fetus far more than the drugs, so will need to continue using drugs.

Chapter 18 Medication Safety for Breastfeeding Mothers

Any kind of substances taken by mothers may get in the milk. Therefore, while taking medication, in addition to consider whether or not the babies may also consume the medicines in milk, mothers should also take into account the overall impacts on their babies, mother themselves, families and the society if they stop breastfeeding.

The myths in breastfeeding stoppage while mothers are sick

1. The medication intake of babies depends on their daily milk feeding amount, gastrointestinal function and milk feeding time.
2. You may opt for breastfeeding before taking medication or preparing milk, or temporarily suspend the intake of drugs.
 - (1) The concentration of drug reaches its highest after 1-3 hours taking it.
 - (2) It is relatively safe to breastfeed 6 hours after taking medication.
 - (3) Consult your physician on the possibility to stop medication.
3. Preservation of breast milk:
 - (1) Can be stored 6-8 hours under room temperature.
 - (2) Can be stored 3-5 days if refrigerated.
 - (3) Can be stored 3-4 months in the freezer.

Breastfeeding Medication Considerations

1. Whether or not it is necessary to take the medication?
2. Select safe drugs.
3. If the medication may affect the babies, you should measure their blood drug concentration.

4. Breastfeed before taking medication to reduce the impact of drugs on babies.

Determining Factors of Drugs Affecting the Babies

1. Natures of the drugs:

Before taking medication, consult your specialist physician or pharmacist. Choose drugs, such as water-soluble drugs, drugs with high protein binding rate, and drugs with short half-life that cannot be absorbed by the gastrointestinal tract easily, and try your best to use single prescribed drugs.

2. Medicine intake dosage and frequency:

It is recommended to take drugs with a low dosage, short half-life and those that will not accumulate in the body.

Despite the high medication frequency, they are less likely to distribute to the milk.

3. Avoid taking dangerous drugs:

Some drugs may cause damages to babies even taken in minute quantity. For examples Penicillin and sulfonamides, etc.

4. Contraceptive drugs:

Contraceptive drugs shall be avoid taking during breastfeeding because contraceptive drugs may cause damage to babies and reduce the amount of lactation.

Medication recommended by American Academy of Pediatrics during breastfeeding period

1. You are allowed to take medication during breastfeeding, but choose those with lower risks:

(1) Antipyretic analgesics, non-steroidal anti-inflammatory painkillers, antibiotics, vaccines, developers, narcotic drugs, antidepressants, antihypertensive drugs, antiviral drugs, muscle relaxants, anti-epileptic drugs, cardiac stimulants,

anti-TB drugs, thyroxine, anti-thyroid drugs, Xylometazoline, potassium-sparing diuretics, and anticoagulants.

- (2) As the concentration of anxiolytics and antidepressants, etc. in milk is very low, there are only a few cases they have caused discomfort in babies. While using them long-term, pay attention to their impact on the baby's central nervous system.
 - (3) Local anesthesia is safe to use as it will not be absorbed by the baby's gastrointestinal tract.
 - (4) Like other drugs, general anesthesia is unlikely to cause any impact to babies. As its half-life is very short, you can breastfeed immediately after awakening.
 - (5) Almost all external dermatologic agents, inhaled medication (such as asthma medication) or nasal spray, and eye used drugs are regarded as safe drugs.
2. Drugs that you should avoid while breastfeeding:
- (1) Penicillin: As it likely to cause allergies, please handle it with care.
 - (2) Sulfonamides: More obvious to cause harms to kernicterus, hemolysis and favism patients.
 - (3) Tetracycline: It will cause permanent dental coloring and hinder bone development.
 - (4) Chloramphenicol: It may cause bone marrow suppression and aplastic anemi.
 - (5) Metronidazole: It may cause birth defects and mutations.
 - (6) Alcohol: It will cause respiratory depression and weak pulse in babies.
 - (7) Nicotine: It will cause shock, vomiting, diarrhea, respiratory diseases and sudden death in babies
 - (8) Caffeine: It will cause restlessness and weight loss babies.
 - (9) Long-acting antidepressant fluoxetine: It will cause long-term drug action.

3. Drugs that should never be taken:

Anticancer drugs, radiation therapy drugs, Cyclosporin (immunosuppressive), Mysoline (epilepsy), Parlodel (Parkinson), Ergotamine (migraine), lithium salt (mania), cocaine, heroin, marijuana, amphetamines, nicotine and amphetamine.

How about radioisotope scanning of nuclear medicine?

- 1.It is not necessary to stop breastfeeding while conducting X-ray and other scanning, even with the use of developer.
- 2.It is also not necessary to stop breastfeeding while conducting computed tomography (CT) and magnetic resonance imaging (MRI).
- 3.Techneium is usually used on mothers while accepting lungs or bone isotope scanning. The half-life of this drug is 6 hours and after a lapse of five half-lives, the drug will be discharged from the mother's body completely. So there is no need to worry about.

Is it alright for women with breast augmentation to breastfeed their babies?

- 1.Silicone and saline bag are common materials used in breast augmentation.
- 2.Currently, scientific studies have found no evidence to indicate that the silicon polymer is harmful to human body.
- 3.The silicon content of silicon element found in milk and formula milk is even higher than the milk from mothers with breast augmentation. Therefore, mothers with breast augmentation can still breastfeed their babies.

Chapter 19 Understanding Infertility

What is infertility?

Under the circumstances of not taking any contraceptive measure, if the wife does not show any sign of pregnancy after one year of marriage, there is a possibility of infertility. The chance of infertility for married couples is approximately 15%.

Ovulation period

The normal female menstrual cycle is 28 days, and the ovulation period roughly falls on the 14th days after the menstrual flow.

The day of ovulation, and three days before and after ovulation are known as the ovulation period. It is the period that most likely to conceive a baby.

Excluding the ovulation period, the reminding time is known as the safe period.

If you think of taking contraception measure during the safe period, the successful rate is not high due to periodic variability. We suggest you to take contraceptive measure through other methods (such as using condoms and birth control pills, etc.)

To enhance the chance of conceiving, you should master the female pregnancy period.

The sperms are able to survive up to 72 hours inside the female reproductive tract, but the egg can only live up to 24 hours.

Performing sexual intercourse within three days before ovulation and one day after ovulation is more likely to conceive a child.

Causes of female infertility

1. Among the infertile couples, about 60% of infertility causes come from women.
2. Problems in female ovaries, fallopian tubes, uterus, cervix and other aspects are factors that may cause infertility.

3. The female menstrual cycle and menstrual flow volume, production history, with or without a history of pelvic inflammatory disease.
4. The women's age, whether or not they are infected with sexually transmitted diseases, smoking, alcoholism, drug addition or chronic diseases, etc.
5. The women's working natures, chemical drugs and radiation, etc. are also factors needed to take into consideration.
6. Overweight or too skinny, long-term strenuous exercises, excessive weight loss, life stress, ovarian diseases, pituitary dysfunction, hyperprolactinemia, thyroid dysfunction and other problems may affect normal ovulation.
7. Fallopian tube congestion or adhesion is also one of the important reasons to cause infertility.
8. Uterine cavity adhesion, endometrial polyps, uterine fibroids, adenomyosis, uterine congenial malformation, etc.
9. Cervical infection, anti-sperm antibodies and cervical mucus dysfunction are also factors that may cause infertility.

Causes of male infertility

1. Congenial chromosomal abnormalities and endocrine system abnormalities.
2. Testicular dysfunction, varicocele, sperm transportation dysfunction, etc.
3. Living habits, working environment, physical and mental illnesses and other factors, such as drugs, radiation and sexual transmitted diseases, etc.

Conclusion

As infertility examination and treatment are relatively complicated, husbands and wives should participate together in the entire treatment process.

Husbands and wives should encourage each other to generate more loving feelings, only then will they have a better chance of giving birth to a lovely child.

Chapter 20 Understanding Osteoporosis

Why postmenopausal women will generate osteoporosis?

A reduction in estrogen during postmenopausal period will result in an increase of osteoblast cells and osteoclast cells in women. Meanwhile, a faster action of osteoclast cells and a slower action of osteoblast cells will cause a huge loss of bone mass to result in bone porosity. Hence, the bones tend to fragile during postmenopausal period.

Medical Treatments of Osteoporosis

The priority treatment is to change the lifestyle, including to quit smoking, quit drinking, exercise, eating habits, and supplement calcium and vitamin D. On more serious condition, it is necessary to take the following medical treatments:

1. Bisphosphonate drugs: They are able to repress the osteoclast cells and reduce the reabsorption of bone element. In addition, vitamin D is able to enhance calcium absorption.
2. Selective estrogen receptor modulators: Such as Raloxifene. Its effect may be weaker and more suitable for women who cannot tolerate bisphosphonate drug treatment and women with a high risk of breast cancer.
3. Hormone replacement therapy: Used in preventing and treating osteoporosis during the postmenopausal period. It is suitable for women who cannot tolerate other osteoporosis drug treatment and women with menopause symptoms.
4. Other medical treatments: Calcitonin, parathyroid hormone, RANKL monoclonal antibodies and other drugs.
5. Multi-drug combination therapy: It is used to treat patients with excessive bone density increment and prevent bone

fracture. However, the effectiveness is slim.

Conclusions

1. Menopause is a major transformation period in a woman's lifetime.
2. It is a priority to choose low-dose hormone replacement therapy, for it is able to improve the menopausal period and improve the life quality.
3. Except for women with a high risk of breast cancer, the hormone supplement therapy is suitable for general women.
4. Select drugs with best efficiency and lowest side effects after their risks and benefits have been carefully evaluated by your specialist physician.
5. Prevention is better than therapy. The best way to reduce the occurrence of bone loss and avoid osteoporosis is to engage in regular exercise, quit smoking, quit alcohol, take up a balanced diet, and supplement enough calcium and vitamin D.



Chapter 21 Understanding Endometriosis

What is Endometriosis?

Endometriosis is a problem caused by the dislocation of endometrial cells. If endometrial cells grow in the ovary, it will destroy normal ovary cells. It is called "Endometriotic cysts." If endometrial tissues grow in myometrium, it is called "Adenomyosis." Endometrium is normal cells inside women's uterus. They help the embryo implanting when the woman is pregnant. It serves as a breeding ground for the embryo. Women's uterus are ready to breed a new embryo during each period. If the woman gets pregnant, her endometrium will continue growing. If not, the endometrium will fall off and turn into menstruation.

Clinical Symptoms and Complications

Endometriosis is a kind of chronic inflammation and abdominal organs will easily become adhesive. Endometrium is the most active during ovulation and menstruation. Therefore, most symptoms happened during these two periods of time, especially during menstruation. Generally, menstrual pain becomes the most serious during the first two days of menstruation. Serious endometriosis will cause both pain and adhesion, resulting in long-term chronic pelvic pain and gastrointestinal problems. Clinically, menstrual pain is a possible symptom for endometriosis. Common symptoms include: menstrual pain, infertility, pain during sexual intercourse, irregular periods, or too much menstrual blood.

Treatment

1. Medical Treatment: Taking hormones to reduce the activeness of the foci and shrink the scale, including injection, oral, intra-uterine dosing.
2. Surgery: Completely remove all the foci, including laparoscopy, laparotomy.

Releasing Menstrual Pain

1. Go to hot springs one week before the period, or take hot water bath, eat more hot food and less iced food.
2. Hot compressing lower abdomen during the period.
3. Meditation.
4. Doing some exercise properly, such as yoga, Taijiquan, jogging, weight training.
5. Massage, acupuncture, applying magnet patch, finger pressing massage.
6. Taking painkillers: On the day you expect to feel most painful, or take moderate dosing at the beginning of the pain.

Conclusion

Although endometriosis cannot be cured easily and has 50% of possibility for relapsing, if one can undergo treatment as soon as possible, adapt herself in life, and have OPD patiently, it is not difficult to treat this disease.

Chapter 22 Understanding Uterine fibroids

A uterine fibroid is a benign tumor originates from the smooth muscle layer of the uterus. It is commonly found in women between 30-50 years old. A tumor grown within the muscle layer is called an intramural fibroid, while a tumor grown inside the uterus is called a submucosal fibroid, and a tumor grown underneath the mucosal (peritoneal) surface of the uterus is called a subserosal fibroid. Most women with uterine fibroids do not have any symptoms. They are found when the women are under regular gynecological examination such as internal examination or ultrasonic examination by gynecologists

Clinical Symptoms

1. Compression Symptoms: urinary frequency, difficult defecation, backache, stomachache, and pelvic pain.
2. Heavy and irregular periods: especially for submucosal fibroids.
3. Infertility and miscarriage: Submucosal fibroids often cause infertility or recurrent miscarriage.

Operation Time

For women intending to bear a baby, if the fibroid is not very big, unless its location influences implantation, there is no need for operation. If the symptoms are obvious, the fibroid can be removed and the uterus can be retained. However, if the condition is severe, after the treatment, the patient should immediately undergo artificial insemination lest the fibroid relapses. When women have the following symptoms, operation should be taken into consideration:

1. Too much menstrual blood, causing anemia.
2. Severe compression (difficult defecation and pelvic pain).
3. The fibroid grows very fast. There is possibility for having a sarcoma.
4. Infertility caused by uterine fibroids.
5. Severe pelvic pain.
6. The size of the fibroid exceeds a three-month pregnancy uterus.

Treatment

Treatments depending on the patient's age, the retention of fertility, and psychological conditions can be divided into: hysterectomy, myomectomy, medical therapy, uterine artery embolization. Those who want to keep fertility or keep their uterus are applicable for myomectomy, but it is possible to relapse.

Some people misunderstand that after hysterectomy, one would enter menopause, but in fact, it is the ovary rather than the uterus that controls female hormones. Therefore, the undergoing of hysterectomy does not guarantee menopause. One only stops having periods.

Could the fibroid shrink after menopause?

Generally speaking, lacking of the stimulation of hormones, after menopause, the fibroid would usually shrink. If it doesn't, the patient should concern about complications or possibilities of malignant tumors.

Chapter 23 Fair Ladies – Healthy Weight Loss

Definition of obesity

Definition: BMI at between 18.5 and 24 is regarded as normal, over 24 is considered overweight, and over 27 is considered obese.

BMI = personal weight (kg)/height (square meter)

For men's waistline exceeding 90cm and women's waistline exceeding 80cm, they are referred to as obese.

The actual body weight has exceeded 220% of ideal body weight.

Ideal body weight

Men's ideal body weight (kg) = [height (cm) – 80] × 0.7

Women's ideal body weight (kg) = [height (cm) – 70] × 0.6

Causes of obesity?

There has been a problem in life management, such as binge eating (too much intake of foods), physiological and psychological effects (hunger feeling), genetic (metabolic rate), eating habits, social environment, endocrine and genetic inheritance.

A shortcut to weight loss is to conduct a proper life management program. Weight loss success lies in psychological and living habits.

Why you should lose weight?

Obesity is an illness. An ideal weight will allow you to feel healthier and prettier.

How to lose weight?

By means of food control, regular exercise, drug assistance and medical weight loss (liposuction, surgery, intestinal truncation, bariatric surgery, stomach tied-up and intestinal bypass).

Undetermined efficacy remedies such as sauropus, slimming tea and ear acupuncture, etc.

Common side effects of weight loss

Medical liposuction has the side effects of partial hardening and unevenness on body, etc.

Sauropus tends to cause respiratory failure and a need to perform lung transplantation.

The senna ingredient found in slimming tea will cause diarrhea and electrolyte imbalance. Please take caution!

Weight loss diet principles

1. Take three meals daily and do not eat snacks. Take meals at a fixed time and fixed amount. Take light foods prepared by means of boiling and cooking.
2. Drink the soup first, followed by taking vegetables and finally eating meats and rice slowly. Reduce the intake of high calorie foods.
3. Chew and swallow the foods slowly. If you don't feel hungry, you should then stop eating.
4. Concentrate on eating without watching TV or reading a book.
5. Eat less snacks or desserts, drink less beverages and liquor, and eat fewer foods with high calories such as peanuts and nuts.

Regular exercise

Increase energy consumption and control the body weight. Increase the metabolic rate to enhance immunity. Take regular exercise to improve heart and lung functions.

Improve the muscle strength and flexibility to reduce unintentional injuries. Relieve life stress to eliminate physical and mental fatigue. Respond to social life to improve interpersonal relationship.

333 Exercise Principles

Engage in aerobic exercise, and exercise at least 3 times weekly.

Spend at least 30 minutes in each exercise.

Exercise up to the extent of feeling out of breath but still manage to talk, or reaching a pulse rate of 130bpm.

