

Chapter 24 Drug safety for children

Oral dosages suitable for small children

Include Troches, capsules, powders, liquids, elixirs, syrups, solutions, and suspensions.

Health Education on Medicine use for children

1. Children are not small sized adults:
 - (1) The stomach absorption: Gastric peristalses are slower in newborns and young children.
 - (2) Liver metabolism: neonatal liver function only of at 20 to 40% of adults.
 - (3) The kidneys excluded: neonatal renal is only about 30% of adults, will reach adult level after 1-year-old.
 - (4) Skin absorption: high permeability of the skin of infants and young children, better absorption of topical medicines.
2. Is it more convenient for children grinded packed medicine?
 - (1) Using grinded adult medicine may lead to easier contamination, less medicine stability, with shorter preservation period.
 - (2) Mixing many types of medicine through grinding may lead to changes in medicine substance or create interaction, and inaccurate dosage in the packs.
 - (3) Children that are older can practice swallowing or with small amount of food together.
3. Children's medication guides:
 - (1) Not all medicine are suitable for grinding: may lead to easier contamination, less medicine stability, with shorter preservation period, with interactive effects.
 - (2) Can ask doctors to prescribe specialty medicine designed for children, such as: Liquid preparations, syrups, solution agent, suspending agents.
 - (3) Grinded packs should be taken all at once, to ensure

quality of medicine.

4. Advice for using syrup or suspended liquids:

- (1) Unopened and sealed syrup or suspended liquids can be kept at room temperature.
- (2) Dry powder suspended liquid should be used during the first time by following instructions to add cold water and mixed evenly. Before taking medicine each time, they should be mixed and stirred evenly. Make sure the correct dosage amount is taken each time.
- (3) Medicine that are unsealed and opened should be stored at room temperature or refrigerated according to instructions. Note the date of expiration.

5. Giving medicine to babies:

- (1) Use graduated pipette or oral syringe.
- (2) Hold on your lap and support the head of the baby.
- (3) Give only small amount of medicine each time to prevent choking.
- (4) Drip the medicine at the back side or edges of the oral cavity.
- (5) Pacify the baby while giving medicine.

6. Giving medicine to infants:

- (1) Let the infant choose the position of taking the medicine, and let the infant be familiar with the measuring tool.
- (2) If necessary, use small amount of food or beverage to hide the flavor and odor. After taking the medicine, drink water or beverages to eliminate the flavor and odor.
- (3) Give simple instructions or encourage for their cooperation.
- (4) If there is need of taking many types of medicine, let the infant choose the order of taking medicine.

7. Vomiting medicine by children:

If the children spit out the medicine after taking it, they must take it again. Usually choose those that are easiest to absorb such as: Syrup, liquid, or grinded. If it is already 10-15

minutes after taking the medicine, then there is no need to take again. The disintegration times for tablets are different and have different handling. If after vomiting, the pill is still intact, then it must be retaken. Otherwise, there is no need to retake medicine.



Chapter 25 Medicine Safety for Seniors

Senior Distress and signs of aging

1. Vision, hearing, cognitive, memory degradation
2. Drug absorption, distribution, metabolism, excretion changed
3. Physiological balance, compensatory function degradation, more difficult to regulate blood sugar, blood pressure, heart rate, body temperature, etc.
4. Coordination function degradation, unresponsive, mobility, easy to fall, fractures, urinary frequency, urinary incontinence

Frequently problems for medicine usage by seniors

1. Repeated taking of medicine, forgetting to take medicine, taking the wrong medicine, taking medicine at the wrong time
2. Adjusting the medicine by oneself or stop taking medicine, with increasing frequency of side effects occurring
3. Like to buy medicine, remedies, Chinese herbs, drugs with exaggerated effects, and give each other drugs
4. Preserving the medicine the wrong way, reluctant to discard expired drugs

Causes for problems of seniors taking medicine

1. Having many types of chronic diseases, taking prescriptions from many different hospitals at the same time, complexity in the types of medicine used
2. Resting time unable to conform with time for taking medicine
3. Deterioration of body functions, reduction in memory and cognition

Notes on seniors taking medicine

1. When seniors visit doctors, they should tell doctors or pharmacists all the medicines they are taking currently
2. Should let doctors or pharmacists understand all the types of medicine you are using, to avoid repeated usage or effects of drugs interactions
3. When taking medicine, be clear about the usage, the amount, the time, and dosage. If there are any questions, should inquire the pharmacist immediately
4. Be careful of the medicine's side effects and new symptoms that appear
5. Not to buy health products with unclear sources, not to believe in unrealistic and exaggerated advertisements, to avoid spending money and damaging oneself
6. Insist on the 5 Not to Principles: Not to listen, not to believe, not to buy, not to eat, not to recommend
7. Memory and cognition reducing, using methods to avoid forgetting taking medicine such as: calendar, drug box

Need to know for senior medicine taking

1. Should do regular health checkups, to understand functions of inner organs, so to adjust the medicine dosage and avoid side effects happening
2. Diuretics, multivitamin preparations to avoid before bedtime, so as not to affect sleep
3. Comply with doctor's or pharmacist's instructions of taking medicine, and not to change it by oneself
4. After taking sedatives and sleeping pills, to rest and not walk afterwards, to prevent falling down
5. After taking high blood pressure medicine, to prevent feeling dizzy caused by low blood pressure from one's postures
6. Using medicine box for long effect medicine or single dosage medicine to help prevent forgetting to take medicine

Chapter 26 Chinese Herbal Medicine's Safe Usage

Preservation of Chinese Herbal Medicine

1. Refrigeration: This is a more ideal method, because preservation under low temperature (below 5 °C) can prevent bacteria and fungus growth and signs of decay such as changing color and taking oil.
2. Preservation by chemical agents: Frequently used chemical agents include dioxide benzene, camphor, carbon tetrachloride, etc.

Preservation of scientific formulations

Scientific formulations sold on market include dosage form of granules, powders, tablets, ointments, etc. and should be stored in dry locations. To prevent moisture, it is best to place inside glass bottle to be damp-proof.

Caution of using medicine when pregnant

1. Easy to increase uterine contractions causing miscarriage include rhubarb, Glauber's salt, senna and other heat diarrhea drug. Medicine such as Mitsubishi, Curcuma, Changshan that are extremely powerful medicinal drugs are prohibited, to prevent miscarriage.
2. Pregnant women should use caution with citrus aurantium, the blood circulation stasis the peach kernel, safflower; the hot and spicy Pinellia, tuber, and smoothing function's Muk Tong, Rhizoma Imperatae, etc.
3. The effect of Yiyiren is to facilitate urination, making the uterus excited and enhancing contraction of the uterus.
4. The effect of malt is to promote digestion and starch decomposition, causing retreating of milk in pregnant women.

Drug interactions

1. Chinese medicine and their preparations containing calcium, such as: Gypsum, keel, oysters, because calcium ions and cardiac stimulants have similar effects, that can strengthen heart muscle contractions, and strengthen the effects and toxicity of cardiac stimulants.
2. Licorice-containing medicines and decoctions should not be used with cardiac stimulants such as digitalis. Licorice has Deoxycorticosterone Sample effects, can “preserve sodium and expel potassium”, leading the heart to become sensitive to cardiac stimulants and cause poisoning.

Food with cold nature

Can lower the effect of body heat and temperature. Therefore, those who bodies are asthenia cold and are afraid of cold or have upper respiratory diseases or gastrointestinal dysfunction should avoid these foods. Those who bodies are hot can choose food with cold nature to lower the reaction of body's heat.

Warm and hot food

Strengthen the effects of body heat creation and raises the effects of physical fitness and strength. Those who bodies are asthenia cold can choose to use more. However, these foods will cause symptoms of dryness in mouth, constipation etc or symptoms of having too much heat. Therefore, those who bodies are hot should avoid these foods.

Food of insipid nature

Food of insipid nature can be taken by most people on a daily basis, except for those with particular allergic reactions, such as: fruits, vegetables, meat.

Chapter 27 Medication Myths

Curing Illnesses if one has them, strengthening the body if not sick?

- 1.The purpose of using medication is to cure or prevent illnesses.
- 2.No medicine can be used to cure a particular disease and be used as tonic.

When taking medicine, stomach medicine must be taken together to protect the stomach?

- 1.Not all medicine will hurt the stomach. In fact, only a small percentage of medicine will have side effects on the stomach.
- 2.The main ingredients of stomach medicine can easily combine with other medicine, affecting the absorption of these medicines.

It is best to take medicine after meals?

- 1.Many people believe that medicine will hurt the stomach and deduce that it is best to take medicine after meals.
- 2.The absorption of some medicine is affected by food, so may need to be taken on an empty stomach.

After the symptoms disappear, the medicine need not be taken?

- 1.The effect of medicine is to eliminate causes of illnesses, control, or delay the progress of the illness, and relieve symptoms.
- 2.Many antibiotics are designed to eliminate the source of infectious diseases. If medication is stopped in the middle of the treatment process, it may lead to drug resistance of the illnesses.

3. Taking medicine to control blood pressure and diabetes long term can significantly reduce complications.

Introducing “good medicine” to good friends?

Every person’s organ functions, disease conditions, reactions to therapy, and body nature are different. Therefore the dosage of a particular medicine may affect different people differently. Doctors and pharmacists will usually choose different medicine for different patients.

Injections are better than taking medicine orally?

1. Pain: the part injected will suffer pain.
2. Infection: Incomplete disinfection of needles or syringe or piping may lead to infection.
3. Risks: Negative reactions to injections or overdose through injections have smaller chance of rescue and detoxifying.
4. Basic principle of taking medicine: If can be used partially, then do not take orally. If can take orally, then do not take injections.

Grinding the medicine will lead to faster and better effects?

1. Some medicine cannot be grinded into powder or chewed, such as sublingual tablets, long-lasting tablets or continuous tablets, casings tablets etc.
2. The stability of medicine after being grinded into power is less, and the packing is less accurate, making the drug effects and dosage unable to control fully.

Sedatives and sleeping pills are bad for you, and should not be taken?

1. Currently, commonly used sedatives and sleeping pills are very safe.

- 2.They can be used to relieve tension and stress, relax muscles, and help one sleep.
- 3.If necessary, short-term use at appropriate level of sedatives and sleeping pills can help patients relieve stress and sleep disorders.

Morphine will lead to addiction, so it is better to endure pain rather than take morphine?

- 1.Morphine is the strongest pain-killer, and is most frequently used to stop pain after surgery and for treatment of cancer, etc.
- 2.There is hardly ever addiction when used medically. Also, having minimal pain is the right of cancer patients in the terminal stage, and is an indicator of human rights.

Does synthesized medicine cause more side effects than natural medicine?

1. Unless there are impurities, the effects of medicine are only related to its composition. It does not matter whether it is synthesized chemically or abstracted naturally.
2. We won't react differently to the same chemical molecules deriving from different sources.

Are there complementary effects when we take both Chinese and western medicine?

1. Unauthenticated medical combination may bring adverse drug interactions. For example, strengthening or weakening effects, poisoned, or failing to be effective.
2. Staggering medicine taking time can only prevent the interaction during absorption. It cannot completely avoid the effects, metabolism, and excretion for taking multiple medicine.

I dare not take steroid!

1. Steroid is used to treat many diseases, such as endocrine disorders, skin diseases, allergies, asthma, blood disorders, and others. Steroid is the top choice for the right indications such as autoimmune diseases. If you take it when you are not supposed to, it becomes poisonous.
2. To take steroid for a long time might cause some adverse reactions, such as muscle disease, osteoporosis disease, water and electrolyte imbalance, worsening or covering infection, and others. It depends on a doctor's professional diagnosis to determine and monitor these treatments.

Is antibiotic the best anti-inflammatory drug?

1. Antibiotic is not an anti-inflammatory drug. Rather, it is used to resist infection caused by microbes.
2. Used improperly (for example, no such infection, wrong kind of antibiotic, not completing the treatment process, inadequate dosage) may cause drug resistance to the microbes, or even have the risk of no drugs to use when having severe infection.

