

Chapter 33 Understanding High Blood Pressure

What is high blood pressure?

According to the standard issued by the US National United Conference Report

Classification	Systolic blood pressure (mmHg)		diastolic blood pressure (mmHg)
Normal	<120	and	<80
Prehypertension	120~139	or	80~89
The first stage of hypertension (mild)	140~159	or	90~99
The second level of hypertension (moderate)	≥ 160	or	≥ 100

Is high blood pressure a disease?

High blood pressure is a condition, not disease.

When sympathetic nerves in normal people are affected, such as: Happiness, anger, sadness, joy, cold, and blood pressure is also affected.

Therefore, upon measuring blood pressure as high just once and thinking it as high blood pressure is incorrect. Usually, it is only when measuring over 3 times in a period of time with abnormal blood pressure, before considering treatment.

What are feelings associated with high blood pressure?

High blood pressure is an invisible killer. The patient may feel headache, sore neck, or lack of clarity. When it rises too much

suddenly, conditions such as nausea and blurred vision may occur.

Complications of hypertension

Atherosclerosis. stroke. Lower extremity vascular obstruction, and in severe cases, amputation.

Aortic dissection. Left ventricular hypertrophy, myocardial ischemia, myocardial infarction, heart failure.

Eye damage, blindness in severe cases. Kidney dysfunction, kidney failure.

Treatment

1. Control diet: Take less sodium, supplement food with potassium, calcium, magnesium, lower cholesterol level, high fiber food.
2. Lifestyle: Reduce stress, plenty of sleep, exercise regularly, control cigarettes & alcohol, normal weight.
3. Drug treatment: Must consider quality of life and convenience for long term use.
4. Sudden stopping medicine: Easy to lead to angina or heart damage, and even sudden death.
5. Long-term medication: You should not self-adjust the dosage, and don't decide whether to take the medication or not according to your blood pressure.



Chapter 34 Understanding High Blood Cholesterol

What is high blood cholesterol ?

When there is too much Cholesterol, triglycerides and other fatty substances in the human blood, plaque will form in blood vessels which affect the speed of blood flow. In serious cases, may lead to clogging of blood vessels.

Table of the Diagnosis of High cholesterol:

	Ideal Value (mg/dl)	Marginal Value (mg/dl)	Critical Value (mg/dl)	High Critical Value (mg/dl)
Total cholesterol (without fasting)	<200	200~239	>240	>240
Triglycerides (Fasting for 12 hours)	<200	200~400	400~1000	>1000
Low-density lipoprotein (Fasting for 12 hours)	<130	130~159	160~189	>190
High-density lipoprotein	>35	>35		

The effect of cholesterol on body

1. When the amount of cholesterol in blood vessels is low, blood will flow very smoothly.
2. Too much cholesterol will hinder blood flow, leading to heart attack, stroke.
3. When the long term blood fat is too high, the blood supplied to the blood will clog the blood vessel, leading to heart attack.

4. When the blood vessel supplying blood to the brain is clogged, stroke will occur, endangering one's life.
5. When there is too much cholesterol in the body, it will damage the blood vessel walls.
6. The body needs sufficient amount of cholesterol to maintain its proper function, but too much will lead to high blood cholesterol.

Causes of high blood cholesterol

1. The main danger factors for heart attack are food containing too much fat or too little exercise.
2. Those with high blood cholesterol and diabetes family history, will lead to phenomena of high blood cholesterol.
3. Most high blood cholesterol patients need to be treated.
4. There are usually no external symptoms of high blood cholesterol.

What is good cholesterol? What is bad cholesterol?

Cholesterol mainly consisted of Low-density lipoprotein cholesterol (LDL-C) and High-density lipoprotein cholesterol (HDL-C). Low-density lipoprotein cholesterol is also “bad cholesterol”, while high-density lipoprotein cholesterol is called “good cholesterol”. LDL-C is a key factor in causing heart attacks and stroke. Good cholesterol can reduce a portion of the danger of high blood cholesterol symptoms.

Treatment

1. If a patient had suffered from Cardiovascular disease, such as: angina pectoris, myocardial infarction, stroke, diabetes, then should take medicine that lower cholesterol, to reduce the chance of heart attack and stroke from happening.
2. Quitting smoking, controlling diet, and regular exercises can raise the amount of high-density lipoprotein cholesterol in the body, and lower the bad low-density lipoprotein cholesterol from the blood stream.

Chapter 35 Understanding diabetes

What is diabetes?

Under normal circumstances, the body will convert starchy foods into glucose to serve as fuel for body. Insulin is a hormone produced by the pancreas, which helps glucose enter the cells and provide energy. However, diabetes patients can not produce enough insulin or can not use insulin effectively or produce insulin resistance, so that glucose can not properly enter the cells, leading to rising level of blood glucose level.

Table of Diagnosis for High Blood Glucose:

Plasma values	Normal	Objective Range for Patients with Diabetes
The average blood sugar before meals (mg/dL)	<100	90-130
The average blood sugar after meals (mg/dL)	<110	<180
* Capillary blood glucose value		

Blood glucose

1. Blood glucose is the glucose produced after the human body completes the digestion process of food, to serve as fuel source.
2. The ideal blood glucose level before meal should be controlled in the range of 80~120 mg/dl.
3. Diabetes patients usually will be accompanied by symptoms of blood cholesterol abnormality.

Who can get diabetes easily?

- 1.Those with a diabetic family history
- 2.Middle to old aged people above 40 years old
- 3.Fat or obese people

Symptoms

Diabetes acute symptoms (not apparent during the initial stage, but they will show up gradually)

- 1.An urge to drink more, urinate more and eat more, and rapid weight loss.
- 2.Vision loss, tingling hands and feet, weakness and a reduction in resistance.
- 3.Skin vulnerable to infection and not easy to get better, and poor wound healing.

Principles of treatment

- 1.In the beginning period of curing diabetes, the keys are diet control, suitable level of exercises, and maintaining normal weight.
- 2.If blood glucose cannot be controlled, then should drug treatment be considered.
- 3.Only when oral diabetic medicine leads to poor control should insulin shots be considered.
- 4.The diabetes patient not only has to control blood glucose level but also should actively control blood cholesterol.

Drug treatment

- 1.Only when diet and exercises fail to control it well, should medication be used.
- 2.Need to use medicine under guidance of medical staff, and should not change medicine or adjust the dosage by oneself.
- 3.If there are adverse reactions after taking medication, should inform medical staff.

4. There should always be a reserve of medicine at home, but in case of sudden needs.
5. Avoid not following instruction of consuming food after taking medicine within regulated time (15-30 minutes) leading to low blood glucose.
6. Low blood glucose may mean that there is an imbalance between the three items of diet, exercise, and medicine, so appropriate adjustments should be made.

Non-medical treatment

1. Quit smoking and losing weight, regular exercises, diet treatment, reducing danger factors, regularly doing re-examination.
2. Must follow instruction of doctor, pharmacist, and nutritionist.
3. Maintain a healthy lifestyle, with good and pleasant emotions and a regular lifestyle.

Hypoglycemia and Treatments

1. What is hypoglycemia?

When the glucose content is lower than 50-60g/dl or there are occurrences of hypoglycemia symptoms.

- (1) Insulin or hypoglycemia drugs overdose.
 - (2) No intake of food after taking blood sugar-lowering drugs or insulin injection.
 - (3) No extra food supplement after an increase in physical activity.
 - (4) Liver and kidney dysfunction.
 - (5) Drinking alcohol or taking aspirin, sulfa agent or beta-blocker at the same time.
2. Symptoms of low blood sugar:
 - (1) Autonomic symptoms: The occurrence of hunger, trem-

- bling, cold sweating, heart palpitation and rapid heart beat during the initial stage.
- (2) Central nervous system: Drowsiness, unconsciousness, convulsion and coma.
 - (3) Non-specific symptoms: Headache, dizziness, nausea and lip numbness.
3. Hypoglycemia prevention:
- (1) Take three meals and snacks daily at regular time and at a fixed amount.
 - (2) Take note on warning signals.
 - (3) Do not exercise with an empty stomach.
 - (4) Take oral medication on time and do not keep a long interval with food intakes.
 - (5) The insulin injection dose must be accurate, and you should eat within half an hour after the injection.
 - (6) Carry candies and cookies along with you anytime and prepare an identification card.
 - (7) If the blood sugar concentration is ≤ 110 before bedtime, then you should take a snack.
 - (8) For patients with “no hypoglycemia awareness” avoid overly strict control of blood sugar.
4. What should the surrounding people do in the event of hypoglycemia coma?
- (1) Do not inject the patient with insulin.
 - (2) Do not feed the patient forcefully.
 - (3) Maintain a free respiratory tract of the patient.
 - (4) Inject the patient with glucagon.
 - (5) Call 119 for help.
5. Hypoglycemia treatment:
- (1) Take 4-6 lumps of sugar in the conscious stage, then take another one (or 120-180cc of fruit juice or a spoonful of honey) if the condition does not improved 10-15 minutes later.
 - (2) Under the unconscious stage, provide sugar through intravenous administration.

Chapter 36 Understanding Asthma

What illness is asthma?

Asthma is a kind of chronic inflammation and a repeated outbreak of airflow blockage pathological change. It will heal spontaneously or treated. For those uncured patients, they can also take proper therapy to control the symptom and still lead a normal life.

What are the symptoms of asthma?

During an asthma attack, there are symptoms of breathing difficulty, wheezing and chest tightness, etc. depending on the severity. The onset time varies from several minutes to several hours.

It is characterized with completely no symptom at all or mild symptoms between two onsets.

What causes asthma?

- 1.Genetic, allergic, infectious or a combination of three factors.
- 2.Approximately 30% of asthma patients have an allergic physique, or allergic to dust or pollens. It is a type of seasonal illness.
- 3.Majority of patients has no apparent causes, and it is known as a specific physical reaction.

Causes that induced asthma

- 1.Allergens: Dust, dust mites, animal danders, pollens and molds, etc.
- 2.Bacterial or viral infections: Colds and bronchitis.
- 3.Sports: Running in bittering cold weather.
- 4.Emotional: Excitement or anger.
- 5.Environmental stimulation: Smoke, emissions or air pollution.

6. Drug or food allergies: Painkillers, milk, egg and seafood, etc.

Treatments

The treatment principles are divided into four levels: Mild intermittent, mild persistent, moderate persistent and severe persistent.

1. Avoid or reduce exposure to allergens – improve home environment and eliminate allergens in the environment.
2. Medical treatments – the asthma medical functions can be classified into control drugs and reliever drugs:
 - The efficacy of control drugs is to lighten inflammation and swelling of the respiratory tract, and prevent asthma attack.
 - The efficacy of reliever drugs is to smoothen and relax the respiratory tract to eliminate asthma symptoms.
3. Anti-allergen therapy – inject the patients with minute amount of allergen repeatedly within a period of time, and then increase the dosage gradually to strengthen the patients' tolerance to allergen.

Precautions

Asthma diagnosis requires clinical characteristics and measurement of pulmonary functions.

The patients should record daily peak expiratory flow rate and onset frequency.

Reduce allergen exposure and avoid contact with pets. Prohibit using drugs that will induce asthma attack, such as high blood pressure medication of beta blocker and aspirin, etc.

Chapter 37 Understanding of urinary incontinence

Definition of urinary incontinence

Medically, the condition when the conscious mind cannot control urine leakage is defined as urinary incontinence.

Most symptoms are light, but will create physical and psychology disturbances because of poor odor and frequent urination.

Causes of urinary incontinence

1. Physical causes of urinary incontinence:

Damages to urinary tract including muscle, structural weakness of the abdominal perineal muscle, nerve motor conduction disease, colorectal lesions, and changes in angle of the female urethra and bladder are all causes of urinary incontinence.

2. Psychological causes of urinary incontinence:

When psychological symptoms of dependence, resistance, fear, and insecurity appear which affect the physiology, leading to urinary incontinence.

Classifications of urinary incontinence

1. Stress incontinence: about 80% of cases:

When the abdomen exerts force, such as lifting heavy objects, coughing, sneezing, or laughing, urine involuntarily leaks out. After women's natural childbirth or after pelvic surgery, leading to pelvic muscle ligamentous laxity. Reduction of hormone postmenopausal for women leading to contraction of urethral mucosa and leaking urine. Male after excision of prostate due to prostate cancer.

2. Urge incontinence:

When patient cannot make it to toilet after sensing urinary urgency, and incontinence accompanies it, can be classified as overactive bladder.

3. Mixed incontinence:

This refers to combination of stress and urge incontinence.

4. Overflow incontinence:

When patients suffer neuropathy, Long-term holding back urine, prostatic hypertrophy, or the urine long term can not be emptied. Bladder with poor contractile force, even if the bladder is full, there is no urination sense, causing overflow incontinence.

5. Temporary Incontinence:

Occurs mainly in the urinary tract infection, puerperal, & insanity.

6. Nerve incontinence:

Stroke, spinal cord injury, hysterectomy and rectal cancer surgery may possibly cause neurological incontinence.

7. Constant leakage incontinence:

Urinary tract fistula or urethral tissues severely damaged in patients leading to constant leaking of urine throughout the day.

Chapter 38 Knowing about Enlarged prostate

Is BPH only for men?

Females have tissues similar to prostate, but they are degraded already. Scientists confirm that female have prostate, which is a gland that surrounds the female urinary tract. Therefore, female may also get prostate related diseases.

The development of prostate?

1. At birth, it is small like a pea
2. Grows rapidly during teenage period
3. Fully developed between 25-30 years old
4. Second growth at middle age (around 40 or more years old)
5. under 50 years old – no problem
6. above 60 years old – 50% have benign enlarged prostate
7. above 80 years old – 80% have benign enlarged prostate

Symptoms of enlarged prostate?

1. Urine stream thins, with discontinuous urination process
2. When starting to urinate, is very difficult, and after urination, will continue to drip
3. Frequent urination or when feeling urge to urinate, unable to be completely emptied

Treatment Objectives and Method

1. Observational Treatment:
 - (1) Restrict intake of beverages and liquid, and to empty urine in bladder as much as possible
 - (2) Restrict use of alcoholic beverages, and being careful to use cold medicine including anti-nasal congestion drugs

- (3)Regular exercises, and keep body warm
- 2.Medication:
 - (1)Influenza adrenaline antagonists: relax the muscle of the prostate and smooth bladder neck.
 - (2)Male hormone inhibitor: shrink the prostate, prostatic hypertrophy with good results.
- 3.Surgery:
 - (1)Transurethral prostate resection
 - (2)Transurethral prostate incision
 - (3)Open prostatectomy surgery

Conclusion

When there is abnormality with prostate, should visit doctor and not to believe in folk prescription that may lead to delay of treatment, leading to worsening of condition.



Chapter 39 Understanding Urinary tract infections

Common urinary tract infections include cystitis, pyelonephritis, urethritis and prostatitis in men. Cystitis in women is the most common. When bacteria enter urethral and bladder, normally urination will wash out the bacteria so that they won't procreate inside. Diseases are prevented. However, when urination is not normal (holding back urine, urinary stricture, urinary tract obstruction, external injuries), bacteria will adhere to the body, procreate, and cause diseases.

Aging often increase the possibility of having urinary tract infections. The most common bacteria are *E. coli*, often gathering at urethra or perineum due to sexual intercourse or bad sanitation habits and going up to the bladder or kidney, causing urinary tract infections. Male urethra is about 17 centimeters long, while female's is only 4 centimeters. Therefore, women are more likely to have urinary tract infections. If women do not have sufficient knowledge about urinary tract infections, they might not know when they are infected. Bad living habits create high risks in urinary tract infections. According to statistics, for women in Taiwan, not drinking enough water before or after sexual intercourse causes the most infections, 81%; The second is not having enough water daily, 57%, and holding back urine 55%. When urine is stored in the bladder for too long, *E. coli* will multiply, causing acute cystitis and hematuria.

Symptoms of Urinary Tract Infections:

Cystitis: urinary frequency, urgency, painful urination, nocturia, urinary up feeling, lower abdominal pain or hematuria.

Pyelonephritis: fever, chills, back pain and cystitis.

Urethritis: painful urination, urethral discharge, burning.

Treatment of Urinary Tract Infections: After diagnosis, use antibiotics and control complications to completely remove all the bacteria in urine or blood and prevent the infections from turning into a chronic disease or relapses. Urinary tract infections in men or recurrent infections in women shall be examined further to find out underlying causes, such as urinary tract stenosis, obstruction, prostatic hypertrophy, urinary tract stones, reflux, neurogenic bladder disorders. If the underlying causes are excluded, relapses can be prevented.

To prevent urinary tract infections, one should: 1. have sufficient sleep to strengthen immunity; avoid wearing tight pants or skirts; 2. dry perineum after taking a bath; 3. drink plenty of water; not hold back urine; keep urinary track clean; 4. after urination, clean from urinary track to anus to prevent infection.



Chapter 40 Understanding Psoriasis

Psoriasis is a common chronic skin disease characterized by silvery white and red, scaly patches, papules, and plaques. Patients can undergo treatment in outpatient clinic. There are rarely cases endangering life and needing to be taken to a hospital.

Epidemiology

Global prevalence of psoriasis has huge disparities. The farther away from the equator, the prevalence of the disease increases. It can happen on people of all ages, but it is more common on adults.

Etiology and risk factors

The specific factors for psoriasis are not yet found. However, the disease can be developed due to immunological, genetic, environmental factors and other risk factors including infection, physiological or psychological stress, drugs, smoking, obesity, vitamin D deficiency, poor immunity and alcohol abuse. Patients with HIV are more likely to have psoriasis. Patients with psoriasis may become psoriatic arthritis. Patients with moderate to severe psoriasis have higher probability for hypertension, diabetes, high cholesterol and other metabolic syndrome.

Symptoms of Psoriasis

1. Dry or red skin, usually covered with silvery white scales and sometimes with raised edge.
2. Rashes, itchiness, and painful skin on scalp, joints, legs, lower back, genitals, skin folds.
3. Joint pain, swelling, or stiffness, deformation.

4. Nail abnormalities, such as depression, discoloration, thickening or fragile.

Clinical Types

1. **Plaque psoriasis:** The most common kind of psoriasis, appearing in any parts of the skin. The lesions will have no change when developed to a certain extent. The affected part is covered with red plaque with silvery white scales. They will be easily pelt down after scuffing. Spots of blood appear while they are pelt.
2. **Teardrop-shaped psoriasis:** It is commonly found in children between 7 and teens. Streptococcal or viral upper respiratory tract infection may happen before the psoriasis. They are acute symmetry guttate papules covering mainly trunk and limbs, expanding as time goes by. In weeks, they will subside automatically.
3. **Pustular psoriasis disease:** Rare but severe psoriasis, visible but non-infectious pustular, covering the whole body or partially. (1) **partial:** plantar pustular disease on palms or soles. In the middle part of the fingers or the front of the soles grow many sterile, not easy to break small pustules covered with thick scab. It can be commonly see in middle-aged women. Rare Hallopeau Acrodermatitis is a kind of psoriasis lowly invading fingers and nails. (2) **Whole body:** acute or subacute. Patients will have fever and pain, and their whole body will be covered with sterile and not easy to break small pustules in one or two days. Although it is rare, it is fatal, so the patients shall be taken well care of or sent to the hospital immediately.
4. **Anti transformation psoriasis:** Also known as buckling psoriasis. Rare, but mostly happened on the elderly. Armpits, groin after, gluteal cleft, ears, female breasts and male genitals beneath folds are common affected areas. The wet patches

with smooth surface and crimson color look like candidiasis infection.

5. Erythroderma psoriasis: acute redness and scales diffusing the whole body infected adults. It is often caused by medicine or external stimulation. The skin will turn red and peeling, with fever, chills, itching, or pain. The patient needs treatment in hospital.

Treatment

Although psoriasis cannot be cured under current medical technology, as long as the patients continue receiving treatment, most of them can control their disease well or even relieve from the disease for a long time. The treatment methods include partial and whole body treatments. Doctors will make assessment according to the level of severity of the disease, complications, the patient's preference (including cost and convenience), medical effects, and individual reactions.

