This paper will attempt to address the issues surrounding the health of the liver as well as the treatment and prevention of various liver diseases.
# Table of Contents

1. Overview ........................................................................................................................................... 1

2. Anatomy of the Liver ...................................................................................................................... 2

3. Main Function of the Liver ............................................................................................................. 3

4. What is the Liver in TCM .............................................................................................................. 4

5. Diseases of the Liver ..................................................................................................................... 6

   5.1 Early manifestations of Liver Diseases .................................................................................. 7

   5.2 Late Manifestations of Liver Diseases .................................................................................. 7

   5.3 Conventional Treatment of Liver Diseases ......................................................................... 8

6. Traditional Chinese Medicine (TCM) and Liver Diseases ......................................................... 8

   6.1 TCM Treatment for Hepatitis ............................................................................................ 8

   6.2 TCM Treatment for Hepatic Cirrhosis ............................................................................. 15

7. Dietary Therapy for Liver Diseases ............................................................................................. 23

   7.1 Proper Nutrients for Liver Disease Patients ....................................................................... 23

   7.2 Chinese Medicated Diet ...................................................................................................... 24

      7.2.1 Principles of Chinese Medicated Diet ........................................................................ 25

      7.2.2 Property of Food and Dietetic Chinese Herbs .......................................................... 25

      7.2.3 Recommended Medicated Diet for Hepatitis ............................................................ 26

      7.2.4 Recommended Medicated Diet for Hepatic Cirrhosis .............................................. 29

8. Other Important Factors for Treating Liver Disease .................................................................. 33

9. Conclusion ....................................................................................................................................... 33
1. Overview

It seems in today’s society that one’s health and wellbeing are not the foremost concern. The individuals of today’s society busy themselves with other priorities, making poor lifestyle choices, developing bad habits and neglecting many aspects of their health. In turn, they cause injury to their body and eventually, their overall health. The liver, being one of the vital organs of the body, is essential to one’s health and wellbeing. One cannot hope to survive without the liver performing its everyday physiological functions. As such, an individual concerned with one’s health and wellbeing should do all in one’s power to protect and nurture the liver. However, due to its lack of inner nerve endings, the liver is a very tolerant organ and much too forgiving. It can still function properly with only 30% of its full capacity. Hence one may have a chronic liver condition for many years without realizing it. Even patients with cirrhosis often have no symptoms. For this reason, it is often called the “silent organ”.

Anatomically speaking, the liver is part of the digestive system. The liver performs over 500 different functions and plays a part in almost all the bodily functions. The liver is also responsible for such complicated and important biochemical reactions as synthesis, division, transformation and storage of protein, sugars (carbohydrates), fatty acids, vitamins, and hormones. It can also degrade various toxins that enter the body that may otherwise be harmful. For this reason, it is often nicknamed the body’s “chemical factory”. The liver is essential since it is responsible for many of the processes that the body needs to survive. There is currently no way to compensate for the long term absence of liver function, although liver dialysis can be used on a short term basis. As previously mentioned, poor lifestyle choices are commonly seen in the individuals of modern society. As such, liver diseases are equally common and not only pose a very significant health risk but also represent a large part of those who are ill. There are over 100 known forms of liver disease that affect individuals of all ages. In Canada, 1 in every 10 people suffers from some form of liver or biliary tract disease. (Cirrhosis of the Liver, 2007)¹ Any liver disease left untreated has the potential to result in cirrhosis (scarring of the liver). Each year, over 1000 Canadians die from liver cirrhosis. (Cirrhosis of the Liver, 2007)¹ Hepatitis viruses A, B, C, D and E can cause acute and chronic infection and inflammation of the liver leading to cirrhosis and liver cancer. These viruses constitute a major global health risk. About 2 billion people around the world have been infected with the Hepatitis B virus. Among those that have been infected, approximately 350 million people have become chronically infected. Around 170 million people have become chronically infected with hepatitis C. An estimated 600,000 people die each year due to acute and chronic hepatitis B infection and more than 350 000 people die from hepatitis C-related liver diseases each year.²

In order to overcome the continued spread of liver diseases, prevention of the disease beforehand is a better, more effective course of action than treatment after the fact. In addition to a proactive approach such as an annual blood test to assess the condition of the liver, a liver-supportive and chemical-free diet is essential to keep this vital organ strong and healthy. Traditional Chinese Medicine (TCM) has had significant success in the treatment as

---

¹ http://www.liver.ca/files/Information_Sheets/CIRRHOSISoftheLiver2007.doc
well as prevention of liver diseases through various treatment modalities such as acupuncture, herbal formulae as well as Chinese medicated diet in which certain foods and herbs are incorporated into one’s daily diet.

This paper will attempt to address the issues surrounding the health of the liver as well as the treatment and prevention of various liver diseases.

2. **Anatomy of the Liver**

The liver is located in the right upper quadrant of the abdominal cavity, in contact with the right rib cage just below the diaphragm. It is the largest internal organ as well as the largest gland in the body. The liver is a soft, reddish brown, pyramidal organ and weighs about 1.5 kg. A sickle-shaped ligament divides the liver into two main lobes (right and left), the right lobe being about 3 times larger than the left. There are two small lobes that lie behind the right lobe. The downward-facing surface of the liver, also known as the visceral surface, is more irregular in appearance than the domed convex upward-facing surface. This irregularity is caused by the fact that the inferior surface is in contact with the lower esophagus, the stomach, the right kidney and adrenal gland.

Each lobe is made up of multi-sided units called lobules. Most livers have between 50,000 and 100,000 lobules. Each lobule consists of a central vein surrounded by tiny liver cells grouped in sheets or bundles. These cells perform the work of the liver. Cavities known as sinusoids separate the groups of cells within a lobule. The sinusoids give the liver a spongy texture and enable it to hold large amounts of blood.

The liver has an unusual blood supply system. Like other organs, the liver receives blood containing oxygen from the heart. This blood enters the liver through the hepatic artery. The liver also receives blood filled with nutrients, or digested food particles, from the small intestine. This blood enters the liver through the portal vein. In the liver, the hepatic artery and the portal vein branch into a network of tiny blood vessels that empty into the sinusoids.

The liver cells absorb nutrients and oxygen from the blood as it flows through the sinusoids. They also filter out wastes and poisons. At the same time, they secrete sugar, vitamins, minerals, and other substances into the blood. The sinusoids drain into the central veins, which join to form the hepatic vein. Blood leaves the liver through the hepatic vein.

Each lobule also contains bile capillaries; tiny tubes that carry the bile secreted by the liver cells. The bile capillaries join to form bile ducts, which carry bile out of the liver. Soon after leaving the liver, the bile ducts join together, forming the hepatic duct. The liver manufactures bile continuously, even if the small intestine is not digesting food. Excess bile flows into the gall bladder, where it is stored for later use. Bile from the liver and gall bladder flows into the small intestine through the common bile duct.

The liver is the only internal human organ capable of natural regeneration of lost tissue after injury and is able to adjust its size to match its host; as little as 25% of a liver can regenerate into a whole liver. However, this is not true regeneration but rather compensatory growth. The parts that are removed do not re-grow and the growth of the liver is a restoration of function.
and not original form. This contrasts with true regeneration where both original function and form are restored.

3. **Main Functions of Liver**

The liver regulates most chemical levels in the blood and excretes a product called bile. Bile is a chemical that helps to break down fats, preparing them for further digestion and absorption. All of the blood leaving the stomach and intestines passes through the liver. The liver processes this blood and breaks down the nutrients and drugs in the blood into forms that are easier for the rest of the body to use. The liver is like a chemical factory performing more than 500 different kinds of chemical reactions at any given moment. It is the largest organ of our digestive system and its functions can be roughly categorized into the following major categories:

- **Digestion and processing of nutrients**
  
  The secretion of bile ranks as one of the most important digestive functions of liver. Bile consists of bile salts and other substances which aid in the digestion and absorption of fats. It also assists in the absorption of substances such as vitamins A, D, E and K.

  The liver also regulates the amount of certain nutrients that cells in the body receive. Digestive enzymes in the intestines break down proteins into amino acids, carbohydrates into simple sugars (glucose – the chief fuel for the body cells), and fat to fatty acids and glycerol. The blood carries these nutrients as well as other substances such as vitamins and minerals to the liver. The liver transforms and stores excess glucose from the blood to a starch-like compound known as glycogen. When the body needs energy, the liver converts the glycogen back into glucose and releases it into the blood. When the glycogen reserve is low, the liver will use fatty acids and amino acids instead and convert them into glucose. In this way, the liver ensures the body receives a constant supply of energy.

  The liver also plays an important role in the storage of certain vitamins such as vitamin A, D, E, K and B complex. It also stores iron and other minerals.

- **Blood detoxification and purification**

  The liver helps to resist diseases by producing immune factors and removing harmful substances from the bloodstream. All of the blood in the body will eventually pass through the liver. This is important because liver cells filter out harmful substances in the blood.

  The liver filters waste substances produced from natural wearing out of cells and tissues. Substances such as bilirubin from the breakdown of old red blood cells are excreted in the bile. The liver also transforms ammonia from amino acids to urea, which is eventually discharged through the urine. Exogenous toxins that enter the body such as alcohol, drugs, insecticides, food additives, and industrial chemicals are also filtered by liver cells and excreted through the urine or feces.
In addition, the liver also filters out many bacteria, viruses and other micro-organisms that may be in the blood. Specialized liver cells surround these micro-organisms and chemically digested them.

- **Other functions**
  - Coagulation of blood – substances essential for proper clotting of blood are manufactured by the liver. Normal blood clotting depends on the presence of proper amounts of different coagulating proteins in the blood. Most of these proteins, which include albumin, fibrinogen and prothrombin, are manufactured by the liver cells and released in proper amounts into the blood.
  - Secretion of cholesterol – a fatty substance uses to build cell membranes and manufacture bile salt and certain hormones

### 4. What is the Liver in TCM?

When talking about the liver in terms of traditional Chinese medicine (TCM), not only the physical organ is taken into account. It also refers to its participation in the physiological and pathological manifestations of the CNS, PNS, and circulatory system. According to TCM, the liver has 5 major physiological functions as listed below.

- **Ensuring Free flow of Qi**
  
  The metabolism of various kinds of material is accomplished through the process of “ascending, descending, entering and exiting” of the liver qi. When it is functioning normally, the qi mechanism is smooth and regular, the qi and blood harmonious, the meridians unobstructed, the activities of organs coordinated, and consequently, all types of nutrients will be transformed.
  
  The liver function in dominating the conducting and dispersing of qi can be summed up as:
  
  - **Regulating Emotional Activities**

    TCM believes that an emotional activity is very much related to the free flow of liver qi. When the functional activity of liver qi is obstructed (stagnation of liver qi), symptoms such as emotional depression, unhappiness, moodiness, excessive worrying, belching or sentimental sighing may occur. On the other hand, hyperactivity of the liver’s function in conducting and dispersing (hyperactivity of liver fire) causes emotional excitement and such symptoms as distending headaches, flushed face, anger, frustration, agitation or difficulty in falling asleep.

  - **Aiding Digestion and Absorption**

    This function is mainly manifested in the liver’s production and excretion of bile, along with the liver maintaining the ascending and descending function of spleen and stomach qi through the free flow of liver qi.
• **Promoting the Normal Flow of Qi, Blood and Body Fluid**

The qi, blood and body fluid are in a constantly flowing state, which is closely related to the physiological function of the liver, in addition to its relation to the physiological activities of the heart, lung, spleen and kidneys.

- **Storing Blood**

In controlling the storage of blood, the liver is capable of retaining blood and regulating its volume in circulation according to the requirements of various tissues and organs. When a person is at rest or asleep, the amount of blood needed by the body decreases and the surplus is stored in the liver. Blood is release from the liver to increase the volume of blood in circulation when the body is performing physical labour.

Malfunctioning of the liver in storing blood is manifested in two pathological changes:

- Insufficient storage of liver blood – causing symptoms such as numbness of the limbs, scanty menstruation or even amenorrhea
- Liver fails to store blood – causing hemorrhage syndromes with symptoms such as hematemesis (vomiting of fresh blood), hemoptysis (coughing up blood), epistaxis (acute hemorrhage from the nose), metrorrhagia and metrostaxis.

- **Housing the Hun (Ethereal Soul)**

The hun is born of the shen (mind). In order for a healthy balance of the mind and emotions, the shen and hun must be coordinated with one another. Both hun and shen take the blood as their material basis. If the blood storing function of liver is normal, the hun can be housed. Otherwise, the hun cannot be housed and there will be fright, dream disturbed sleep, sleep walking, sleep-talking and hallucination.

- **Dominating the tendons and manifesting in the nails**

Tendons refer to fascia, including muscle tendons and ligaments. It implies that the relaxation and contraction of the tendons of the entire body are related to the liver. Malfunction of the liver causes numbness of limbs, sluggishness of joint movement, impaired extension or flexibility, contraction and spasm of tendons, and tremors of hands and feet.

The nails include both the fingernails and toenails. TCM consider the nails as the external manifestation of the tendons. When the liver blood is sufficient, the tendons are rich in nourishment, and the nails are strong with a bright and lustrous finish. When the liver blood is deficient, the nails lack nourishment and become pale, soft, thin, withered, deformed and fragile.

- **Opening into the eyes**

The liver meridian links to the ocular system and normal eyesight depends heavily on the nourishment of liver blood. The physio-pathological conditions of the liver are usually reflected in the eyes. Many disorders of the eyes can be cured by treating the liver. Deficiency of liver
blood may cause blurred vision or night blindness. Insufficiency of liver yin may lead to dry eyes or dim vision. Flaming up of liver fire may cause congestion, itching, or painful and swollen eyes. Damp-heat in the liver and gallbladder may give rise to yellow sclera.

5. Diseases of the Liver

Conventional belief is that liver diseases are linked to excessive ingestion of alcohol or exposure to drugs or toxic compounds when in fact there are many other factors that may cause liver disease. These factors affect everyone from infants to the elderly. According to conventional medicine, the most common liver diseases are generally caused by viruses, parasites, physical injury, alcohol abuse, drugs or toxic compounds, an autoimmune disorder, or a genetic defect that leads to the deposition and build-up of damaging substances such as iron or copper.

Effects of liver disease may include inflammation, scarring, obstructions, clotting abnormalities, and liver failure. The following table lists some common types of liver diseases:

<table>
<thead>
<tr>
<th>Type of Liver Disease</th>
<th>Description</th>
<th>Possible Causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis</td>
<td>Acute or chronic liver inflammation</td>
<td>Viruses, alcohol abuse, drugs, toxins, autoimmune, non-alcoholic fatty liver disease (NAFLD)</td>
</tr>
<tr>
<td>Cirrhosis</td>
<td>Scarring of liver tissue leads to decreased liver function</td>
<td>Can be caused by a variety of conditions but usually a result of chronic hepatitis, alcoholism, or chronic bile duct obstruction</td>
</tr>
<tr>
<td>Acute Liver Failure</td>
<td>Sudden decrease in liver function</td>
<td>Drugs, toxins, a diversity of liver diseases</td>
</tr>
<tr>
<td>Fatty Liver</td>
<td>Excessive accumulation of triglyceride fat in liver cells</td>
<td>Alcohol abuse, obesity, malnutrition, diabetes, drugs, toxins</td>
</tr>
<tr>
<td>Liver cancer</td>
<td>A cancer that originates in the liver</td>
<td>Increased risk with cirrhosis and chronic hepatitis; hepatocellular carcinoma (HCC) is most common primary liver tumor</td>
</tr>
<tr>
<td>Obstruction of bile ducts</td>
<td>Complete or partial blockage of bile ducts</td>
<td>Tumors, gallstones, inflammation, trauma</td>
</tr>
</tbody>
</table>
5.1 Early Manifestations of Liver Diseases

Most liver diseases are asymptomatic in their early stages and therefore are difficult to detect. The following are possible early manifestations of liver diseases:

- General fatigue that gets worse over time
- Loss of appetite with nausea
- Persistent low grade fever with possible aversion to cold
- Difficulty focusing/reduced mental clarity
- Lowered tolerance to alcohol
- Dull, lusterless complexion
- Yellowish discoloration or itchiness of the skin
- Dark, yellow urine
- Constipation or grayish, white stool
- Chest and hypochondriac distention
- Dull pain in the right upper quadrant of the abdomen
- Increase of black spots on the skin
- Numbness of the limbs
- Halitosis (foul breath)

If one has a few of the aforementioned symptoms at once, and further, if they persist even after improving one’s diet and lifestyle habits, there is a possibility of a liver disease.

5.2 Late Manifestations of Liver Diseases

The major clinical features of liver cell failure at the late stages of liver diseases include jaundice, retention of fluid, and bleeding tendency.

- Jaundice
  
  Jaundice occurs when the blood contains an excessive amount of bilirubin. This excess bilirubin causes a yellowish discoloration of skin and sclera (whites of the eyes). Jaundice may result if diseased liver cells fail to remove bilirubin from the blood.

- Retention of Fluid
  
  Edema and ascites are well recognized manifestations of liver cells failure. The etiology of the fluid retention involves reduced synthesis of albumin by the liver, portal hypertension and a failure of the kidney to handle the excessive renal tubular absorption of sodium.
• Bleeding Tendency

Disturbances of blood coagulation are common features of liver cell failure. It is due to a lack of the coagulant factors which are synthesized in the liver. Portal hypertension and platelet dysfunction are other important causes of a coagulation disturbance in liver disease.

5.3 Conventional Treatment of Liver Diseases

Depending upon what form of liver disease one has and what stage it’s at, a physician may recommend treatment with drugs, special diet and lifestyle changes. However, most liver treatments are symptomatically managed and not cured.

The only real treatment for chronic liver disease at present is a liver transplant. However, a group of English researchers have made a promising discovery that drugs such as sulfasalazine\(^3\) have the potential to aid partial or total regeneration of liver by blocking special proteins that stop liver regeneration. They may have changed the future treatment goals for liver disease and provide a safer and less expensive alternative to liver transplant surgery.

6. Traditional Chinese Medicine (TCM) and Liver diseases

Many people with liver disease, especially hepatitis and cirrhosis, turn to TCM for treatment. TCM uses a number of therapies including acupuncture, moxibustion, Chinese herbs, qi gong, and dietary therapy to treat a variety of diseases. TCM diagnoses are based on symptom differentiation, not on laboratory reports. Further TCM recognizes that each person has a unique constitution. Hence, the best form of treatment is to modify, alter, or supplement base therapies to create an individualized treatment that meets each patient’s unique characteristics and needs.

6.1 TCM Treatment for Hepatitis

According to TCM, the organ systems primarily disturbed in hepatitis are the liver and spleen. These disturbed organ systems affect digestion and energy. According to TCM acute hepatitis is generally associated with excess damp heat or damp cold conditions while chronic hepatitis is more related to qi and yin deficiency, blood deficiency, or blood stasis patterns.

The main causes of Hepatitis according to TCM are:

- External contraction of pestilences called “Li qi” or “Yi qi”
- Unregulated eating and drinking
- Internal damage by the seven emotions
- Aging

\(^3\) [http://www.liversupport.com/wordpress/2008/03/sulfasalazine%E2%80%99s-potential-for-reversing-fibrosi/](http://www.liversupport.com/wordpress/2008/03/sulfasalazine%E2%80%99s-potential-for-reversing-fibrosi/)
In TCM, hepatitis is categorized as “Huang Dan” (Jaundice) or Xie Tong (Hypochondriac Pain). Hepatitis is classified into the following patterns according to the main symptoms and signs, the cause of the disease as well as whether it is chronic or acute.

1. **Damp Heat In Liver-gallbladder (Acute Hepatitis With Jaundice)**

   **Main Symptoms:** Hypochondriac (rib-side) pain, low grade fever or alternating fever and chills, red eyes, headache, a bitter taste in mouth, loss of appetite, aversion to greasy, fatty food, nausea, vomiting, scanty dark yellow urine, possible jaundice, red tongue with greasy yellow coating and a wiry, slippery, rapid pulse.

   **Treatment Principles:** Soothe liver, benefit gallbladder, clear heat, eliminate dampness

   **Acupuncture:**
   - SJ-6  Jing-River and Fire point of the San Jiao channel
     Regulates qi and clears heat in the three jiao
     Benefits the chest and lateral costal region
   - GB-34  He-Sea and Earth point of the Gallbladder channel
     Spreads Liver qi and benefits the lateral costal region
     Clears Liver and Gall Bladder damp-heat
   - LV-3  Shu-Stream, Yuan-Prime and Earth point of the Liver channel
     Spreads Liver qi
     Clears the head and eyes
   - LV-14  Front-Mu point of the Liver
     Spreads the Liver and regulates qi
   - Ren-12  Front-Mu point of the Stomach
     Influential point of the Fu
     Harmonises the middle jiao and descends rebellion
     Tonifies the Stomach and fortifies the Spleen
     Regulates qi and alleviates pain

   **Modification:**
   - Nausea, vomiting + PC-6
   - Jaundice + DU-9

   **Herbal Medicine:**

   Long Dan Xie Gan Tang (龍膽瀉肝湯)

   **Ingredients:**
   - Long Dan Cao (6g)  Huang Qin (9g)  Zhi Zi (9g)  Ze Xie (12g)
   - Mu Tong (6g)  Che Qian Zi (9g)  Sheng Di (9g)  Dang Gui (3g)
   - Chai Hu (6g)  Gan Cao (6g)
Modification:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Herbs Removed</th>
<th>Herbs Added</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat more than damp</td>
<td>Mu Tong, Che Qian Zi</td>
<td>Huang Lian</td>
</tr>
<tr>
<td>Damp more than heat</td>
<td>Huang Lian, Sheng Di</td>
<td>Hua Shi, Yi Yi Ren</td>
</tr>
<tr>
<td>Jaundice</td>
<td>-----</td>
<td>Yin Chen Hao</td>
</tr>
<tr>
<td>Nausea, vomiting</td>
<td>-----</td>
<td>Zhu Yu, Chen Pi</td>
</tr>
<tr>
<td>Aversion to greasy food or undigested food in stool</td>
<td>-----</td>
<td>Shan Zha, Mai Ya, Shen Qu</td>
</tr>
</tbody>
</table>

2. Liver Qi Stagnation (Hepatitis With No Jaundice)

Main Symptoms: Distension, unfixed pain in the hypochondriac region, pain aggravated or alleviated by emotional change, fullness in chest, a tendency to sign, irritability, continuous burping and belching, poor appetite, normal or dark tongue with thin, white coating and a wiry pulse.

Treatment Principles: Soothe liver qi

Acupuncture:

LV-3  Shu-Stream, Yuan-Prime and Earth point of the Liver channel  
Spreads Liver qi

LV-14 Front-Mu point of the Liver  
Spreads the Liver and regulates qi

SJ-6  Jing-River and Fire point of the San Jiao channel  
Regulates qi and clears heat in the three jiao  
Benefits the chest and lateral costal region

GB-34 He-Sea and Earth point of the Gallbladder channel  
Spreads Liver qi and benefits the lateral costal region  
Clears Liver and Gall Bladder damp-heat

Modification:  
Fullness of chest + PC-6  
Burping & belching + Ren-17

Herbal Medicine:

Chai Hu Shu Gan San (柴胡舒肝散)

Ingredients:
Chai Hu (6g)  Xiang Fu (4.5g)  Chuan Xiong (4.5g)  Chen Pi (6g)
Zhi Ke (4.5g)  Bai Shao (4.5)  Gan Cao (1.5g)

Modification:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Herbs Removed</th>
<th>Herbs Added</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severe pain</td>
<td></td>
<td>Yu Jin, Chuan Lian Zi</td>
</tr>
<tr>
<td>Transform to fire</td>
<td></td>
<td>Zhi Zi, Chuan Lian Zi</td>
</tr>
<tr>
<td>Dry mouth, dry tongue with little or no coating</td>
<td></td>
<td>Gou Qi Zi, Di Huang, Chuan Lian Zi</td>
</tr>
<tr>
<td>Low appetite</td>
<td></td>
<td>Shen Qu, Mai Ya</td>
</tr>
</tbody>
</table>

3. **Hyperactive of Heat-toxin (Acute Hepatitis With Severe Jaundice)**

**Main Symptoms:** Sudden attack of jaundice which aggravated quickly, dark-yellow eyes, high fever, thirst, dark yellow-dark urine, distension in the abdomen, hypochondriac pain, irritability, loss of consciousness, mania, delirium, nose bleeding, teeth bleeding, vomiting blood, blood in the stools or skin rash, ascites, insomnia, coma, dark red tongue with dark yellow dry coating, and rapid wiry or rapid surging pulse.

**Treatment Principles:** Clear heat, eliminate toxin, cool blood

**Acupuncture:**

- **DU-9**
  - Treat jaundice
- **SI-4**
  - Yuan-Prime point of the Small Intestine channel
  - Clears heat and reduces swelling
  - Clears damp-heat and treats jaundice
- **GB-34**
  - He-Sea and Earth point of the Gallbladder channel
  - Spreads Liver qi and benefits the lateral costal region
  - Clears Liver and Gall Bladder damp-heat
- **LV-3**
  - Shu-Stream, Yuan-Prime and Earth point of the Liver channel
  - Spreads Liver qi
- **LI-4**
  - Yuan-Prime of the Large Intestine channel
  - Regulates the face, eyes, nose, mouth and ears
- **LI-11**
  - He-Sea and Earth point of the Large Intestine channel
  - Clears heat
  - Cools the blood, eliminates wind, drains damp and alleviates itching
  - Regulates qi and blood
- **DU-14**
  - Front-Mu point of the Stomach
  - Influential point of the Fu
Harmonises the middle jiao and descends rebellion
Tonifies the Stomach and fortifies the Spleen
Regulates qi and alleviates pain

**DU-26**
Restores consciousness and calms the spirit

**Ying-Spring points**
Clears heat

**Modification:**
Loss of consciousness, mania, delirium  HT-8, PC-8

**Herbal Medicine:**

Xi Jiao San (犀角散)

**Ingredients:**

Xi Jiao (-g)  Huang Lian (-g)  Zhi Zi (9g)  Yin Chen (-g)

**Modification:**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Herbs Removed</th>
<th>Herbs Added</th>
</tr>
</thead>
</table>
| Loss of consciousness, delirium | -----         | Shi Chang Pu, Yu Jin  
  Shen Xi Dan (神犀丹) or  
  On Gong Niu Huang Wan (安宫牛黄丸) |
| Convulsion                 | -----         | Shi Jue Ming, Gou Teng  or  
  Zi Xue Dan (紫血丹)          |
| Ascites, scanty urine      | -----         | Mu Tong, Che Qian Zi                           |

4. **Disharmony Between Liver And Spleen (Recovery-stage of Acute Hepatitis)**

**Main Symptoms:** Distension and pain of the chest and hypochondriac region, belching, poor appetite, fatigue, abdominal pain and diarrhea often occurring after emotional change, swollen dark or pale tongue with thick greasy coating and a wiry, slippery or wiry thin pulse.

**Treatment Principles:** Soothe liver, strengthen spleen

**Acupuncture:**

UB-18  Back-Shu point of the Liver  
Spreads Liver qi

GB-34  He-Sea and Earth point of the Gallbladder channel  
Spreads Liver qi and benefits the lateral costal region

LV-3  Shu-Stream, Yuan-Prime and Earth point of the Liver channel  
Spreads Liver qi
LV-13  Front-Mu point of the Spleen  
Harmonize liver and spleen  
Strengthens spleen  
Spreads liver and regulates qi

ST-36  He-Sea and Earth point of the Stomach channel  
Harmonises the Stomach  
Fortifies the Spleen and resolves dampness  
Supports the correct qi and fosters the original qi

Modification:  
Nausea, vomiting, belching  + PC-6  
More spleen deficiency with fatigue  + UB-20, UB-21  
Diarrhea  + ST25, ST-37

Herbal Medicine:

Xiao Yao San (消遙散)

Ingredients:
Chai Hu (9g)  Bai Shao (9g)  Dang Gui (9g)  Bai Zhu (9g)  
Fu Ling (9g)  Zhi Gan Cao (6g)  Bo He (6g)  Wei Jiang (2 slices)

Modification:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Herbs Removed</th>
<th>Herbs Added</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qi deficiency causing fatigue</td>
<td>-----</td>
<td>Huang Qi, Dang Shen</td>
</tr>
<tr>
<td>Pronounced qi stagnation</td>
<td>-----</td>
<td>Xiang Mu, Mu Xiang, Chuan Lian Zi</td>
</tr>
<tr>
<td>Phlegm-damp</td>
<td>-----</td>
<td>Ban Xia, Chen Pi</td>
</tr>
</tbody>
</table>

5. Qi Stagnation and Blood Stasis (Chronic Hepatitis)

Main Symptoms: Hepatomegaly, splenomegaly, stabbing fixed pain that aggravated at night, or hard and fixed mass in the hypochondriac region, abdominal distension or fullness, retching, dark complexion, spider nevi, dark purple tongue and a wiry, choppy pulse.

Treatment Principles: Move qi and blood, dispels blood stasis, unblock collaterals

Acupuncture:
LV-3  Spreads Liver qi  
Clears the head and eyes
LV-14  Front-Mu point of the Liver  
Spreads the Liver and regulates qi  
Invigorates blood and disperses masses  

GB-34  He-Sea and Earth point of the Gallbladder channel  
Spreads Liver qi and benefits the lateral costal region  
Cleans Liver and Gall Bladder damp-heat  

SP-10 Invigorates the blood and dispels stasis  
SP-6 Invigorate blood  

Modification:  
Severe hypochondriac pain  + PC-6  
Qi deficiency  + ST-36  
Severe blood stasis  + LI-4  

Herbal Medicine:  
Jin Ling Zi San (金鈴子散) + Ge Xia Zhu Yu Tang (膈下逐瘀湯)  
Ingredients:  
Chuan Lian Zi (6g) Yan Hu Suo (6g) Wu Ling Zi (6g) Dang Gui (9g)  
Chuan Xiong (6g) Tao Hong (9g) Hong Hua (9g) Dan Pi (6g)  
Chi Shao (6g) Xiang Fu (4.5g) Zhi Ke (4.5g) Wu Yao (6g)  
Gan Cao (9g)  

Modification:  

<table>
<thead>
<tr>
<th>Condition</th>
<th>Herbs Removed</th>
<th>Herbs Added</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lumps below hypochondriac</td>
<td>-----</td>
<td>E Zhu, San Lang</td>
</tr>
<tr>
<td>(only if Zheng qi not weak)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>With heat</td>
<td>-----</td>
<td>Zhi Zi, Huang Qin</td>
</tr>
<tr>
<td>Qi deficiency</td>
<td>-----</td>
<td>Huang Qi, Dang Shen</td>
</tr>
<tr>
<td>Chest oppression &amp; fullness</td>
<td>-----</td>
<td>Xuan Fu Hua, Yu Jin</td>
</tr>
</tbody>
</table>

6.  Liver Yin Deficiency (Chronic Hepatitis)  

Main Symptoms:  Dull continuous pain in the hypochondriac region, dry sensation in mouth and throat, irritability, dizziness, blurred vision, red tongue with little coating, thready, wiry, rapid pulse.  

Treatment Principles:  Nourish liver yin  

Acupuncture:  
UB-18  Back-Shu point of the Liver
Regulates and nourishes Liver blood

UB-23  Back-Shu point of the Kidney
Tonifies Kidney yin (source of yin)

SP-6  Meeting point of three yin channels of the leg
Harmonizes the Liver and tonifies the Kidneys
Tonifies the Spleen and Stomach
Invigorates blood

LV-14  Front-Mu point of the Liver
Spreads the Liver and regulates qi
Invigorates blood and disperses masses
Harmonises the Liver and Stomach

**Modification:**  Dry mouth and throat + KD-6
Weak constitution + ST-36

**Herbal Medicine:**

Yi Guan Jian (一貫煎)

**Ingredients:**

Sheng Di (18g)  Sha Shen (9g)  Mai Dong (9g)  Dang Gui (9g)
Gou Qi Zi (9g)  Chuan Lian Zi (4.5g)

**Modification:**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Herbs Removed</th>
<th>Herbs Added</th>
</tr>
</thead>
<tbody>
<tr>
<td>With deficiency heat and night sweating</td>
<td>-----</td>
<td>Di Gu Pi</td>
</tr>
<tr>
<td>Severe yin deficiency</td>
<td>-----</td>
<td>Shi Hu</td>
</tr>
<tr>
<td>Irritable, thirst</td>
<td>-----</td>
<td>Zhi Mu, Shi Gao</td>
</tr>
<tr>
<td>Insomnia</td>
<td>-----</td>
<td>Suan Zao Ren</td>
</tr>
<tr>
<td>Mass in hypochondriac region</td>
<td>-----</td>
<td>Bie Jia</td>
</tr>
</tbody>
</table>

6.2  **TCM Treatment for Hepatic Cirrhosis**

Cirrhosis is a prognosis of various liver diseases and it is the final stage of liver fibrosis. However, not all chronic liver diseases will advance to cirrhosis. For example, only about 20 to 25% of chronic hepatitis C patients will advance to the cirrhosis stage and it usually takes many years to do so.

Cirrhosis results in liver cell necrosis and fiber (scar) tissue overgrowth. As liver cirrhosis progresses, the liver itself becomes hardened and it will shrink in size while the surface
becomes uneven. Liver function deterioration and portal vein hypertension are the main causes of pathogenesis. Clinically, there are two stages in liver cirrhosis:

- **Compensated Stage** – disease progression is stealthy and shows very few noticeable symptoms. Liver function tests may show normal enzyme readings and without a biopsy, it is difficult to identify clinically. During this stage, the most common symptoms could be fatigue, anorexia, over-frequent thirst, thick coating on the tongue, nausea, stomach broadness, and dull pains in the liver area.

- **De-compensated Stage** – the late stage of the chronic liver diseases and many complications may arise. The most serious complications are ascites, gastric bleeding, spontaneous peritonitis, hepatic-renal dysfunction etc.

### Liver Cirrhosis in TCM

For patients with cirrhosis, the purpose of Chinese medicinal treatment is to sustain the stability of the compensated condition and prevent progression into the de-compensated stage. For those already in the de-compensated condition, Chinese medicinal treatment can deal with the various complications and try to reverse the de-compensated stage back to the compensated stage. Many patients with cirrhosis are also candidates for a liver transplant. The waiting period can be long and Chinese herbal treatment can ensure that the patient is in the best condition possible before undergoing this major surgical procedure. Patients who are not suitable for a transplant can maximize their quality of life with Chinese medicinal treatment.

According to TCM, hepatic cirrhosis is categorized as “Ji Ju” (Aggregation) or “Gu Zhang” (Drum Distension). The organ systems primarily disturbed in hepatic cirrhosis are the liver, spleen and kidney. The main pathogeneses of Hepatic Cirrhosis according to TCM are:

- Accumulation of damp-heat toxin
- Blood stasis accumulated in the Liver channel
- Spleen and Kidney qi deficiency causing body fluid retention
- Liver and Kidney yin and blood deficiency

According to the differentiation of excess or deficient, the main treatment principles are regulating qi, transform blood stasis, promote water metabolism or drastic purgation, warm and tonify spleen and kidney or nourish liver and kidney.

According to the main signs and symptoms, Hepatic Cirrhosis is classified into the following five patterns.

1. **Depression of Liver and Deficiency of Spleen**

   **Main Symptoms:** Loss of appetite, distension and bulge of chest and abdomen, distension and fullness or pain of hypochondria, belching, fatigue, agitation, easily to get anger, nausea, vomiting, loose stools, pale tongue with white coating, wiry pulse.
**Treatment Principles:** Soothe liver, strengthen spleen

**Acupuncture:**

- **UB-18** Back-Shu point of the Liver  
  Spreads Liver qi
- **GB-34** He-Sea and Earth point of the Gallbladder channel  
  Spreads Liver qi and benefits the lateral costal region
- **LV-3** Shu-Stream, Yuan-Prime and Earth point of the Liver channel  
  Spreads Liver qi
- **LV-13** Front-Mu point of the Spleen  
  Harmonize liver and spleen  
  Strengthens spleen  
  Spreads liver and regulates qi
- **ST-36** He-Sea and Earth point of the Stomach channel  
  Harmonises the Stomach  
  Fortifies the Spleen and resolves dampness  
  Supports the correct qi and fosters the original qi

**Modification:**  
Nausea, vomiting, belching + PC-6  
More spleen deficiency with fatigue + UB-20, UB-21  
Diarrhea + ST25, ST-37

**Herbal Medicine:**

Xiao Yao San (消遙散)

**Ingredients:**

<table>
<thead>
<tr>
<th>Chai Hu (9g)</th>
<th>Bai Shao (9g)</th>
<th>Dang Gui (9g)</th>
<th>Bai Zhu (9g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fu Ling (9g)</td>
<td>Zhi Gan Cao (6g)</td>
<td>Bo He (6g)</td>
<td>Wei Jiang (2 slices)</td>
</tr>
</tbody>
</table>

**Modification:**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Herbs Removed</th>
<th>Herbs Added</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qi deficiency causing fatigue</td>
<td>-----</td>
<td>Huang Qi, Dang Shen</td>
</tr>
<tr>
<td>Pronounced qi stagnation</td>
<td>-----</td>
<td>Xiang Mu, Mu Xiang, Chuan Lian Zi</td>
</tr>
<tr>
<td>Ascites</td>
<td>-----</td>
<td>Hu Lu, Chuan Jiao</td>
</tr>
</tbody>
</table>
2. **Qi Stagnation and Blood Stasis**

*Main Symptoms:* Hepatomegaly, splenomegaly, poor appetite, distension or fullness in the abdomen or hypochondriac region, spider angioma on face, neck and chest, liver palm, protrusion of distended blood vessels on the surface of abdomen, stabbing pain in the abdomen and hypochondria, dark complexion, dark purple tongue and a choppy thready pulse.

*Treatment Principles:* Move liver qi and invigorate blood, dispels blood stasis

*Acupuncture:*

- **Ren-6** Regulates qi and harmonizes blood
- **Ren-17** Influential point of Qi
  - Regulates qi and unbinds the chest
- **LV-3** Shu-Stream, Yuan-Prime and Earth point of the Liver channel
  - Spreads Liver qi
  - Clears the head and eyes
- **UB-17** Influential point of Blood
  - Invigorates blood and dispels stasis
  - Cools blood heat and stops bleeding
  - Nourishes and harmonizes the blood
  - Harmonizes the diaphragm and descends rebellious
- **SP-10** Invigorates the blood and dispels stasis
- **SP-6** Invigorate blood

*Modification:* Severe hypochondriac pain + PC-6  
Qi deficiency + ST-36  
Severe blood stasis + LI-4

*Herbal Medicine:*

**Jin Ling Zi San** (金鈴子散) + **Ge Xia Zhu Yu Tang** (膈下逐瘀湯)

*Ingredients:*

- Chuan Lian Zi (6g)  
- Yan Hu Suo (6g)  
- Wu Ling Zi (6g)  
- Dang Gui (9g)
- Chuan Xiong (6g)  
- Tao Hong (9g)  
- Hong Hua (9g)  
- Dan Pi (6g)
- Chi Shao (6g)  
- Xiang Fu (4.5g)  
- Zhi Ke (4.5g)  
- Wu Yao (6g)
- Gan Cao (9g)
Modification:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Herbs Removed</th>
<th>Herbs Added</th>
</tr>
</thead>
<tbody>
<tr>
<td>Larger masses below hypochondriac (only if Zheng qi is not weak)</td>
<td>Dang Gui, Chi Shao, Dan Pi</td>
<td>Zhe Chong, Chuan Shan Jia, San Lang, E Zhu</td>
</tr>
<tr>
<td>Severe hypochondriac pain</td>
<td>-----</td>
<td>San Qi</td>
</tr>
<tr>
<td>Spenomegaly</td>
<td>-----</td>
<td>Bie Jia Jian Wan</td>
</tr>
</tbody>
</table>

3. Accumulation of Damp Heat

Main Symptoms: Ascites, irritability, fever, bitter taste in the mouth, thirst with no desire to drink, dark urine, difficult to urinate, constipation or loose sticky stools, Jaundice in some cases, tongue with redder sides and tip, yellow greasy or greyish-back coating, and rapid, wiry pulse.

Treatment Principles: Clear heat, transform dampness, promote bowel movement and dispel water

Acupuncture:

<table>
<thead>
<tr>
<th>Point</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GB-34</td>
<td>He-Sea and Earth point of the Gallbladder channel</td>
</tr>
<tr>
<td></td>
<td>Spreads Liver qi and benefits the lateral costal region</td>
</tr>
<tr>
<td></td>
<td>Clears Liver and Gall Bladder damp-heat</td>
</tr>
<tr>
<td>SP-9</td>
<td>He-Sea and Water point of the Spleen channel</td>
</tr>
<tr>
<td></td>
<td>Regulates the Spleen and resolves dampness</td>
</tr>
<tr>
<td></td>
<td>Opens and moves the water passages</td>
</tr>
<tr>
<td>Ren-9</td>
<td>Regulates the water passages and treats oedema</td>
</tr>
<tr>
<td></td>
<td>Harmonises the intestines and dispels accumulation</td>
</tr>
<tr>
<td>ST-28</td>
<td>Regulates the lower jiao and dispels stagnation</td>
</tr>
<tr>
<td></td>
<td>Benefits the Bladder and the uterus</td>
</tr>
<tr>
<td>LI-11</td>
<td>He-Sea and Earth point of the Large Intestine channel</td>
</tr>
<tr>
<td></td>
<td>Clears heat</td>
</tr>
<tr>
<td></td>
<td>Cools the blood, drains dampness</td>
</tr>
<tr>
<td>LV-3</td>
<td>Shu-Stream, Yuan-Prime and Earth point of the Liver channel</td>
</tr>
<tr>
<td></td>
<td>Spreads Liver qi</td>
</tr>
</tbody>
</table>

Modification: Nausea, vomiting + PC-6
Jaundice + DU-9

Herbal Medicine:

Zhong ManFen Xiao Wan (中滿分消丸) + Yin Chen Hao Tang (茵陳蒿湯)
Ingredients:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Ingredient</th>
<th>Ingredient</th>
<th>Ingredient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Huang Qin</td>
<td>Huang Lian</td>
<td>Zhi Mu</td>
<td>Hou Pu</td>
</tr>
<tr>
<td>Zhi Ke</td>
<td>Ban Xia</td>
<td>Chen Pi</td>
<td>Fu Ling</td>
</tr>
<tr>
<td>Zhu Ling</td>
<td>Ze Xie</td>
<td>Sha Ren</td>
<td>Da Huang</td>
</tr>
<tr>
<td>Zhi Zi</td>
<td>Gan Jiang</td>
<td>Jiang Huang</td>
<td>Ren Shen</td>
</tr>
<tr>
<td>Bai Zhu</td>
<td>Zhi Gan Cao</td>
<td>Yin Chen Hao</td>
<td>Da Huang</td>
</tr>
<tr>
<td>Zhi Zi</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Modification:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Herbs Removed</th>
<th>Herbs Added</th>
</tr>
</thead>
<tbody>
<tr>
<td>More heat with jaundice</td>
<td>Ren shen, Gan jiang</td>
<td>-----</td>
</tr>
<tr>
<td>Sudden vomiting of blood or bloody stools</td>
<td>-----</td>
<td>Use Xi Jiao Di Huang + Xian He Cao, Di Yu Tan</td>
</tr>
<tr>
<td>Dark yellow urine, difficult to urine</td>
<td>-----</td>
<td>Hu Lu, Hua Shi</td>
</tr>
</tbody>
</table>

4. Deficiency of Spleen and Kidney Yang

Main Symptoms: Enlargement, distension and fullness of abdomen, symptoms are milder in the morning and more severe at night, greenish-yellow complexion, epigastric fullness, poor appetite, fatigue, aversion to cold, cold extremities, edema in lower limbs, difficult urination, pale or light purple swollen tongue, deep, thin and weak pulse.

Treatment Principles: Warm and strengthen Spleen and Kidney yang, move qi, drain dampness

Acupuncture:

Ren-4 Fortifies the original qi and benefits essence  
Tonifies and nourishes the Kidneys  
Wars and fortifies the Spleen  
Regulates the lower jiao and benefits the Bladder  

Ren-6 Fosters original qi  
Tonifies qi  
Tonifies the Kidneys and fortifies yang  

UB-20 Back-Shu point of the Spleen  
Tonifies Spleen qi and yang  
Raises Spleen qi and holds the blood  
Regulates and harmonizes the qi of the middle jiao
UB-23  Back-Shu point of Kidney  
Tonifies the Kidneys and fortifies yang  
Regulates the water passages and benefits urination

LV-13  Front-Mu point of the Spleen  
Harmonises the Liver and Spleen  
Regulates the middle and lower jiao  
Fortifies the Spleen  
Spreads the Liver and regulates qi

**Modification:**  Difficult to urinate   + Ren-3

**Herbal Medicine:**

For more Spleen Yang deficiency:   *Fu Zi Li Zhong Wan* (附子理中丸)  +  
*Wu Ling San* (五苓散)

For More Kidney Yang Deficiency:   *Ji Sheng Shen Qi Wan* (濟生腎氣丸)  +  
*Wu Ling San* (五苓散)

**Ingredients:**

*Fu Zi Li Zhong Wan*:  
Zhi Fu Zi  Ren Shen  Gan Jiang  Zhi Gan Cao  
Bai Zhu

*Ji Sheng Shen Qi Wan*:  
Shu Di  Shan Yao  Shan Zhu Yu  Ze Xie  
Fu Ling  Dan Pi  Fu Zi  Gui Zhi  
Niu Xi  Che Qian Zi

*Wu Ling San*:  
Zhu Ling  Ze Xie  Bai Zhu  Fu Ling  
Gui Zhi

**Modification:**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Herbs Removed</th>
<th>Herbs Added</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ascites</td>
<td>-----</td>
<td>Hu Lu, Chuan Jiao</td>
</tr>
<tr>
<td>Severe Kidney yang deficiency</td>
<td>-----</td>
<td>Lu Rong, Ba Ji Tian</td>
</tr>
</tbody>
</table>

5. **Deficiency of Liver and Kidney Yin**

**Main Symptoms:** Enlargement, distension and fullness of abdomen, protrusion of superficial abdominal blood vessels in severe cases, dull complexion, purplish lips, dry mouth, irritability, nose bleeding, gum bleeding, dark scanty urine, dark red tongue with little dry coating, rapid thin wiry pulse.

**Treatment Principles:** Nourish Liver and Kidney yin, move qi and blood, dispel blood stasis
**Acupuncture:**

KD-3  Shu-Stream, Yuan-Prime and Earth point of the Kidney channel  
Nourishes Kidney yin and clears deficiency heat

KD-6  Nourishes the Kidneys and clears deficiency heat

UB-17  Influential point of blood  
Invigorates blood and dispels stasis  
Cools blood heat and stops bleeding  
Nourishes and harmonizes the blood

UB-18  back-Shu point of the Liver  
Spreads Liver qi  
Regulates and nourishes Liver blood

UB-23  Back-Shu point of the Kidney  
Tonifies Kidney yin

SP-6  Meeting point of three yin channels of the leg  
Harmonizes the Liver and tonifies the Kidneys  
Invigorates blood

**Modification:**  Irritability  + LV-3

**Herbal Medicine:**

Yi Guan Jian (一貫煎)  +  Ge Xia Zhu Yu Tang (膈下逐瘀湯)

**Ingredients:**

| Sheng Di (18g) | Sha Shen (9g) | Mai Dong (9g) | Dang Gui (9g) |
| Gou Qi Zi (9g) | Chuan Lian Zi (4.5g) | Yan Hu Suo (6g) | Wu Ling Zi (6g) |
| Dang Gui (9g) | Chuan Xiong (6g) | Tao Hong (9g) | Hong Hua (9g) |
| Dan Pi (6g) | Chi Shao (6g) | Xiang Fu (4.5g) | Zhi Ke (4.5g) |
| Wu Yao (6g) | Gan Cao (9g) |

**Modification:**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Herbs Removed</th>
<th>Herbs Added</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal heat with dry mouth, crimson dry tongue</td>
<td>-----</td>
<td>Xuan Shen, Shi Hu, Mai Dong</td>
</tr>
<tr>
<td>Ascites</td>
<td>-----</td>
<td>Lai Fu Zi, Da Fu Pi</td>
</tr>
<tr>
<td>Irritable, tidal fever, Insomnia</td>
<td>-----</td>
<td>Yin Chai Hu, Di Gu Pi, Zhi Zi, Ye Jiao Teng</td>
</tr>
<tr>
<td>Scanty urination</td>
<td>-----</td>
<td>Zhu Ling, Hua Shi, Bai Mai Gen</td>
</tr>
<tr>
<td>Tinnitus, res cheeks due to floating yang</td>
<td>-----</td>
<td>Gui Ban, Bie Jia, Mu Li</td>
</tr>
<tr>
<td>Nose or gum bleeding</td>
<td>-----</td>
<td>Xian He Cao, Fresh Mai Gen</td>
</tr>
</tbody>
</table>

### 7. **Dietary Therapy for Liver Diseases**

For patients with liver disease, a balanced nutritional diet is a very important supportive therapy. Malnutrition is commonly seen in patients with chronic liver diseases. It is described in all the stages of liver cirrhosis, its occurrence reaching as high as 65%–90% in patients with more advanced liver impairment. The main reasons are:

- Inadequate dietary intake due to multiple reasons such as poor appetite, nausea... etc
- In advanced stage, nutrients from food are poorly absorbed due to insufficient secretion of digestive enzyme and fluid retention in the gastrointestinal system
- Malfunction of the liver causing dysfunction of the metabolism of nutrients Certain nutrients such as good quality proteins are vital for the regeneration and repair of the liver cells
- The use of diuretic medication and aspiration of the ascites can cause the loss of protein

Proper dietary therapy can improve the metabolism of the liver and also meet the nutritional needs of the other organ systems. It can promote the regeneration and repair of the liver structure and improve the detoxification functions of the liver. A good diet can also enhance the immune system thereby raising resistance to infections. In addition, proper dietary measures will promote good nutrient storage, transport, and regulation by the liver. The prevention of malnutrition related damage is very important and therefore, nutritional therapy is one of the most important treatment factors in liver diseases.

Furthermore, several studies have shown that a modified eating pattern with 4–7 small daily meals, including at least one late evening snack to avoid prolonged fasting periods, improves the metabolic profile of cirrhotic patients.

#### 7.1 **Proper Nutrients for Liver Disease Patients**

**Protein**

Normally, proteins provide building blocks for the generation of new cells, tissue repair and the immune system. They also prevent buildup of fatty tissue and damage to the liver cells. However, in one with a severely damaged liver, proteins are not properly processed. Waste products may build up and cause hepatic encephalopathy (mental confusion). Restricting the amount of protein in the diet can reduce the chance of toxins building up in the body.
Protein intake must be adjusted in accordance with a one’s body weight and the degree of liver damage present. U.S. National Institutes of Health (NIH) recommends 1 g of protein for each kilogram of body weight for a stable liver disease patient.

Patients with unstable liver diseases, such as decompensated stage of cirrhosis, need to lower the percentage of animal protein they consume and eat mostly vegetable sources of protein. This is because animal protein has a high ammonia content which is liable to cause a sudden episode of encephalopathy among these patients. When there are symptoms of encephalopathy, protein intake should be reduced to less than 20 g per day, until the episode resolves.

Proteins absorbed through natural foods such as fish, soy products, meat and eggs are the best. For patients that have difficulty eating solid foods, protein can be taken as amino acids, albumin or serum infusion.

**Carbohydrate**

Adequate amount of carbohydrates in the diet can help protect the liver, improve resistance to infections, and reduce protein catabolism. However, excess calories in the form of carbohydrates can add to liver dysfunction and can cause fat deposits to develop in the liver. Liver disease can also lead to alterations in carbohydrate metabolism. This may cause an increase in blood sugar levels. As such, it is often recommended to control one’s blood sugar level by avoiding simple sugar foods such as candy and other sweets.

**Fats and Oils**

Dietary fat should not be unduly limited in liver disease patients, so as to not affect the body's energy supply and reduce appetite. However, one should avoid greasy foods, especially those whose jaundice has not receded. Hepatitis patients who ingest excessive amounts of fat may cause steatorrhea (excessive fat in the stool). On the other hand, insufficient ingestion of fat influences appetite and fat-soluble vitamin absorption. Therefore, the standard supply of fat should be about 40 - 50 g / day. Vegetable oil or emulsified fat is recommended.

**Vitamins**

Vitamin malabsorption in severe liver diseases can cause a deficiency of vitamin C, B1, and B2. Increasing the supply of vitamins will help repair liver cells, and enhance detoxification function, and improve immunity. Using Vitamin C, E and K for treatment of hepatitis, can alleviate symptoms and improve liver function. Therefore, the liver disease patients may choose vitamin-rich foods such as green leafy vegetables, dark-colored vegetables such as tomatoes, fruits such as apples, pears, grapes, bananas, oranges etc.

7.2 **Chinese Medicated Diet**
Chinese food therapy is a very effective way to control the liver disease, and even lead to recovery. In order to achieve the desire effect, one must have a good understanding of the disease differentiation, body constitution, nature and flavor of the ingredients used.

7.2.1 Principles of Chinese Medicated Diet

Chinese medicated diet is used for health care, treatment and prevention of disease. Ingredient selection is based on the following criteria:

1. In accordance with the syndrome differentiation

   Treatment based on the syndrome differentiation is the cornerstone of TCM therapeutics. The same disease may include several different syndromes. For example, based on main signs and syndromes, hepatic cirrhosis is classified into 5 different syndromes. Food/herb selection for patient with different syndromes will be different.

2. In accordance with the body constitution

   TCM constitution theory is essential to the regulation of health. For example, people with yang deficiency body constitution should avoid food/herbs with cold nature such as watermelon and mung beans. Conversely, food with warm and dry nature such as chives and chili pepper should be avoided for people with yin deficiency body constitution.

3. In accordance with the seasons, geographical and climatic condition

   In Chinese medicine, human and the nature make an organic whole. Holistic treatment requires the consideration of the external environmental factors. Cold nature diet, such as cold food and drinks, raw vegetables, should be avoided in the cold winter and warm nature diet, such as chili pepper, ginger, garlic, should be avoided in the hot summer.

7.2.2 Property of Food and Dietetic Chinese Herbs

In TCM, food and herbs are commonly classified according to:

- **Nature (Temperature)**

  Cold – substances that produce yin energy (slow movement, feeling of chilled, low energy). Medicated diet for treating or preventing febrile diseases should contain cold natured ingredients.

  Hot – substances that produce yang energy (fast, hot, aggressive). Ingredients with hot nature should be used in medicated diet for cold symptoms.

- **Five Flavors (Taste)**

<table>
<thead>
<tr>
<th>Flavors</th>
<th>Organ/Nature</th>
<th>General Functions</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pungent</td>
<td>Lung</td>
<td>Release exterior</td>
<td>Ginger</td>
</tr>
<tr>
<td></td>
<td>Dispersing,</td>
<td>Promote qi and blood</td>
<td>Tangerine peel</td>
</tr>
<tr>
<td></td>
<td>Moving</td>
<td>circulation</td>
<td>Green onion</td>
</tr>
<tr>
<td>Sweet</td>
<td>Spleen</td>
<td>Used as nourishing tonic</td>
<td>Chinese dates</td>
</tr>
</tbody>
</table>
### Recommended Medicated Diet for Hepatitis

#### 1. Tomato Fried Egg (番茄炒雞蛋)

**Function:** Clear heat, nourish yin, eliminate vexation, and promote body fluid generation

**Symptoms:** Poor appetite, vexation, thirsty, insomnia

**Ingredients:**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Property</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tomato</td>
<td>Sweet, sour</td>
<td>Clear heat, generate body fluid, nourish yin, stop thirst</td>
</tr>
<tr>
<td>(250g)</td>
<td>Slightly cold</td>
<td></td>
</tr>
<tr>
<td>Egg</td>
<td>Sweet</td>
<td>Tonify yin, nourish blood, eliminate vexation, calm mind</td>
</tr>
<tr>
<td>(3)</td>
<td>Neutral</td>
<td></td>
</tr>
</tbody>
</table>

**Cooking Instruction:**

1. Wash tomato and cut into wedges
2. Beat eggs until smooth
3. Heat 1 tablespoon of vegetable oil in a nonstick skillet over medium-high heat until hot
4. Add tomatoes and cook, stirring and turning occasionally, until juices are released and tomatoes are slightly wilted but still intact
5. Add appropriate amount of sugar and stir to mix
6. Add eggs to skillet and stir occasionally, until eggs are just cooked

**Caution:**
• Not suitable for patient with deficiency cold of spleen and stomach (cold pain of epigastria, bland taste in mouth, profuse saliva)
2. **White Fungus Mushroom Tofu Stew**（蘑菇銀耳燜豆腐）

   **Function:** Tonify spleen and stomach, Nourish yin, and moisten dryness

   **Symptoms:** Fatigue, poor appetite, dry mouth and throat, vexation heat, dry stools

   **Ingredients:**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Property</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mushroom (100g)</td>
<td>Sweet Neutral</td>
<td>Tonify spleen and stomach, benefit yin and nourish liver</td>
</tr>
<tr>
<td>White Fungus (60g)</td>
<td>Sweet Neutral</td>
<td>Nourish yin, moisten dryness, benefit stomach, generate body fluid</td>
</tr>
<tr>
<td>Tofu (3 pieces)</td>
<td>Sweet Neutral</td>
<td>Benefit qi, harmonize spleen and stomach, clear heat, moisten dryness</td>
</tr>
</tbody>
</table>

   **Cooking Instruction:**
   1. Wash mushroom
   2. Wash white fungus, trim and soak in water for 30 minutes
   3. Cut tofu into small cubes
   4. Heat 1 tablespoon of vegetable oil in a nonstick skillet over medium-high heat until hot
   5. Fry tofu until lightly brown, add mushroom and white fungus, stir-fry for 1 minute
   6. Add ¼ cup of water, bring to a boil and then simmer, covered, for about 5 minutes
   7. Add a pinch of salt and serve

   **Caution:**
   - Not suitable for patient with internal cold-damp symptoms (loose stools, excessive saliva)

3. **Fu Shou (Citrus Medica) Yu Jin (RADIX CURCUMAE) Congee**（佛手鬱金粥）

   **Function:** Soothe liver, release stagnation, Regulate qi, and strengthen spleen

   **Symptoms:** Hypochondriac pain, poor appetite, belching, abdominal bloating after meal, unsmooth bowel movement

   **Ingredients:**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Property</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry Fu Shou (15g)</td>
<td>Pungent, Slightly Bitter; Warm</td>
<td>Smooth qi, stop pain, harmonize stomach, transform phlegm,</td>
</tr>
<tr>
<td>Yu Jin (12g)</td>
<td>Bitter Cold</td>
<td>Invigorate blood, move qi, stop pain, release stagnation, clear</td>
</tr>
</tbody>
</table>
Cooking Instruction:
1. Wash all ingredients and put into a pot
2. Add appropriate amount of water, bring to boil and turn to medium heat
3. Cook until become thick porridge
4. Add a pinch of salt or sugar and serve

Caution:
- Not suitable for patient with deficiency cold of spleen and stomach (blend taste in the mouth, profuse saliva, cold pain in epigastria, loose or watery stools)

4. **Yin Chen (capillaries) Congee (茵陳粥)**

   **Function:** Clear heat, eliminate dampness, benefit gallbladder and treat jaundice

   **Symptoms:** Hypochondriac pain, poor appetite, belching, abdominal bloating after meal, unsmooth bowel movement

   **Ingredients:**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Property</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yin Chen Hao (60g)</td>
<td>Bitter Slightly cold</td>
<td>Release stagnation, clear heat-toxin, treat jaundice</td>
</tr>
<tr>
<td>Rice (30g)</td>
<td>Sweet Neutral</td>
<td>Benefit stomach, generate body fluid, neutralize the bitter taste of Yin Chen</td>
</tr>
</tbody>
</table>

   **Cooking Instruction:**
1. Wash Yin Chen Hao and soak in water for 30 minutes
2. Boil Yin Chen Hao in 2 liter of water for 40 mins, filter and remove the dregs
3. Wash rice and add to the Yin Chen decoction, boil with low heat until become thick porridge
4. Add appropriate amount of sugar and serve

5. **Wu Wei Zi (schisandra fruit) Red Date Syrup (五味子紅棗的蜜糖露)**

   **Function:** Nourish yin, generate body fluid, calm mind

   **Symptoms:** Hypochondriac pain, dry mouth and throat, poor sleep, lots of dreams, dizziness
Ingredients:

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Property</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wu Wei Zi (60g)</td>
<td>Sour, Sweet Warm</td>
<td>Nourish liver and kidney, generate body fluid, stop thirst, calm mind</td>
</tr>
<tr>
<td>Chinese Red Date (30)</td>
<td>Sweet Neutral</td>
<td>Strengthen spleen, benefit qi, nourish blood, harmonize liver, moderate Wu Wei Zi’s sour to protect stomach qi</td>
</tr>
<tr>
<td>Honey (200ml)</td>
<td>Sweet Neutral</td>
<td>Moisten dryness, tonify deficiency, moderate Wu Wei Zi’s sour to protect stomach qi</td>
</tr>
</tbody>
</table>

Cooking Instruction:

1. Wash Wu Wei Zi and Red Dates and boil with 3 L of water with low heat until 1 ½ L of decoction left
2. Remove dregs and pour decoction into a jug with lid
3. Add honey and stir thoroughly, over lid and steam with low heat for an hour
4. Take 1 – 2 tablespoons, twice daily

Caution:
- Not suitable for patient with damp-heat accumulation (jaundice, scanty yellow urine, bitter taste in mouth)

7.2.4 Recommended Medicated Diet for Hepatic Cirrhosis

1. Cucumber Fried Egg (黃瓜炒牛奶)

   Function: Clear heat, detoxification, promote urination, eliminate swelling
   Symptoms: Ascites, dysuria, loss of appetite, vexation heat, thirsty

Ingredients:

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Property</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cucumber (500g)</td>
<td>Sweet Cold</td>
<td>Clear heat, generate body fluid, promote urination, eliminate swelling</td>
</tr>
<tr>
<td>Egg White (10)</td>
<td>Sweet Neutral</td>
<td>Tonify yin, nourish blood, eliminate vexation, calm mind</td>
</tr>
<tr>
<td>Milk (250ml)</td>
<td>Sweet Neutral</td>
<td>Benefit stomach, moisten dryness, nourish yin</td>
</tr>
</tbody>
</table>

Cooking Instruction:

1. Clean cucumber and cut into thin slices
2. Beat egg white until smooth and mixed with milk
3. Heat 1 tablespoon of vegetable oil in a nonstick skillet over medium-high heat until hot
4. Fry cucumber until just cooked, add appropriate amount of salt and mix well, remove and set aside
5. Heat a tablespoon of vegetable oil in the skillet, add milk and egg white mixture slowly; stirring in one direction until half cooked, add cucumber and stir-fry until cooked

Caution:
- Not suitable for patient with qi stagnation in the spleen and stomach (distension of abdomen, epigastric pain, belching)

2. **Winter Melon Corn Silk Small Red Bean Soup** (冬瓜玉米鬚赤豆湯)

   **Function:** Promote urination, eliminate swelling

   **Symptoms:** Early stage of ascites, swelling in legs, epigastric distension, lassitude, loss of appetite, scanty urination, loose stools

   **Ingredients:**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Property</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter Melon Peel (60g)</td>
<td>Sweet, Slightly Cold</td>
<td>Promote urination, eliminate swelling, expel water-dampness</td>
</tr>
<tr>
<td>Corn Silk (30g)</td>
<td>Sweet, Slightly Sour, Neutral</td>
<td>Promote urination</td>
</tr>
<tr>
<td>Small Red Bean (30g)</td>
<td>Sweet, Sour, Neutral</td>
<td>Unblock water passage, promote urinate, tonify deficiency, strengthen spleen</td>
</tr>
</tbody>
</table>

   **Cooking Instruction:**
   1. Clean all ingredients and soak in water for 30 minutes
   2. Boil all ingredients in ½ liter of water for 1 hour

   **Caution:**
   - Only suitable for patient with mild ascites and swelling.

3. **Tian Qi** (Panax Pseudoginseng) **Turtle Shell Pork Soup** (田七鱉甲燉瘦肉)

   **Function:** Invigorate blood, dissipate blood stasis, soften hardness, and disperse nodules

   **Symptoms:** Hypochondriac pain, enlargement of liver and spleen, emaciate, poor appetite, fatigue, unsmooth bowel movement, dysuria
Ingredients:

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Property</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tian Qi (6g)</td>
<td>Sweet, Slightly Bitter Warm</td>
<td>Invigorate blood, dissipate blood stasis, eliminate swelling, stop pain</td>
</tr>
<tr>
<td>Turtle Shell (30g)</td>
<td>Salty Neutral</td>
<td>Calm liver, clear heat, soften hardness, and disperse nodules</td>
</tr>
<tr>
<td>Lean Pork (100g)</td>
<td>Sweet Neutral</td>
<td>Strengthen spleen qi, nourish liver blood, prevent over-dispersing from Tian Qi and Turtle Shell</td>
</tr>
<tr>
<td>Chinese Red Date (4)</td>
<td>Sweet Warm</td>
<td>Assist lean pork to harmonize stomach, tonify deficiency, harmonize all ingredients</td>
</tr>
</tbody>
</table>

Cooking Instruction:
1. Wash Tian Qi, Turtle Shell and soak in water for 30 minutes
2. Wash and core the red dates
3. Wash pork and cut into small pieces
4. Put all ingredients in a double layer steamer, add appropriate amount of water, cover with lid and steam for 3 hours with low heat
5. Add a pinch of salt and serve

Caution:
- Not suitable for patient with deficiency cold of spleen and stomach (poor appetite with loose stools)

4. Frog and Enoki Mushroom Rice (田雞金針菇飯)

Function: Strengthen spleen, benefit stomach, promote urination, and eliminate swelling

Symptoms: Hypochondriac pain, abdominal distension, fatigue, loss of appetite, shortness of breath, spontaneous sweating, sallow complexion, emaciate, yellow scanty urination or dysuria

Ingredients:

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Property</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frog Leg (60g)</td>
<td>Sweet Cold</td>
<td>Strengthen spleen, benefit stomach, detoxification, promote urination</td>
</tr>
<tr>
<td>Enoki Mushroom (30g)</td>
<td>Sweet, Slightly Sour Neutral</td>
<td>Strength spleen, nourish yin, promote urination, reduce swelling</td>
</tr>
</tbody>
</table>
### Rice

<table>
<thead>
<tr>
<th>Rice</th>
<th>Sweet Neutral</th>
<th>Strengthen spleen, nourish stomach</th>
</tr>
</thead>
<tbody>
<tr>
<td>(150g)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Cooking Instruction:**

1. Wash Enoki mushroom and frog legs and season with sugar, salt, soya sauce, ginger, corn starch
2. Wash and cook rice until half cooked
3. Put frog legs and Enoki mushroom on top of rice, cover with lid and cook on low heat until fully cooked

**Notes:**

- This dish is very suitable for liver disease patient and is recommended to eat regularly in order to treat the disease and strengthen the body.

### 5. He Shou Wu *(Fallopia multiflora)* Sea Cucumber Soup *(首烏燉海參)*

**Function:** Replenish blood, benefit essence, nourish yin, and tonify liver

**Symptoms:** Emaciate, pale or white complexion, dizziness, palpitation, insomnia, dry stools

**Ingredients:**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Property</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>He Shou Wu (25g)</td>
<td>Sweet Neutral</td>
<td>Tonify liver blood, benefit liver yin</td>
</tr>
<tr>
<td>Sea Cucumber (60g)</td>
<td>Sweet, Slightly Salty Warm</td>
<td>Benefit qi, nourish yin, tonify kidney, strengthen yang, moisten intestine, unblock bowel, promote urination, treat jaundice</td>
</tr>
<tr>
<td>Chinese Red date (4)</td>
<td>Sweet Warm</td>
<td>Tonify qi and blood, harmonize spleen and stomach</td>
</tr>
</tbody>
</table>

**Cooking Instruction:**

1. Wash all ingredients and and cut sea cucumber into pieces
2. Blanch sea cucumber in boiling water for a few minutes; drain, rinse with cold water
3. Put all ingredients in a double layer steamer, add appropriate amount of water, cover with lid and steam for 2 hours over low heat
4. Add a pinch of salt and serve
Caution:

- Not suitable for patient with damp-heat (diarrhea, fever, abdominal pain, jaundice, bitter taste in mouth, scanty and yellow urination) or exterior syndrome with fever, headache or sore throat.

8. Other Important Factors for Treating Liver Disease

- Regulating Emotions – negative emotions easily impair liver function
- Have enough rest
- Obtain adequate nutrients through a balanced diet
- Avoid alcohol and spicy, pungent food
- Avoid excessive use of drugs
- Avoid environmental pollutants such as fumes from paint thinner, insect sprays etc.
- Reduce sodium and fluid intake to avoid retention of fluids in the body (ascites, edema)

9. Conclusion

Many people with liver disease are using Traditional Chinese Medicine as a complementary or alternative treatment. TCM uses a number of treatment modalities including acupuncture, moxibustion, Chinese herbs, qi gong, and medicated diet. While these therapies have not undergone major clinical trials in the west, many of them have been used for centuries in China for hepatitis and other liver conditions. The results of modern Chinese research on herbs and other modalities are used in the development of current Chinese medicine treatment for Hepatitis.
References

1. 何國柱, 肝聶病自然飲食療法, 萬里機構, 飲食天地出版社
2. 王方凌, 肝聶病治療與護理, 星輝圖書有限公司
3. 單書健, 古今名醫臨証金鑾, 黃疸脅痛臌漲卷, 中國中醫藥出版社
4. 張瑋, 肝炎肝硬化辨驗方, 中國中醫藥出版社
5. 洪心容, 中藥應該這樣吃, Vitality
6. 吳為華, 肝病日常飲食, 上優文化事業有限公司
7. 羅錦河, 肝炎化解讀, 健康世界雜誌社
8. 高翔, 肝膽病的預防與治療, 雁南圖書出版公司
9. 段富津, 方劑學, 上海科學技術出版社
11. Cheng Xin Nong, Chinese Acupuncture and Moxibustion, Foreign Languages Press, Beijing
17. http://www.liver.ca/files/PDF/Publications_English/Children_LiverDisease_E.pdf
20. http://www.liversupport.com/wordpress/2008/03/sulfasalazine%20%2880%20mg%20sulfapyridine%20or%20sulfasalazine%29%20for-reversing-fibrosis/