



SOME ASPECTS RELATED TO THE HUMAN BODY PLANT

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ABSTRACT

The paper presents some important aspects related to the human liver, which is a real human body's plant, having essential roles in human life, especially in the preparation of the food necessary for the organism, in the production of the various essential substances necessary for the body and the basic chemical elements. At the same time, the human liver has the role of detoxifying the body, processing and eliminating toxic elements from ingested foods. The liver secretes various substances necessary for the human body. The more we keep this vital organ healthier, the more human body becomes free, healthier, younger and vigorous. The liver is probably the organ with the most diverse functions in the human body. After ingestion of food, they are processed along the digestive tract and degraded to nutrients that will reach all tissues and organs in the body. The liver is an annexe of the digestive tract with a very complex structure. The morphological unit of the liver is the liver lobe. It has a pyramid shape and a length of a few millimeters. The liver contains up to 100,000 lobules.

Keywords: Human body; Human body's liver; Food preparation; Essential substances; Detoxifying the body; Eliminating toxic elements; Physiopathology; Anti-aging.



1. INTRODUCTION

The liver is probably the organ with the most diverse functions in the human body. After ingestion of food, they are processed along the digestive tract and degraded to nutrients that will reach all tissues and organs in the body. Liver is an organ, part of the digestive system, which is present in most of the upper animals. It has numerous functions in the human body, especially in metabolism. It is believed that the liver is the most complex plant of the body, the human liver having over 500 functions, indispensable to normal life. These functions are so complex that there is no machine that can replace the liver, primarily because of the many functions of synthesis of life-essential substances, and then because of its role of detoxification.

The liver is an annexe of the digestive tract with a very complex structure. The morphological unit of the liver is the liver lobe. It has a pyramid shape and a length of a few millimeters. The liver contains up to 100,000 lobules. Each hepatic lobe consists of hepatocytes (liver cells), sinusoidal capillaries and bile ducts (in which the ball is spilled).

Hepatic circulation is dual - functional and nutritive (Figure 1), but the branches of the liver artery and those of the portal vein will merge into the liver forming the sinusoidal capillaries. From the sinusoidal capillaries, the blood will collect in the liver veins that will flow into the inferior cavity. Every minute through the portal vein passes about 1 liter of blood, and around the liver arteries approximately 350 ml of blood.

This amount of blood will reach sinusoidal capillaries, that is, 25% of the volume of blood that the heart pumps at rest. Liver blood vessels do not have vasodilators, but only vasoconstrictors - the blood cantoned in the liver will be unblocked and sent to circulation by vasoconstriction. In some shock states, the blood flow from the liver can be reduced to liver necrosis (ANGELI et al., 2005; BERZIGOTTI; BOSCH, 2014; BOSCH et al., 2015; COLLE et al., 2004; ENGUITA et al., 2019; FERNÁNDEZ et al., 2009; FERNÁNDEZ-IGLESIAS; GRACIA-SANCHO, 2017; GRACIA-SANCHO et al., 2018; GRACIA-SANCHO et al., 2007; IWAKIRI; GROSZMANN, 2006; JENNE; KUBES, 2013; MARRONE et al., 2016; MARTIN et al., 2017; PINZANI et al., 2011; ROCKEY, 2006; SAADATI et al., 2019; STEIB et al., 2007).

The human liver is a dark red body weighing 1.5 - 2 kg, being the most difficult organ of the human body. It is located to the right of the abdomen under the ribs, which protects it from trauma.

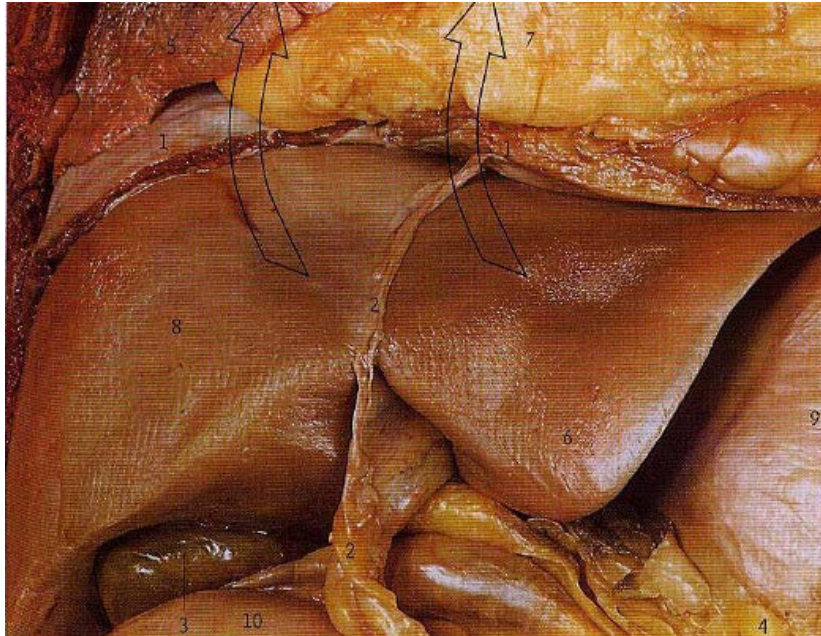


Figure 1: Hepatic circulation is dual - functional and nutritive.

Source: https://www.scientia.ro/images/stories/articles/2012/aprilie/10/ficatul_uman.jpg

1. Diaphragm;
2. Falciform ligament;
3. Biliary bladder;
4. The big omentum;
5. The lower lobe of the right lung;
6. Left liver lobe;
7. Pericardial adipose tissue;
8. Right lobe of the liver;
9. Stomach;
10. Transversal colon.

It primarily filters the blood that comes from the organs of the digestive tract, which is the main entry point of toxins in the body, but in fact the liver fills all the blood in the body, retaining and metabolizing substances harmful to the body (AVERSA et al., 2018a; AVERSA et al., 2018b; AVERSA et al., 2017a; AVERSA et al., 2017b; AVERSA et al., 2016a; AVERSA et al., 2016b; AVERSA et al., 2016c; AVERSA et al., 2016d; AVERSA et al., 2016e; AVERSA et al., 2016f; AVERSA et al., 2016g; AVERSA et al., 2016h; AVERSA et al., 2016i; AVERSA et al., 2016j; AVERSA et al., 2016k; AVERSA et al., 2016l; AVERSA et al., 2016m; AVERSA et al., 2016n; ALJOHANI; DESAI, 2018; ALEXANDER; WANG, 2018; APICELLA et al., 2018 a-c; MARQUETTI; DESAI, 2018; ARMAH, 2018; WILK et al., 2017; BABAEV et al.,

2010; BUZEA et al., 2015; PETRESCU et al., 2015; PETRESCU, 2008; PETRESCU, 2009; ABDUL-RAZZAK et al., 2012; AJITH et al., 2009; ATASAYAR et al., 2009; AHMED et al., 2011; COVIC et al., 2007; WILLIS, 1953; WILLIS, 1954, 1957; HA, 2010; EL-GENDY, 2009; ENSTROM, 2014; GEORGE et al., 2019; HANSEN, 2014; RATH, 1990; RATH, 2003; YILMAZ, 2006; RAVNSKOV, 2009; KUNUTSOR, 2016; HICKEY, 2007; CHOUDHURY; GREENE, 2018; CHOUDHURY, 2018).

2. METHODS AND MATERIALS; THE MAIN FUNCTIONS OF THE HUMAN LIVER

- 1. Blood storage function.** The hepatic system can store up to half a liter of blood, and under pathological conditions, this volume can increase to 1.5 liters. The liver is a large organ (2.5% of the body weight in the adult) that is able to act as a blood reservoir and to deliver this volume of blood when the situation demands it (hypovolemic shock).
- 2. The blood filtration and purification function** is due to the macrophages in the sinusoidal capillaries. These liver macrophages are also called Kupffer cells and will phagocytose any foreign particle that gets from the intestine into the blood (bacteria).
- 3. The liver also interferes with the inactivation of toxic substances** - drugs or hormones. In the liver, these substances undergo chemical processes (oxidation, reduction or hydrolysis).

Some enzymes that interfere with the metabolism of these substances can be secreted in greater amounts over time - as is the case with the alcohol-dehydrogenase enzyme that will be secreted in higher amounts in chronically consuming alcohol.

Within the liver, many substances are inactivated or metabolized, some of which are potentially toxic for the body - liposoluble medicines, ammonia, insulin, glucagon or cortisol (PETRESCU, 2008).

Liquid function of transforming toxic substances into non-toxic products that are eliminated by bile. Bile is excreted a large amount of metabolic products resulting from toxic substances introduced into the body or produced by cells in the body. Lack of detoxification, makes the body intoxicated, in the advanced stages of liver disease, the sickly paralyzed patient (a condition called hepatic encephalopathy).

- 4. Metabolic function of the liver.** The liver has an essential role in the metabolism of carbohydrates, proteins, or lipids.

Glucids are converted to the liver in glycogen - the method of storage of carbohydrates. From stored glycogen, the liver can restore glucose through gluconeogenesis processes. The liver can be compared to a carburetor: if it does not work well, the car consumes a lot of gas and has no power. In liver disease, man eats but loses weight and is tired, has no power.

With the exception of immunoglobulins, the rest of the proteins are synthesized in the liver. In a person of 70 kg, the liver each day forms about 10 to 12 g of protein (under normal conditions).

The liver also has an important role in lipid metabolism. It removes chylomicrons from the circulation (fats absorbed by digestion). Hepatocytes synthesize more amounts of VLDL (lipoproteins) and convert carbohydrates to proteins or lipids when needed.

5. **The function of lactic acid glucose synthesis liver** - therefore to cirrhotic patients occurs the lower blood glucose and they need glucose infusions.
6. **Liver function of the metabolism of red blood cell degradation products** - resulting in bilirubin being eliminated in the ball. Once used and degraded, red cells must be processed and removed from the body. All tired red cell degradation products are manufactured in the liver. They decompose and degrade old red and worn red blood cells and result in bilirubin being eliminated in the ball and with it from the human body.
7. **The secretory function and excretion of the liver.** The liver secretion product is the ball, which it eliminates in the bile ducts. In addition to the bile, it also removes cholesterol or heavy metals (in heavy metal poisoning).

The bile contains water, bile acids, bile pigments, bilirubin, proteins and Na, K or Cl ions.

The ball is continuously secreted by the liver and stored in the bile duct where it will be removed during digestion to emulsify the lipids. Inside the bladder, there are processes of concentration reaching 50-70 ml stored in the bile, as the liver secretes about 500 ml of bile at 24 hours.

8. **The liver also represents a deposit for minerals or vitamins**, especially vitamin B12. The amount of vitamin B 12 deposited in the liver could cover the body's needs (red blood cells) for a period of 1 to 2 years under debilitating conditions.

Storage site for vitamins A, D, E, K and B12, iron and sugars. By lacking these functions in serious liver disease, the patient is devoid of energy (has permanent fatigue), and it is sometimes necessary to administer vitamins; they DO NOT heal liver disease but should compensate the failure of the liver vitamin store.

9. Liver metabolism function liver. Alcohol metabolism is done by destroying some of the liver cells with transaminase elevations and GGT, and from their regeneration can occur to cirrhosis of the liver.

A large or very large amount of alcohol often leads to the high demand of liver cells that must fight to metabolize that large amount of alcohol in the human body. Mobilizing them for this purpose often leads to the destruction of large amounts of liver cells or their illness, and then to cirrhosis in the liver. In other words, alcoholism certainly leads to liver cancer in a certain period of time.

10. Metabolism of some of the hormones. Due to the lack of metabolism of male hormones in liver diseases, the man gets some feminine characters - hair loss on the chest, breast enlargement, atrophy of the testicles, etc.

The liver produces a variety of hormones, and in elderly or tired livers, there is a lack of those specific male hormones, which leads to the occurrence of some disturbances in the body.

11. Synthesis of proteins necessary for the good functioning of the organism (growth, regeneration of tissues, water balance in the body, immune defense against infections, etc.). The liver disease makes infections easier, wound healing is longer, and the retention of water in the body can cause edema (swelling of the feet) and/or ascites (water in the stomach).

12. Protein degradation results in ammonia, the toxic substance the liver turn into non-toxic urea; in severe liver disease, increases the concentration of ammonia in the blood and lowers the concentration of urea in the blood.

13. Synthesis of factors that help blood clotting - such as fibrinogen and prothrombin. Serious liver disease decreases fibrinogen and prothrombin activity, and bleeding occurs in gums, hemorrhoids, or esophagus varicose veins.

14. Metabolism and storage of iron. Iron in the human body is one of the most important elements. It is vitally important in strengthening the organism against diseases, in

increasing the body's immunity, in the prevention and cure of viral infections. In the absence of iron, serious anemia can occur, and various bleeding due to lack of iron in the body.

15. Cholesterol metabolism - The liver is the main cholesterol synthesis site and the primary cholesterol-lowering in the blood. Cholesterol, in turn, is used to synthesize hormones - progesterone, testosterone, estrogens, adrenaline - and vitamin D. A tired liver no longer fulfills this function, and the result is seen by breast enlargement, impotence and hair loss on the chest, hands and feet in men, menstrual cycle disorders in women, and osteoporosis in both sexes. With decreasing vitamin D there is also a decrease in body immunity.

2.1. The liver to the newborn

Functions of the liver in the newborn are still undeveloped, but towards the end of pregnancy, they develop almost completely, as after birth 90% of the glycogen stored in the liver is released to cope with the needs of the body (no longer receiving glucose from mother because the umbilical cord is interrupted). Synthesis functions of the liver are not well developed in the newborn, so it can not synthesize the proteins necessary to provide optimal protection against bacteria, but breast milk will supplement this function by the antibodies and leukocytes it contains.

3. RESULTS AND DISCUSSION; HEPATIC IMPAIRMENT

Hepatic impairment consists of altering liver functions - synthesis, excretion, and detoxification, due to a decrease in the number of functional hepatocytes. The first signs of liver failure occur when more than 80% of the liver cells are not functional. Normally, the liver has a great regenerative capacity.

The most common causes leading to hepatic impairment are: viral hepatitis (with B, C, D, E virus, Epstein Barr virus, etc.), hepatitis (can be produced by antibiotics or other medicines), alcoholic cirrhosis or liver cancer more frequently, liver cancer is produced by metastasis of colon, pancreas, or stomach cancer).

In liver failure, all liver functions are affected. Decreases protein synthesis, which produces edema in the periphery (synthesized liver albumin keeps blood in the arteries - 1 gram of albumin can retain 18 ml of fluid - colloidal-osmotic pressure.) Without albumin, the blood liquors would leave the vessels and cantons in tissues - producing edema). The protein

synthesis disorder affects the blood clotting and protection against blood infections. In addition to protein metabolism, glucose and lipid are also affected.

Hepatic impairment causes hormonal disturbances because the liver inactivates some hormones. Thus, they stay longer in the blood producing different effects - it increases the blood concentration of estrogen, aldosterone or thyroxine and decreases the level of androgenic hormones (which produces the feminization of the individual).

Hepatic insufficiency is a serious condition that can not be compensated by the body, the best today healing method, but not always, is liver transplantation.

The role of the liver in immunity is extremely important, some of the liver cells being part of the immune system. These cells capture and digest bacteria, fungi, parasites, cellular debris filtered from the blood; In the liver, there are lymphocytes with an important role in immunity, the liver reground immune tolerance. In serious liver disease, the role of the liver in immunity is disrupted, with patients at high risk of infection. The disruption of liver function, the inability of the liver to perform its functions, is called liver failure (or in popular terms "liver fatigue").

What does tired liver mean?

Hepatic impairment, a syndrome popularly known as "tired liver", is defined as the inability of the liver to perform its main functions at the level necessary for the body at some point.

If liver failure is a medical emergency requiring at least medical advice, and usually hospital admission, the term tired liver is usually used by non-specialists without defining liver failure,

Hepatic insufficiency can be acute (with a short duration of development) or chronic (long duration), but regardless of the type, it can be severe, often followed by death, despite the (recognized) liver regeneration capacity

Causes of hepatic insufficiency ("tired liver")

In principle, hepatic failure can occur by destroying hepatic liver cells, microbes, traumas, medicines, teas, etc., through the poor functioning of liver cells (who do not have the enzyme bag required for good functioning). Main causes that may lead to liver failure are:

- Destruction of hepatic cells from acute viral hepatitis A,

- B, C, D, E, alcoholic, toxic, autoimmune, drug, alcoholic or other causes; of the drugs we notice PARACETAMOL, a common cause of mortality due to acute liver failure, we mention the high frequency of deaths from fungi or ethno-botanic intoxication;
- Replacement of hepatic tissue with nonfunctional nodules such as liver cirrhosis, irrespective of causes;
- Replacement of hepatic tissue with fatty liver and liver steatosis from pregnancy;
- Replace liver tissue with cancerous liver tissue cancer;
- The inability of the liver to remove from the inside the toxic substances processed as in jaundice;
- The existence of a toxic amount over the normal ability to treat hca liver in septicemia, massive hemolysis, liver infections regardless of cause;
- Disorders of hepatic perfusion that prevent it from feeding but also taking toxic substances detoxified as a shock of any nature, ischemic hepatitis, heart failure, portal vein thrombosis, hepatic venous-occlusive disease;

Replacement of tissue works with liver without tissue treatment as in:

- Massive liver metastases
- hepatic amyloidosis
- hemosiderosis
- tyrosinemia
- hemochromatosis
- Gaucher's disease
- Wilson's disease
- Liver transplant rejection

In current medical practice, the most common cause of chronic liver failure is viral or alcoholic liver cirrhosis, and acute hepatic failure is acute viral or toxic hepatitis (currently ethno-botanic, alcohol, drugs).

The risk of acute liver failure is higher in the following categories of people:

- Age under 18 or over 65 - Children are more sensitive to toxic substances including food, medicines or alcohol.
- Obesity (fat load with fat)
- Task
- The genetic sensitivity (inherited) of the liver
- The sensitivity of the liver over life through various over-demands (liver disease, diseases of the body, toxic substances, etc.)
- Combining toxic substances with each other or with alcohol

Symptoms of "tired liver" are not characteristic, and patients know that fatigue can be due to liver disease; it is, but in most situations, fatigue is NOT due to liver disease, and fatigue in liver disease occurs only in serious situations, most of the liver disease evolving long without fatigue.

The most common symptoms that may occur in liver failure are:

- Decreased appetite
 - Weight loss (through poor processing of nutrients)
 - Sometimes nausea, bitter taste (rare)
 - The jelly (passing the bloodball into the skin)
 - Excessive colored excess urine to orange (excess bilirubin)
 - The more faded, sometimes white chit (because of the lack of bilirubin)
 - Extreme fatigue (liver stores glycogen, energy reserve of the body) that can go up to coma
- Mucosal and cutaneous bleeding (due to lack of synthesis of prothrombin and fibrinogen and decreased platelets))
 - Dive into the skin at minimum kicks
 - Edema, possibly ascites with abdominal enlargement (by decreasing liver albumin synthesis)
 - Sleep disturbances (daytime somnolence with insomnia at night) - through intoxication with non-metabolized substances by the diseased liver.

- Diagnosis of liver failure ("tired liver")
- The main liver functions that are disturbed in liver failure:
- The metabolism or storage of proteins, carbohydrates, fats, and vitamins
- Metabolism of toxic substances
- Production of the bile required for the digestion and excretion of some substances
- Synthesis of coagulation factors

Symptoms are explained by disturbing the functions mentioned, as well as the majority of changes in laboratory tests.

For the diagnosis of hepatic insufficiency it is important to evaluate the following:

- The existence of some factors in the patient's history that could cause liver failure (chronic liver disease, alcohol, toxic, drugs, fungi, autoimmune diseases, viral diseases, etc.)
- The laboratory analyzes that can show the cause of liver failure (dosing toxic substances in the blood, determining the existence of viruses, iron, copper, autoimmune changes, etc.)
- The existence of symptoms and clinical signs that may be due to insufficient liver function
- The existence of visible liver changes with some explorations (ultrasound, upper digestive endoscopy, CT or MRI exam, eco endoscopy, etc.)

The existence of laboratory tests that reflect the inability of the liver to perform its functions normally:

- Increased transaminases
- Alkaline phosphatase increased
- GGT increase
- Bilirubin increase in blood
- Low blood albumin
- Low blood protein

- Decreased fibrinogen
- Increased ammonia in the blood
- An increase of prothrombin time or INR
- Sometimes decreasing red blood cells, white blood cells, and platelets
- Lower blood sugar
- An increase of ammonium in blood and lactate
- Increased creatinine in the blood

By correlation between clinical changes, a 5-stage classification of hepatic failure was imagined, in the first two stages the patient's behavioral changes were only visible through specific tests, and at the last stage, the patient entered a coma.

Treatment of hepatic insufficiency ("tired liver")

Treatment of "tired liver" is not a simple problem, and death can occur quite frequently. Hence, healing attempts with hepatic healers, healing, liver, natural, natural, bioenergy, etc. can only aggravate the disease, with the chance (and so low) of survival. In the issue of hepatic insufficiency, any lost time may mean the death of the patient.

There are currently several levels of treatment for hepatic failure:

- Bedtime (increases liver blood perfusion)
- A low-protein diet (meat), salt, fry, alcohol
- Causative treatment of hepatic impairment (digestive hemorrhage, drugs, toxic, viruses)
- Elimination of digestive content, the potential source of hepatic intoxication
- Antibiotics that inhibit digestive flora or treat over-infected ascites
- Medication to maintain kidney and liver function, and elimination of fluid retention
- Sometimes evacuating needle ascetic
- Sometimes intubation with mechanical ventilation
- Applying methods for supplementing liver function (MARS hepatic dialysis, Prometheus) effective for short periods of time
- Liver transplant - the last method, which, if applicable, can often solve the situation.

Naturist treatments in liver failure ("tired liver")

Everything that passes through the mucous membrane of the digestive tract reaches the blood that then enters the liver for processing. If it is a nutritive substance that is useful to the body, it passes from the liver cells to the blood, then reaches the cells of the rest of the body, and if it is a toxic substance, it is metabolized by liver cells into less toxic products that are either eliminated by the bile, either they reach the kidneys, and then they are eliminated in the urine. The same happens with substances that reach blood through other pathways (inhalation, skin, injectable, etc.).

Probably sounds weird, but even a normal diet supplies toxic residues, which explains why a patient with functional liver less than 10% due to cirrhosis can enter a coma by eating only a quantity of fresh meat, even if it is chicken and is dietary, just by boiling, Dr. Ditoiu of Fundeni Hospital explains in a publication.

A normal diet is supported without any problem by a healthy liver, but excess diet (even if it is dietary) can even overload a healthy liver.

It is already well known that a large number of foods heavily over strips the function of liver detoxification - roasters, smokes, smokes, preservatives, animal fats etc., but also a digestive tract with an abnormal function which, due to a disease, provides numerous toxic residues. Hepatic functions are also overloaded in case of excessive physical strain - which can increase transaminases - but also many other substances that can lead to toxic hepatitis, which is similar to any hepatitis, including viral hepatitis. Sometimes toxic hepatitis may be accompanied by hepatic impairment and may have a fulminating, rapid progression, leading to death if liver transplantation is not performed.

Why and how should the liver be protected?

As the protection of a car requires its use in normal parameters, avoiding overload and using suitable supplies, fuel, and quality oils, protecting the liver means its extra labor which leads to its wear, especially through good quality food.

The most important and workable measure that should be taken when the liver was overloaded with food abuse (overeating, roasting, fat, alcohol, etc.) consists in putting the liver at rest in a diet with a reduced amount of food for a while.

Proper hydration is required - you can consume not very sweet compotes, milk, dairy, soups or vegetable soups, fruits. Meat, which supplies the most toxic liver residue, should be avoided in these situations.

Through such a diet, the liver has time to regenerate its destroyed areas. The regeneration capacity of the liver is well-known, being extraordinary. It is considered that if 25% of the liver tissue remains after destruction by toxins or surgical removal, this amount is sufficient for complete liver regeneration.

A heavily damaged liver of toxic substances with severe hepatic impairment begins the regeneration in the first 24-48 hours of aggression, and after 3-4 weeks, its volume has doubled compared to the one from which regeneration started. This happens spontaneously, naturally, through the physiological substances produced by the body in response to the destruction of the liver tissue. This happens if the sick liver is left to regenerate without being overstretched without giving it up.

Let's look at some natural solutions for caring for an overloaded or regenerating liver:

- 1. Garlic:** It is a good detoxifying substance for the body by activating enzymes that remove toxins. Garlic contains allicin and selenium, substances that help protect the liver from toxins. It is ideal to consume 2-3 cloves of garlic daily, whether fresh or added to food.
- 2. Grapefruit:** Grapefruit has a significant contribution to vitamin C, vitamin A, vitamins B1, B2, and B5, as well as iron, calcium, phosphorus, potassium, and water. It also has antioxidant actions for the body. Whole fruit and juice have the ability to stimulate hepatic activity and keep the liver cell healthy.
- 3. Red Beet:** Red beet is a complex of vitamins and minerals that we rarely find and, in addition, cure tumors, liver diseases, cardiovascular, digestive disorders, strengthens immunity and is a powerful anti-inflammatory, detoxifying and energizing. The red beet contains the entire complex of vitamin B, potassium, manganese, vitamin C, vitamin A, magnesium, phosphorus, iodine, calcium, sulfur, antioxidants and iron, in other words, everything the body needs. Consumption of this root helps the body in the fight against anemia, as it contains, besides a wide range of vitamins, iron and folic acid that contribute to the growth of red blood cells. Also, the liver will be protected and will have the ability to regenerate much faster because of beet consumption, which is beneficial even for hepatitis.

4. **Lemon:** Fresh lemons are a real adjunct to maintaining long-term health. The liver is particularly beneficial to lemon consumption, especially if it comes with a rich supply of liquids. From a medicinal point of view, these citrus acts as an antiseptic, as an agent for infection prevention and rotting. Lemons assist in cleaning the body of impurities, stimulate hepatic activity and act as a solvent for uric acid and other toxic substances.
5. **Green Tea:** Daily green tea consumption helps eliminate toxins in the body, helps eliminate fat and moisturizes the body at the same time. Prevents fat accumulation in the liver and helps protect the liver against toxic substances like alcohol. Green tea is also very common in the treatment of patients with liver cancer. At the same time, it is good to know that drinking too much green tea can be harmful to the liver or other organs. Consume with moderation.
6. **Avocado:** Helps detoxify the liver and contributes to its functioning. Mono-unsaturated fats in avocados help reduce bad cholesterol and increase good cholesterol in the body. Avocado contains many vitamins and minerals and other nutrients that can help slimming diets. It is ideal to consume 1-2 avocado per week for several months to restore an affected liver.
7. **Noni (*Morinda citrifolia*),** originating in Southeast Asia, is an evergreen tree growing in coastal regions and forest areas. And noni has active substances that stimulate secretion of interferon- γ , tumor necrosis factor α , interleukin, which makes it an antiviral and immunostimulant very good remedy. It also has depurative, vitaminizing and remineralizing action to stimulate liver function.
8. **Curcuma** is a ginger-related plant that is recommended in ancient times for its beneficial effects on the body. Recent research has shown that turmeric has anti-cancer, anti-inflammatory properties and is a powerful antioxidant. Turmeric consumption has a beneficial effect on blood circulation, prevents blood clots and accelerates detoxification, stimulating bladder gall bladder functions. It is a natural stimulant for liver detoxification.

Mix a quarter teaspoon of turmeric in a water jug (one cup) and boil it. Drink twice a day for several weeks. Also, add this spice to your daily kitchen.
9. **Armor (*Silybum Marianum*):** The main medical ingredient in the armor is called silymarin. This compound protects the liver by inhibiting harmful substances that damage the cells in it. Silymarin also stimulates the regeneration of cells in the liver

which helps to restore the liver after damage. Silymarin helps to prevent the depletion of nutrient glutathione - one of the most important nutrients for liver detoxification.

10. Apples: One apple per day is the secret to a healthy liver. This fruit is a good source of pectin, a soluble fiber that helps eliminate toxins in the digestive tract and blood cholesterol, helping the tired liver. More than that, it contains malic acid, which helps eliminate carcinogens and other toxins in the blood.

11. Walnuts: Walnuts contain a high proportion of fats (63%), especially omega 3, and are also rich in protein. Walnuts also have a high content of potassium, phosphorus, calcium, sodium, iron, magnesium, and copper salts. Walnuts are rich in vitamin E but also contain a lower proportion of vitamins A, B1, B2, B3, C, and F. Nuts also contain valuable antioxidants for the body.

12. Broccoli: Broccoli helps to detoxify the body and researchers have recently identified key reasons for this benefit. Glucorx Afrin, gluconasturtiin and glucobrassicin are 3 phytonutrients found in a special combination in broccoli. This dynamic trio is capable of supporting all stages of the body's detoxification process, including activation, neutralization, and elimination of undesirable contaminants. Isothiocyanates (ITCs) are detoxifying molecules made by broccoli glucosides that help control the detoxification process at a genetic level.

13. Artichoke: Artichoke helps eliminate toxins.

The "liver plant", as it is called in the people, artichoke offers many benefits to this organ. Stimulates bile fluid secretion and, thanks to cinnamon in the composition, favors the detoxification of the body. Another substance found in this liver-producing plant is luteolin.

It stimulates the metabolism of fats and prevents their accumulation in the liver. Phytotherapeutics recommend artichoke for its hepatoprotective effect in many diseases, such as chronic hepatitis, liver cirrhosis, liver failure.

14. Dandelion: Can be eat it fresh in salad, or you can infuse from a spoonful of the plant to 250 ml of boiling water, which you leave a quarter of an hour at room temperature and drink it on an empty stomach.

Dandelion is an effective remedy for hepatitis.

The dandelion properties are countless: it helps to strengthen the bones, fight bile stones, anemia, "bad" cholesterol and is an effective cure for circulatory disorders. First of all, dandelion is useful in detoxification belts, when you can consume teas, infusions, and salad with dandelion leaves.

The substances in this plant ameliorate the symptoms that accompany hepatitis A, B, C. In these situations, it helps a lot of dandelion tea belts, drunk on an empty stomach, in the morning, and in the evening, before bedtime, two hours after a meal for three months. To prepare it, you need a spoonful of dried herbs in a cup of water, boiling for ten minutes.

15. Cyst: The cyst stimulates hepatic function.

You can use chicory air and roots as an infusion (30 g of plant per 1 liter of water), a cup before meals.

The root decoction is stronger than the plant root. Prepare 15-30 grams of dried and chopped root to 1 liter of water, cook for 5 minutes, then leave it for another 15 minutes before eating it. Chickpea is a general tonic that favors digestion and stimulates liver function, being helpful in biliary dyskinesia, biliary colic, chronic and acute hepatitis.

16. Rosemary: Rosemary detoxifies the body.

Used in worldwide cuisines, rosemary is an indispensable ingredient in natural medicine because it has excellent properties at the digestive level. Rosemary tea stimulates bile production and excretion, has antispasmodic action, lowers cholesterol "bad" and relieves digestion.

Drink two cups of tea a day, obtained from two tablespoons of dried plant and chopped to half a liter of water. Phytotherapist Ruxandra Constantina from the Sanavit Consult Center for Natural Therapies in Bucharest also recommends jam-therapeutic extract of rosemary (40-50 drops in a little water) for liver health, in treatments of up to two months.

17. Hyperforin (St. John's wort plant): The liver can be regenerated with a hyperforin remedy. Specialists say that hyperforin, one of the plant compounds, destroys the viruses that produce hepatitis B and C. The powder is made from several plants in equal parts: St John's wort, Mistletoe flowers, Arbor seed, Artichoke flowers, leaves or celandine flowers. Grind dried plants and seeds with a coffee grinder. Take one

teaspoon of powder, three times a day, 30 minutes before a meal for one month. Swallow the preparation with some liquid.

18. Celandine: Celandine tea is considered an effective remedy for hepatic, cardiac and hepato-biliary diseases, but should be consumed with care. Tea and celadine soup helps you regain your silhouette. Is part of the Papaveraceae family. It is a herbaceous, perennial plant, found in forests, gardens, beside walls, fences, plains or mountain areas. Celandine is considered one of the strongest healing plants due to its curative properties. In popular medicine, it is known as neglected, because it was used to remove warts. It is recognized and used for its healing effects since antiquity.

It is also a cure for those who suffer from cancer and tumors. Likewise, celandine is an effective remedy for heart disease, such as cerebral arteriosclerosis, atherosclerosis, high cholesterol. Cellar tea is a powerful antibacterial and anti-inflammatory, antiseptic, antiviral, hypotensive, cardiac and hepatic, anti-tumor and cytostatic. The remedy for liver disease The most important use of this plant is in liver disease because it is a true panacea for liver diseases. The plant is effective in treating hepatitis A, hepatitis B, liver cirrhosis. It stimulates the regeneration of the liver cell by its drainage and tonic effects. It also works as an antiviral good. Celandine is also recommended for biliary disorders: dyskinesia or inflammation of the gallbladder caused by defective drainage of the bile.

4. CONCLUSIONS

The liver is probably the organ with the most diverse functions in the human body. After ingestion of food, they are processed along the digestive tract and degraded to nutrients that will reach all tissues and organs in the body. Liver is an organ, part of the digestive system, which is present in most of the upper animals.

It has numerous functions in the human body, especially in metabolism. It is believed that the liver is the most complex plant of the body, the human liver having over 500 functions, indispensable to normal life. These functions are so complex that there is no machine that can replace the liver, primarily because of the many functions of synthesis of life-essential substances, and then because of its role of detoxification.

The liver is an annexe of the digestive tract with a very complex structure. The morphological unit of the liver is the liver lobe. It has a pyramid shape and a length of a few millimeters. The liver contains up to 100,000 lobules. Each hepatic lobe consists of hepatocytes (liver cells), sinusoidal capillaries and bile ducts (in which the ball is spilled).

Hepatic circulation is dual - functional and nutritive (Figure 1), but the branches of the liver artery and those of the portal vein will merge into the liver forming the sinusoidal capillaries. From the sinusoidal capillaries, the blood will collect in the liver veins that will flow into the inferior cavity. Every minute through the portal vein passes about 1 liter of blood, and around the liver arteries approximately 350 ml of blood.

This amount of blood will reach sinusoidal capillaries, that is, 25% of the volume of blood that the heart pumps at rest. Liver blood vessels do not have vasodilators, but only vasoconstrictors - the blood cantoned in the liver will be unblocked and sent to circulation by vasoconstriction. In some shock states, the blood flow from the liver can be reduced to liver necrosis.

The human liver is a dark red body weighing 1.5 - 2 kg, being the most difficult organ of the human body. It is located to the right of the abdomen under the ribs, which protects it from trauma. It primarily filters the blood that comes from the organs of the digestive tract, which is the main entry point of toxins in the body, but in fact the liver fills all the blood in the body, retaining and metabolizing substances harmful to the body.

Permanent maintenance of the liver is not only a pressing necessity but also a necessity for the normal functioning of the human body. In this way the life of the whole organism is prolonged and a state of well being is achieved. Our health is permanently dependent on the proper functioning of the liver. Beautiful aging also requires correct and permanent maintenance of the human liver.

It is necessary for this sense to have a correct, normal, decent, healthy diet, elimination of chemicals, alcohol, removal of stress as much as possible, daily movement in clean air, relaxing walks, use of plants that maintain the liver, remedies as natural as possible homeopaths if they are carefully chosen by a skilled physician. Regular rest and sleep are also mandatory for maintaining a healthy liver.

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