

Liver Function Essay

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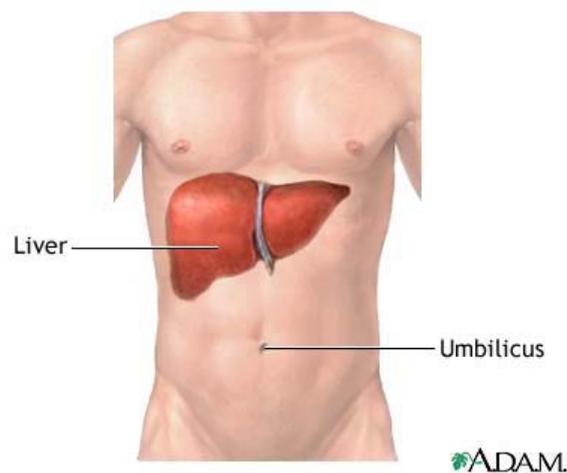
Date: April 20, 2009

Professor: Dr. Danil Hammoudi

Class: Anatomy and Physiology 2

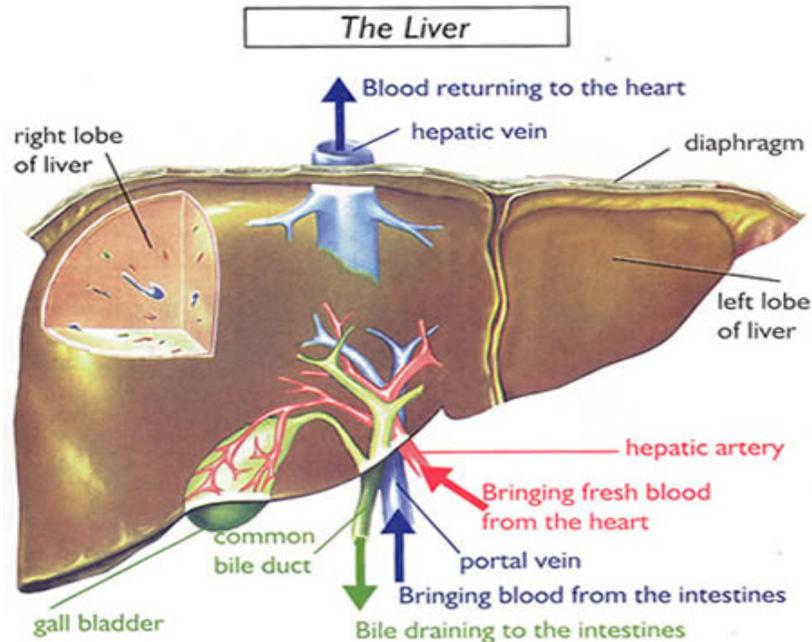
Liver function

The human body consist of many highly organize part working together to accomplish the function necessary for the body to sustain life.



The liver is one of the most important organ in the body, because it places many roles in the metabolic and regulation of the body. It is an accessory organs associate with the small intestine in the function of digestion.

The liver is located on the right side of the abdominal cavity beneath the diaphragm. The liver of an adult weighs about 3lbs. It is reddish brown in color and it's divided into four lobes of unequal size and shape. Blood is transported to the liver by the hepatic artery and portal vein. The hepatic artery carries oxygen-rich blood from the aorta to the liver and the portal vein carries blood containing digested food from the liver to the small intestine.

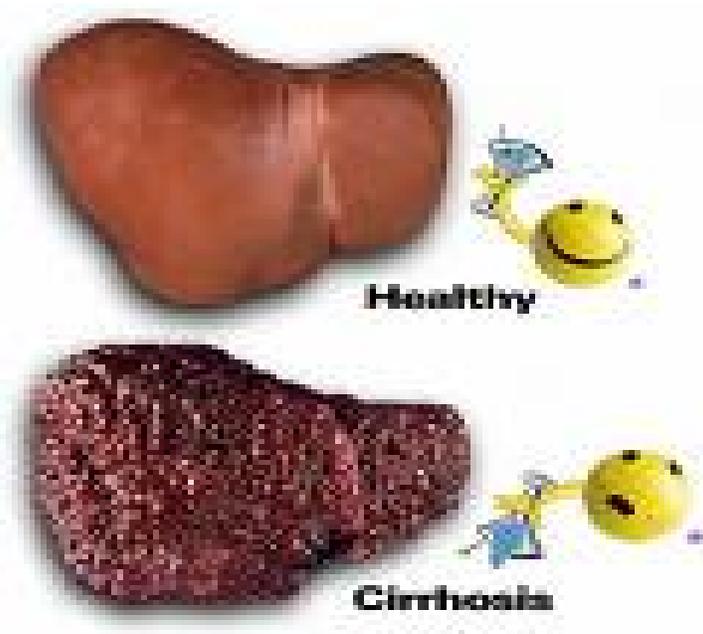


Major functions

- One of the many functions of the liver is the digestion, in this process the liver produces bile which is a fat emulsifier. It involves the breakup of fat into tiny particles so that they are more accessible to digestive enzymes.
- Converts glucose to glycogen
- Produce urea, which is the main substance for urine.
- Makes certain amino acids, which are important for the production of protein.
- Storing of vitamins and minerals, (vitamin A, D, K, B12) which helps boost the immune system, energy, and human growth.
- According to a NIH.gov article, the liver produces about 80% of the cholesterol in the body.

Diseases of the Liver

Because the liver performs a wide variety of function, it also acts as a filtration system for toxic materials which can damage the body. Certain toxins are excessively negative to the liver, as a result causing liver damage or diseases, Such as, **Hemochromatosis**. It is an inherited disorder that allows the body to absorb too much iron from the food. **Wilson disease**; is when the liver dose not release copper into bile as it should, as a result the copper builds up in the liver causing tissue damage. **Cirrhosis of the liver** is a chronic inflammation of the liver, cause sometimes by the consumption of alcohol over a long period of time.



According to the article in the Cancer Treatment Center of America, (www.cancercenter.com) "**Liver cancer** is rare in the U.S., but in part of Asia and Africa it is one of the most common malignancies." They also state that, there is a strong association between chronic hepatitis B and C viral infection and the development of hepataoocellular (liver cells) carcinoma, which accounts for about two-third of all liver cancers.

In Addition, certain medication can also side effects that could cause damage to the liver, for example; “serzone, anti-cancer drugs (tagfur, MTX, and cytoxan) and medication use to treat diabetes”. www.mamahealth.com Medications come in many forms it is best to read the instruction package to inform once self of what it can do to the liver.

Conclusion

To help prevent liver damage, it is suggested to let the doctor Know about your liver condition when being treated for other conditions. Because the liver has many functions, we can help it do its job better by limiting the amount of toxin that goes in the body, in the form of a healthy life style.

(LF)

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Primary Pulmonary Hypertension Essay

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Primary Pulmonary Hypertension

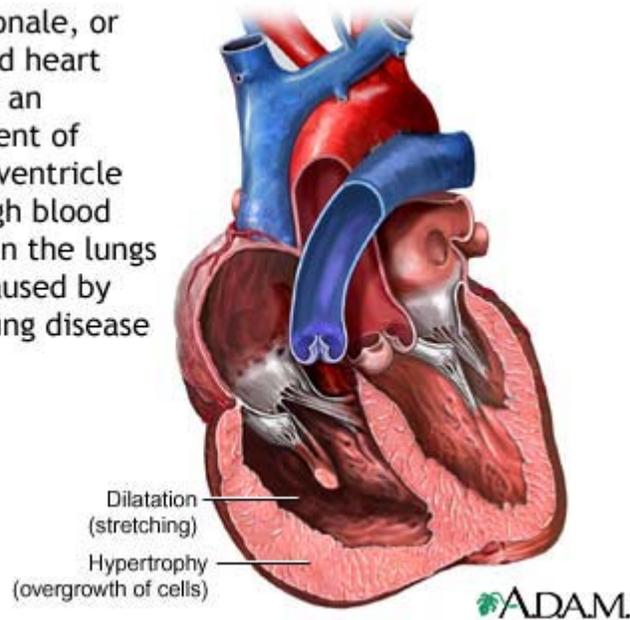
Pulmonary Hypertension is the leading cause of death in the u.s. According to American heart association, “In the united state, an estimated 500 to 1000 new cases of primary pulmonary hypertension are diagnosed each year.” They also reported that women between the age of 20 and 40 are have greatest number of cases of people with PPH.

Primary or (essential)pulmonary hypertension indicates that no specific medical cause can be found to explain a patients condition .There is a wide inconsistency in the rigorousness of pulmonary hypertension among various patients. For this reason, evaluating, diagnosing and treating the condition is very difficult. Because the symptoms take time to manifest patients require a thorough evaluation.

What is primary pulmonary hypertension?

Primary pulmonary hypertension (PPH) is a rare lung disorder in which the blood pressure in the pulmonary artery rises far above normal levels for no apparent reason. The pulmonary artery is a blood vessel which carries oxygen-poor blood from the right ventricle to the lungs. Then the lungs takes the oxygen to the left ventricle, and the left ventricle pumps it to the aorta and then to the rest of the body.

Cor pulmonale, or right-sided heart failure, is an enlargement of the right ventricle due to high blood pressure in the lungs usually caused by chronic lung disease



Hypertension is an abnormal high blood pressure. Normal pulmonary artery pressure is about 14mm Hg at rest. But in people with primary pulmonary hypertension, the bp in the pulmonary artery is above 25mm Hg at rest and above 30mm Hg when exercising. The abnormality in the pressure is due to the changes in the small blood vessels in the lungs. The changes increases the resistant to the blood flowing through the vessels, as the pressure builds up in the heart the right ventricle strains forcing it to work harder to pump blood through the lungs, eventually causing the heart muscle to weaken and sometime completely failing.

What Causes primary pulmonary hypertension?

The specific cause of primary pulmonary hypertension is not yet known. The report in www.americanheart.org stated that, it has been very difficult to study the disease because there hasn't been great number of animal model with the disease available. The doctors believe in most people that develop primary pulmonary hypertension, the blood vessels are very sensitive to certain factors that trigger the disease.

- For instant, people with Raynaud's syndrome seem more likely to develop it.

- Also, appetite suppressant, cocaine and HIV are some of the factors believed to trigger the constriction or narrowing of the pulmonary artery.

What are the symptoms?

Most people with primary pulmonary hypertension complain of;

- Fatigue or tiredness, it is mostly confused with being out of shape.
- Difficulty in breathing, dizziness and fainting can occur.
- Swelling in the ankles or legs bluish discoloration of the lips and skin.
- Chest pain develops more later on in the disease.

Because the diagnosis is often delayed due to the slow progressive start of the symptoms, it makes the disease difficult to treat.

How is Primary Pulmonary Hypertension Evaluated and Treated?

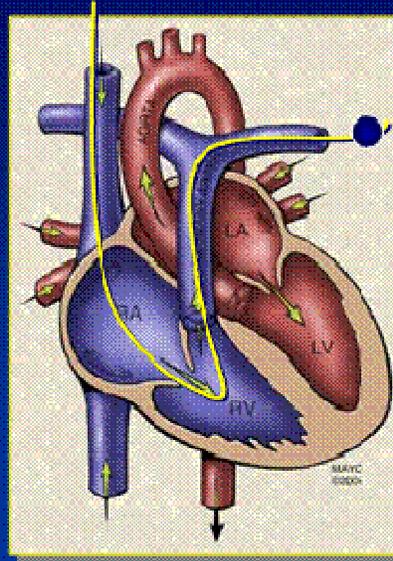
Because the disease is insubstantial, it is recommended that a thorough evaluation at a medical center with expertise in pulmonary hypertension.

The evaluation includes a right cardiac catheterization. In this procedure the doctor places a thin, flexible tube (a catheter) through an artery or vein in the patient's arm, leg or neck, then thread into the right ventricle and pulmonary artery. This is the only way to measure in the pulmonary artery and find out what medical therapy is appropriate for the patient. www.americanheart.org

Cardiac Catheterization

A more invasive test in which the physician inserts a small tube called a "catheter" into a patient's blood vessel and passes the tube toward the heart.

The cardiac catheterization measures important pressures in the heart and lungs.



Doctors can choose from a variety of drugs that can help in the lowering of blood pressure in the lungs. But because Primary pulmonary hypertension responds differently to different medications, many drugs have to be experimented on before long-term treatment begins. They do this to find out which medication works best for the particular patient.

- Treatments can include, Calcium channel-blocker drugs given orally.
- Intravenous prostacyclin, is a vasodilator which continuously delivers calcium channel blockers by a portable, battery-operated infusion pump.
- Anticoagulants, it permits blood to flow more freely by decreasing the tendency of blood to clot.
- Some patients require supplemented oxygen delivered through nasal prongs if breathing becomes too difficult.

In extreme cases a heart-lung or lung transplant may be necessary if the patient doesn't respond to medical therapy.

Conclusion

Despite the complexity of primary pulmonary hypertension, early diagnosis and initiation of treatment has saved many lives. It is very important to inform the doctor as soon as possible of any changes that are occurring in your body.

Primary Pulmonary Hypertension Essay

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