Environmental toxicology assignment

High traffic organs like the kidneys and liver make it easy as they receive and filter all blood therefore taking the toxin in large doses to cleanse the body. The primary purpose of the kidneys and liver is to expel toxins and therefore this action is there specialty making them more susceptible. The human body has a specialized detoxification process that includes a specific target organ, the liver. The liver is a primary regulator of chemical levels in the blood and it also excretes bile that helps the breakdown of fat (Lucile Packard Children's Hospital, 2012).

This breakdown helps to prepare the fats for the final stages of digestion and ultimately absorption. The liver has two sources of blood flowing threw it at all times, oxygenated blood from the hepatic artery and nutrient-rich blood from the hepatic portal vein. Approximately 13% of blood in the body is held in the liver at any moment (Lucile Packard Children's Hospital, 2012). The blood that leaves the stomach and intestines will be passed through the liver before it is allowed to travel anywhere else in the body. In the liver nutrients and toxins are broken down so they can be used easily the body.

Waste is not only excreted through the bile but also in the blood which will travel to the kidneys and leave the body as urine (Lucile Packard Children's Hospital, 2012). The liver has many very important duties it carries out such as cleaning the blood of toxins and bacteria, and producing the bile that carries away waste and breaks down fat (Lucile Packard Children's Hospital, 2012). With all of this toxic intervention the liver can be overworked and disease can overcome, such as chronic liver disease (Lucile Packard Children's Hospital, 2012).

The conditions that lead to chronic liver disease are vast but they fall into five groups (Chronic liver, 201 1). The first group is the viral group classification which includes conditions such as hepatitis B and C (Chronic liver, 201 1). The second group is the metabolic group which includes diseases such as Willow's disease (Chronic liver, 2011). The third group is the autoimmune response group which includes primary billiard cirrhosis sufferers (Chronic liver, 201 1). The fourth group is the toxin- related group which includes alcoholism and the last is the miscellaneous roof with ailments such as right heart failure (Chronic liver, 2011).

Within these groups there is a silent killer though which raises the risk for that group. That is the toxin-related group because alcoholism leads to cirrhosis and then to hepatitis (Chronic liver, 201 1). That group alone takes a person through three groups in one shot. While researching toxicities and reactions there have been some similarities found. Many toxicities affect the lungs, skin, and eyes. Take for instance Sulfur Dioxide, Asbestos, and gasoline. Sulfur Dioxide is a colorless gas with a choking odor and suffocating qualities (Air Gas, 2012).

It is toxic to humans even at low concentrations. The target organs of Sulfur Dioxide are the lungs, upper respiratory tract, the skin, and eyes (Air Gas, 2012). At the low dose of Pam coughing will commence leading to severe respiratory tract issues as well as eye and skin burns (Air Gas, 2012). Another toxic substance is a naturally occurring fibrous mineral called asbestos (Centers for Disease Control and Prevention, 2011 The most common types are Chrysalises and Animosity. It targets the respiratory system, eyes, and is known as a carcinogen because it causes lung cancer.

With chronic exposure dyspepsia will begin, interstitial fibrosis and restricted pulmonary functions will be observed as well as finger clubbing, and eye irritation (Centers for Disease Control and Prevention, 2011). Gasoline is a volatile combination of flammable liquid hydrocarbons. Taken from crude petroleum it is highly used for internal-combustion engines. No matter the grade gasoline affects the eyes, skin, lungs, gastrointestinal tract, nose, throat, he respiratory tract, the central nervous system, the liver and kidneys (Amerada Hess Corporation, 2004).

In the eyes the effects are moderate causing irritation. When it comes to the skin it depends on the exposure, if acute gasoline IS mild but with prolonged contact toxic amounts can be absorbed and damage can be made. If the gasoline is ingested there are many major issues that will follow (Amerada Hess Corporation, 2004). First the breathing of liquid drops into the lungs when vomiting occurs, which can cause chemical pneumonia, lung damage, respiratory failure and ultimately death (Amerada Hess Corporation, 2004).

This is not all ingestion can cause though as gastrointestinal issues can arise such as nausea, diarrhea, vomiting and even brain damage (Amerada Hess Corporation, 2004). If the ingestion is a chronic level of exposure convulsions could follow, even loss of consciousness, coma, and respiratory arrest. Another means of exposure is through inhalation. This can cause serious issues with the nose, throat, lungs and once again the respiratory tract (Amerada Hess Corporation, 2004). It can also cause headaches, dizziness and in vertigo, unconsciousness that leads to mom and even death.