

# BILE'S ROLE In Our Health

The gallbladder is a small pouch that sits under the liver on the right side of the upper abdomen. The gallbladder is a holding tank that stores bile that is made by the liver. When we eat fatty foods the gallbladder contracts and bile is squirted into a tube called the cystic duct. From there the bile flows through the common bile duct into the small intestine where it aids digestion. When food leaves the stomach, bile helps to neutralize the acidity of the foods to protect the intestines from the hydrochloric acid of the stomach. Bile also aids in emulsifying fats and oils, breaking them down to fatty acids so the fat soluble vitamins, such as Vitamins A, D, E and K can be extracted and used by the body.

Bile also carries off toxins from the liver that are to be expelled through the bowel. Without the bile flow, toxins could build up in the liver and the blood stream. Stones can block the normal flow of bile if they lodge in any of the ducts that carry bile from the liver to the small intestine, creating a stressed or toxic liver.

What happens if the gallbladder gets clogged with stones or thick sludge and can't put out bile efficiently when it is needed for digestion? When food leaves the stomach and there is not sufficient bile to neutralize the food, then the stomach acids in the food, which are not fully neutralized, can cause acid burns along the entire small and large intestines.

Without adequate bile and this emulsification process, then fats, oils and the fat soluble vitamins will become very difficult to absorb, creating nutritional deficiencies and possible health problems from these over the long term.

Bile also stimulates peristalsis (the wave-like motion that moves food through the digestive tract) in the intestines. Inadequate bile in the intestines can create constipation (as well as alternating constipation and diarrhea) no matter how much fiber we take in.

Vitamin B6 is the nutrient that keeps the bile salts in suspension in the gallbladder and bile veins. If we are highly stressed in our life, it is common to become deficient in vitamin B6. Additionally, if you are female and have taken synthetic hormone replacement, this can also cause a B-6 deficiency and a dependence on B-6 supplementation.

What if you have had your gallbladder removed? When the gallbladder is removed, the bile veins from the liver are reconnected to the common bile duct. Without the gallbladder sac that holds the bile and squirts it into the small intestine for digestion when it's needed, the bile continues slowly dripping or flowing, much like water would drip from pipes if there were no faucet to turn the dripping off. Typically, bile will flow more during the hours between 10am and 2pm, so during this period of time is when you'd want to eat your heaviest meal (although no meal should be "heavy" after gallbladder removal). A careful and balanced diet is necessary for those without a gallbladder. Additional digestive aids are also important, especially to help break down and absorb fat soluble vitamins.

Keeping the gallbladder healthy and functioning efficiently, and the bile flowing as needed is very important. A prolonged disturbance in good bile flow can cause many health challenges - associated with nutritional deficiencies and a compromised digestive system. These include weight gain, hair loss, dry & itchy skin, dry & itchy eyes, elevated cholesterol, constipation, hormonal imbalances, bloating, pain, headaches, hives, depression, vision problems (especially night vision), enlarged pancreas, pancreatitis and even diabetes. Maintaining a healthy gallbladder can contribute greatly to a healthy life! ♦