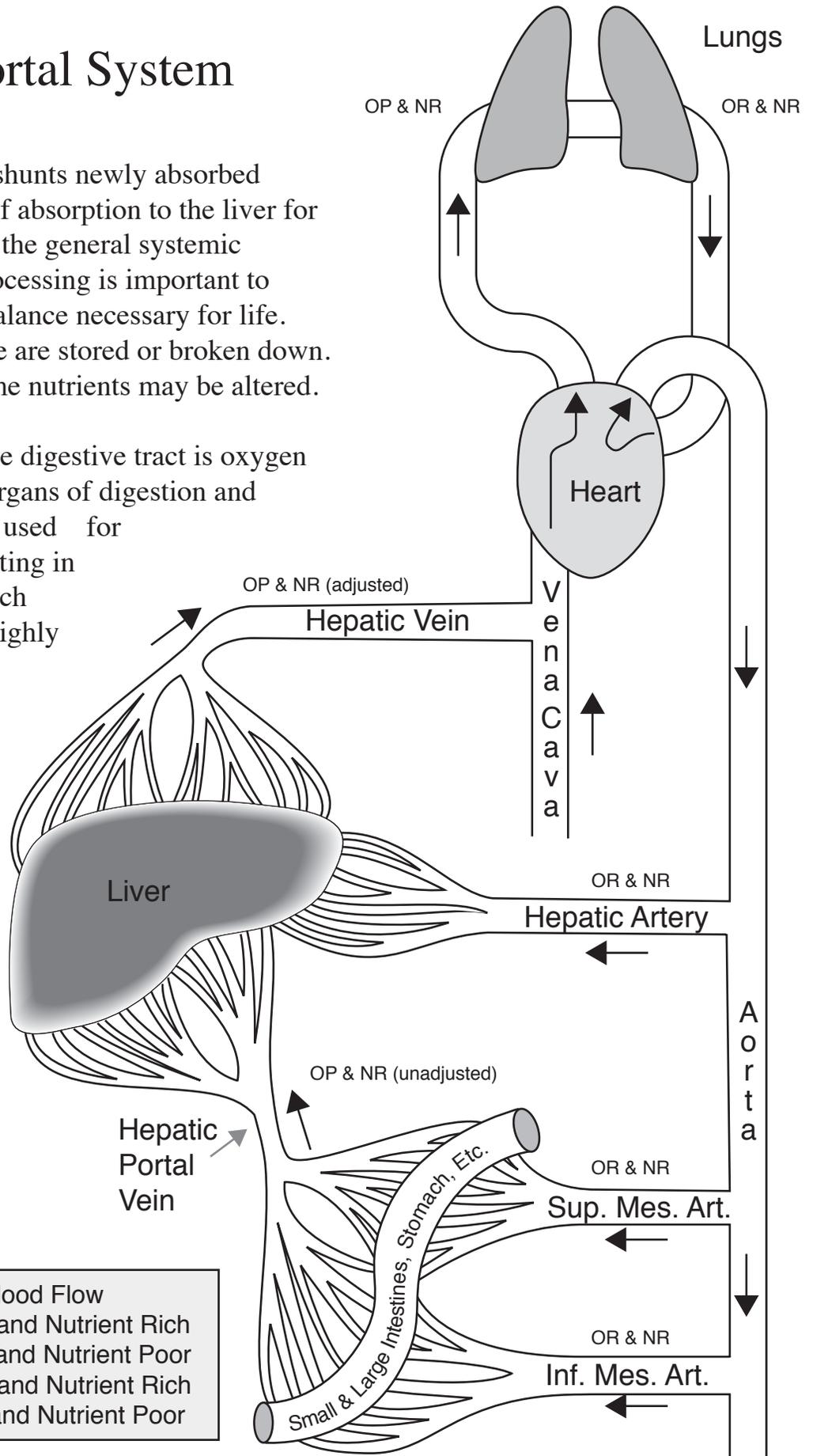


Hepatic Portal System

The hepatic portal system shunts newly absorbed nutrients from the organs of absorption to the liver for processing before entering the general systemic circulation. This initial processing is important to maintain a physiological balance necessary for life. Nutrients in overabundance are stored or broken down. Toxins are detoxified. Some nutrients may be altered.

Note that blood going to the digestive tract is oxygen rich. Once it reaches the organs of digestion and absorption, oxygen will be used for the digestive process, resulting in oxygen poor but nutrient rich blood. The liver, being a highly metabolic organ, also has significant oxygen needs, and these needs exceed what the hepatic portal vein can supply. Therefore, the hepatic artery will supply necessary oxygen. After nutrient processing, the blood is again oxygen poor (but nutrient rich and "adjusted"), and will then enter the pulmonary circulation for "oxygen recharging". The system repeats...



→ - Direction of Blood Flow
 OR & NR - Oxygen Rich and Nutrient Rich
 OR & NP - Oxygen Rich and Nutrient Poor
 OP & NR - Oxygen Poor and Nutrient Rich
 OP & NP - Oxygen Poor and Nutrient Poor