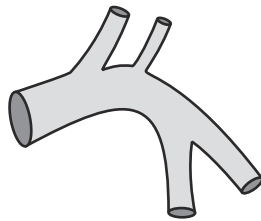
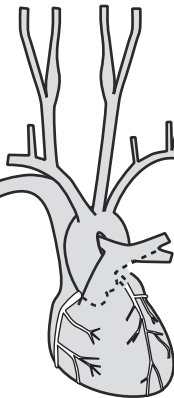


Human Vasculature

Study Aids for the Mastery of Select
Human Blood Vessels
with
Practice Sheets



By Noel Ways



Human Vessels

The list below represents the arteries and vessels that you should be prepared to identify for your lecture exam (not lab practical). Specificity is important; vessels must be identified as left or right, vein or artery etc. where appropriate. This information may not always be provided below.

Arteries

Superior to Heart

- Ascending Aorta
- Aortic Arch
- Descending (Thoracic / Abdominal) Aorta
- Brachiocephalic Trunk
- Common Carotid Arteries
- Internal Carotid Arteries
- External Carotid Arteries

To Brachium and Antebrachium

- Subclavian Arteries
- Axillary Arteries
- Brachial Arteries
- Ulnar Arteries
- Radial Arteries

Abdominal Arteries

- Celiac Trunk
- Left Gastric Artery
- Common Hepatic Artery
- Splenic Artery
- Superior Mesenteric Artery
- Renal Arteries
- Gonadal (Spermatic or Ovarian) Arteries
- Inferior Mesenteric Artery

To Lower Appendages

- Common Iliac Arteries
- External Iliac Arteries
- Internal Iliac Arteries
- Femoral Arteries

Veins

Superior to Heart

- Superior Vena Cava
- Brachiocephalic Veins
- Internal Jugular Veins
- External Jugular Veins

To Brachium

- Subclavian Veins
- Axillary Veins
- Cephalic Veins
- Brachial Veins
- Basilic Veins

Abdominal Veins

- Inferior Vena Cava
- Hepatic Veins
- Gonadal (Sper. or Ov.) Veins

To Lower Appendages

- Common Iliac Veins
- External Iliac Veins
- Internal Iliac Veins

Hepatic Portal System

(Use your hepatic portal System handout)

- Hepatic Vein(s)
- Hepatic Portal Vein
- Inferior Mesenteric Vein
- Superior Mesenteric Vein

Vessel Diagrams

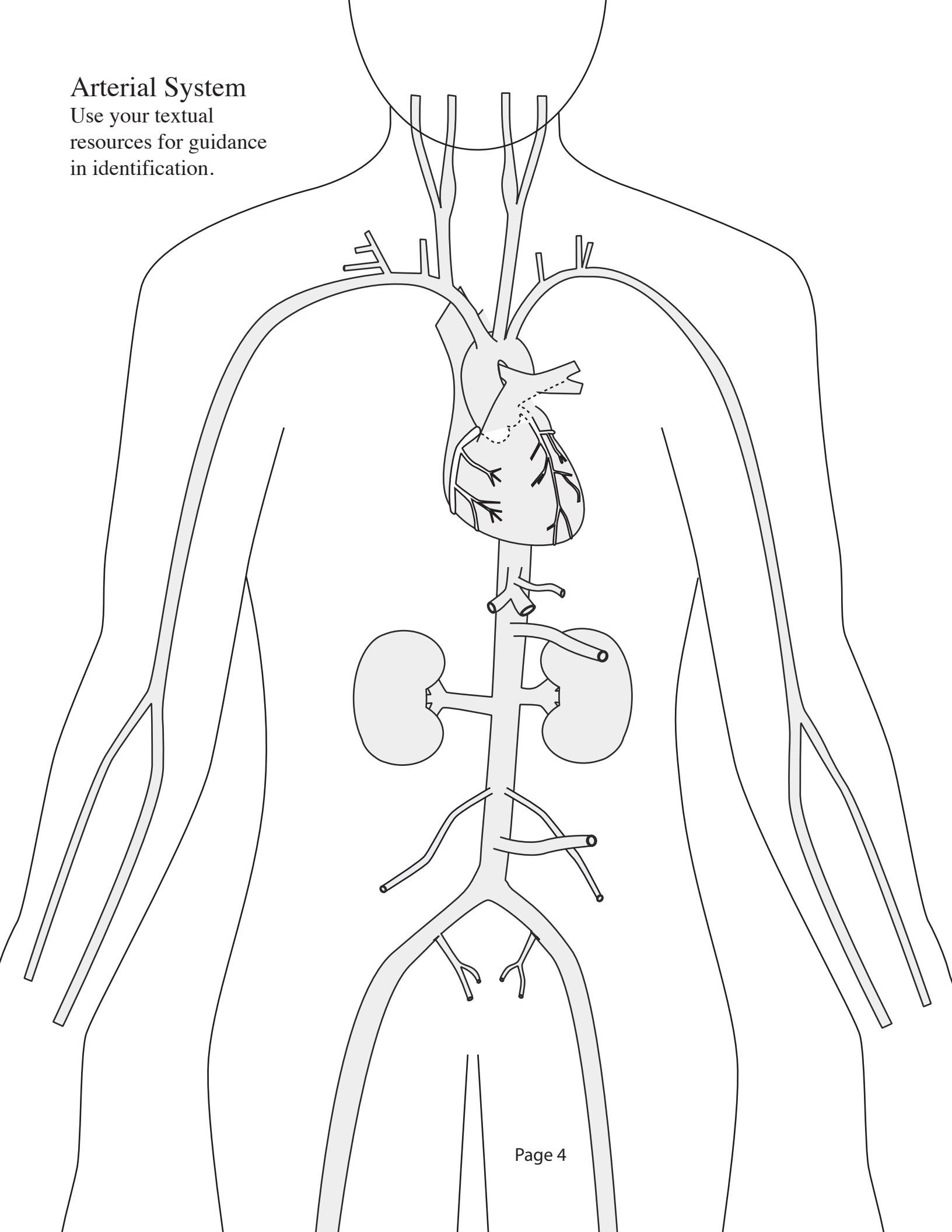
The attached two diagrams were put together to make your learning of the vessels easier. Use them if you think they will otherwise avoid them.

It is suggested that you use the Human vessel list, along with your text and the coloring book (excellent, pages 115 and 120), to identify them. Having done so, write the name of the vessels in. Color them if you like. On your exam, I will use similar (not exact) diagrams. Answers are all fill in the blank, so you want to work with this immediately.

Take care and as always, **STUDY HARD !!!**

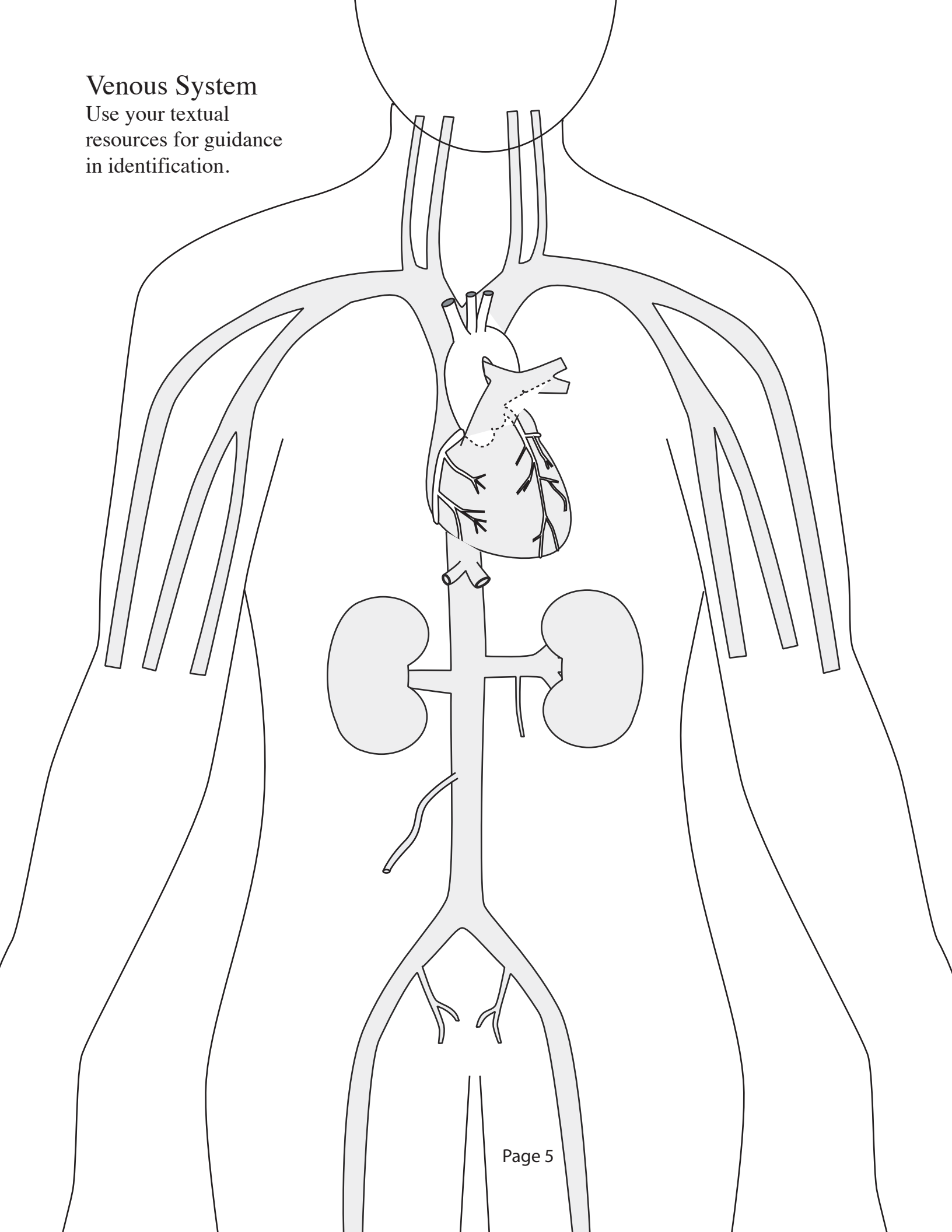
Arterial System

Use your textual resources for guidance in identification.



Venous System

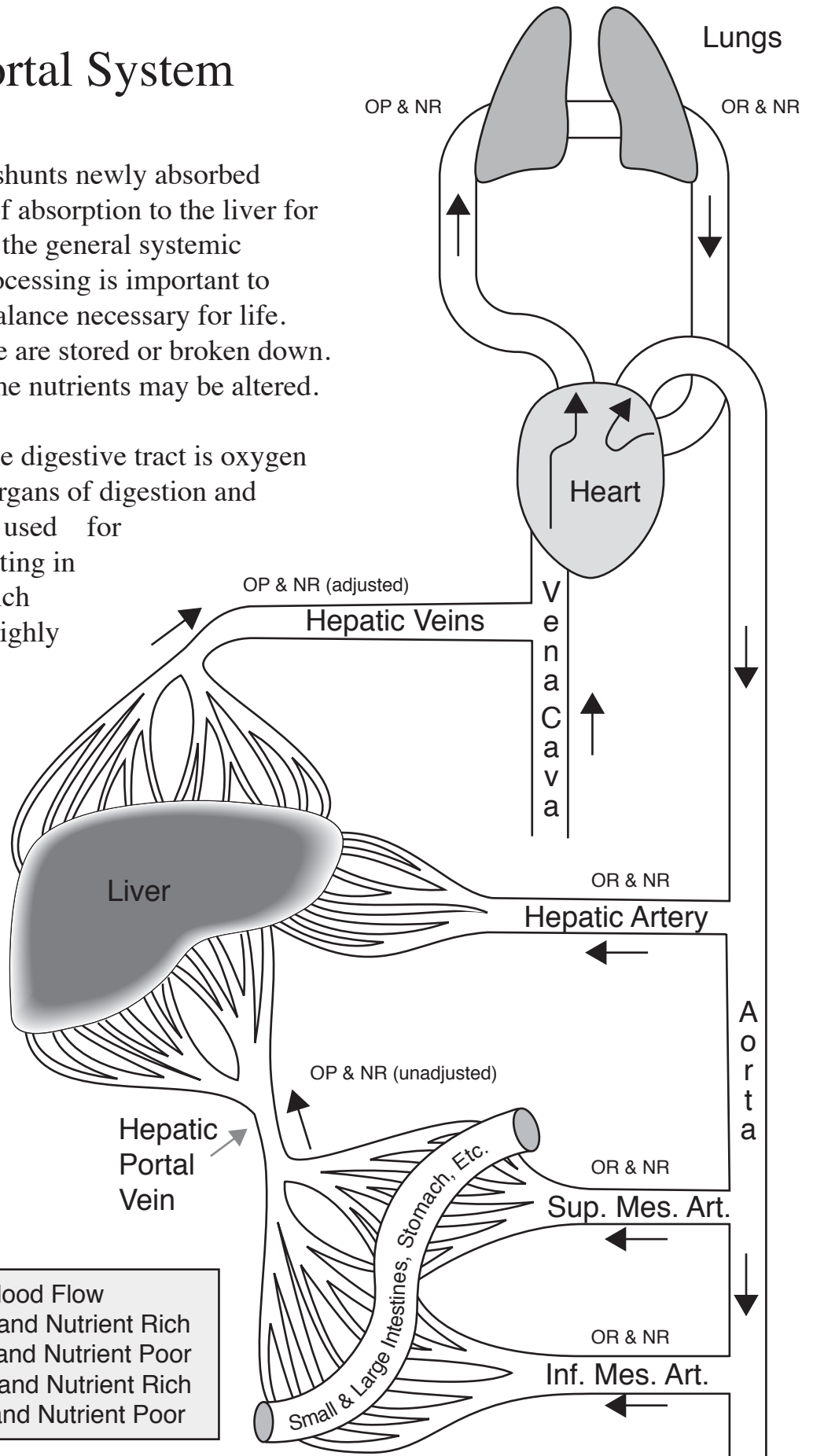
Use your textual resources for guidance in identification.



Hepatic Portal System

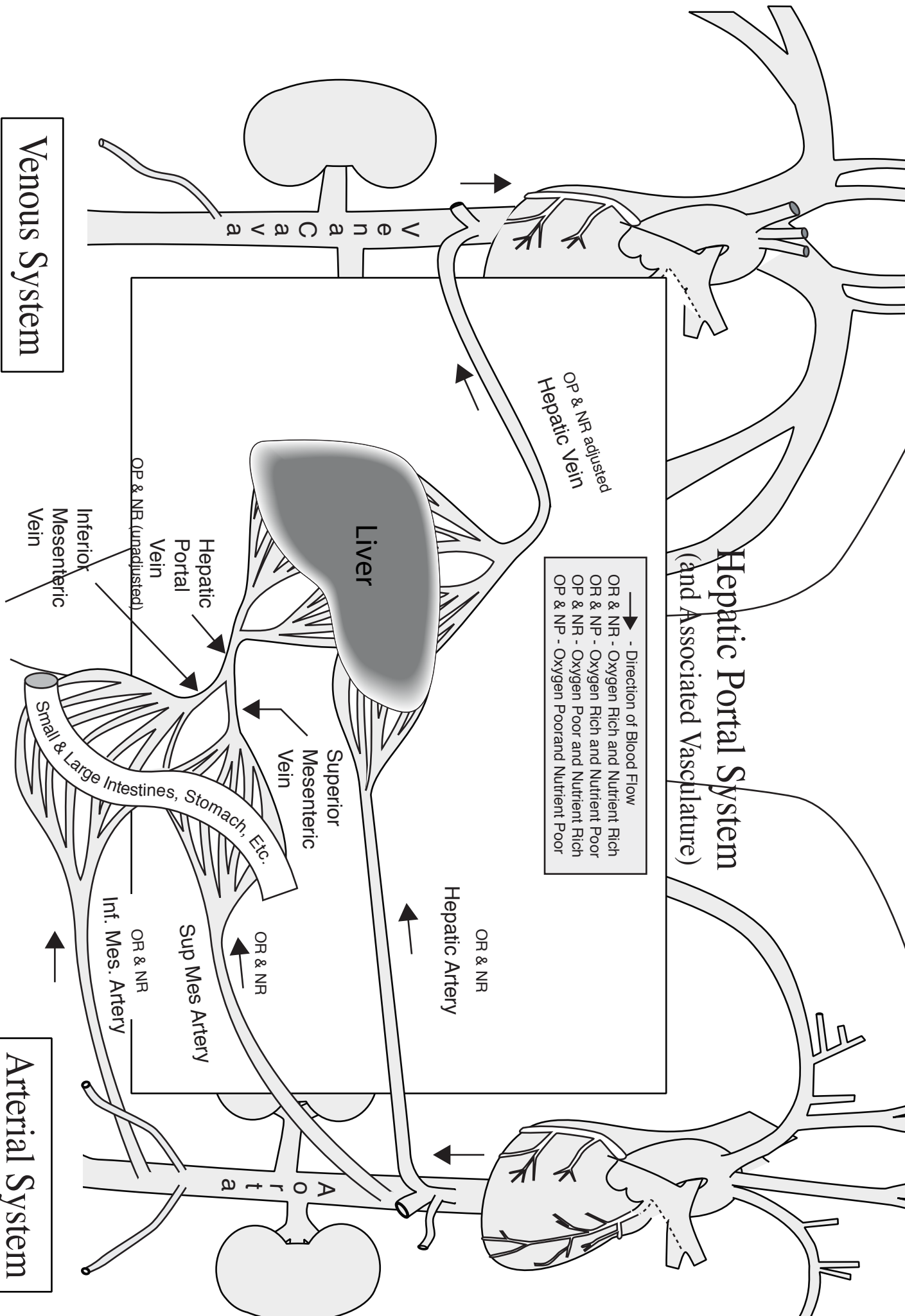
The hepatic portal system shunts newly absorbed nutrients from the organs of absorption to the liver for processing before entering the general systemic circulation. This initial processing is important to maintain a physiological balance necessary for life. Nutrients in overabundance are stored or broken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



→ - 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

Hepatic Portal System (and Associated Vasculature)

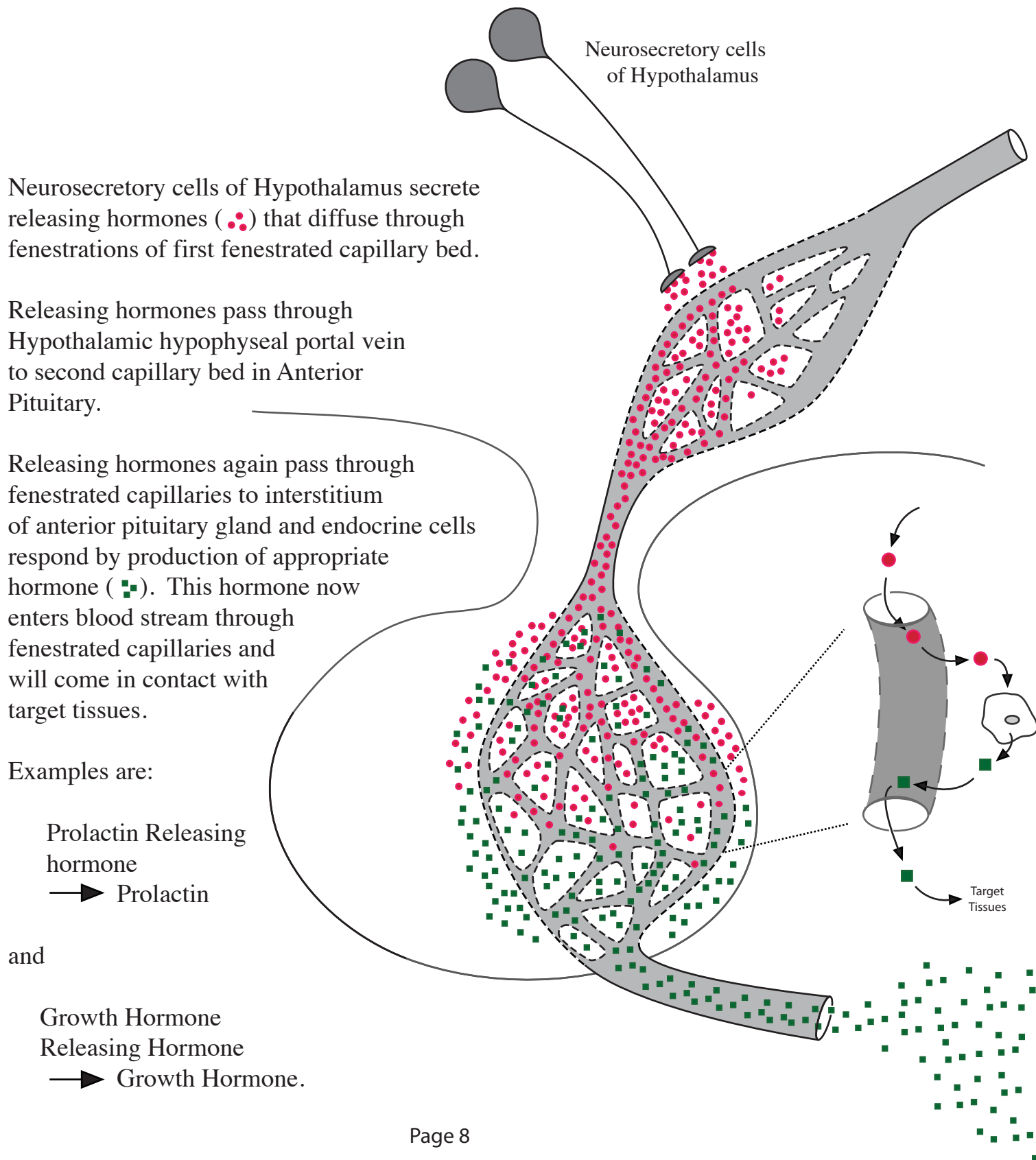


- Direction of Blood Flow
 → OR & NR - Oxygen Rich and Nutrient Rich
 → OR & NP - Oxygen Rich and Nutrient Poor
 → OP & NR - Oxygen Poor and Nutrient Rich
 → OP & NP - Oxygen Poor and Nutrient Poor

Venous System

Arterial System

Hypothalamic-hypophyseal Portal System and Endocrine Control of Anterior Pituitary Gland



Neurosecretory cells of Hypothalamus secrete releasing hormones (●●) that diffuse through fenestrations of first fenestrated capillary bed.

Releasing hormones pass through Hypothalamic hypophyseal portal vein to second capillary bed in Anterior Pituitary.

Releasing hormones again pass through fenestrated capillaries to interstitium of anterior pituitary gland and endocrine cells respond by production of appropriate hormone (■). This hormone now enters blood stream through fenestrated capillaries and will come in contact with target tissues.

Examples are:

Prolactin Releasing hormone
 → Prolactin

and

Growth Hormone Releasing Hormone
 → Growth Hormone.