

13 Excretion and the kidneys – Part 1

Name: _____ Class: _____ Date: _____

Vocabulary 词汇

Write each word three times. 把每个单词抄写三遍。

English	中文	Write it 3 times (English)
Excretion	排泄	_____
carbon dioxide	二氧化碳	_____
respiration	呼吸作用	_____
lungs	肺	_____
urea	尿素	_____
liver	肝脏	_____
kidneys	肾脏	_____
ions	离子	_____
urine	尿液	_____
ureters	输尿管	_____
bladder	膀胱	_____
urethra	尿道	_____

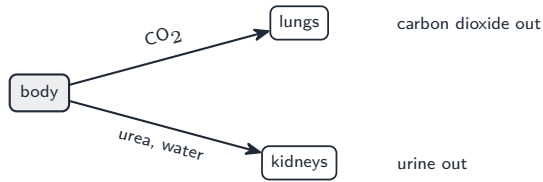
Recall

Excretion 排泄 is removing the waste products your body's reactions make, and any substances in excess.

New ideas

Read these first, then do the Practice.

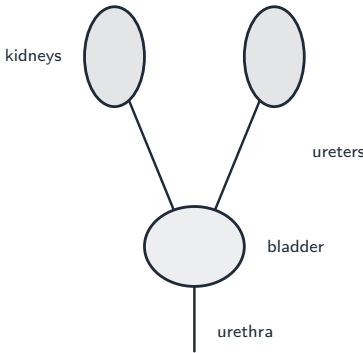
1 Two main wastes



- **carbon dioxide** 二氧化碳 — made in **respiration** 呼吸作用, breathed out through the **lungs** 肺;
- **urea** 尿素 — made in the **liver** 肝脏, removed by the **kidneys** 肾脏 with excess water and **ions** 离子.

2 The urinary system

The kidneys clean the blood and make **urine** 尿液:



kidneys → **ureters** 输尿管 → **bladder** 膀胱 → **urethra** 尿道 → out.

Watch out: **excretion** removes waste the body *makes* (carbon dioxide, urea) — it is not the same as egestion (undigested food). Carbon dioxide leaves through the **lungs**; urea is made in the **liver** but removed by the **kidneys**.

Practice

Try these in order.

13.1 What is *excretion*? [1]

13.2 Which waste gas leaves the body through the lungs? [1]

13.3 Where in the body is urea made? [1]

13.4 Which organs remove urea from the blood? [1]

13.5 Put these in order, from kidney to outside: bladder, urethra, ureter, kidney. [2]

13.6 Challenge. Carbon dioxide and urea are both excreted, but leave by different organs. State the organ that removes each, and where each waste is made. [3]