

Kidney Nephron

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The Kidney Nephron

1

Lessons

1

Videos

All

Skill Level

2 hours

Duration

English

Language

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The Kidney nEPHRON

Lesson 3: The nephron.

so this is where it all happens.

In the last 2 lesson you have studied structures of the kidneys, putting them into context.

In this lesson, its all about the function of the kidney- highlighting where those important things happen that make the kidney a really important organ system.

By the end of this lesson you need to have drawn a nephron and its circulatory system freehand.

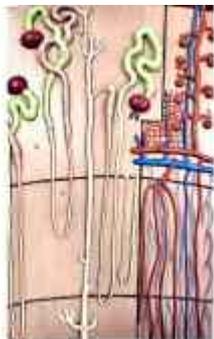
Include labelling and shading- and dare I say it, a smidgin of colour to help identify what otherwise may look like a plate of spaghetti.

Watch all the videos and learn how to sketch and shade the kidney and vessels. You can sketch and watch along or watch then sketch. It's up to you. Upload your finished piece of work.

Lets Begin!

Below a little video of a sketch !!

<https://franscienceart.com/wp-content/uploads/2022/02/kidney-nephron.mp4>



Kidney in context

Kidney Images to draw and label

Here are some images of the nephron.

For ease we're going to draw a model of a kidney (the colours aren't what they're really like).

Your drawing has to be labelled.

Try and make a note of what each of these structures does.

The Nephron

Have a look at the kidney model below. See if you can label the following structures.

What does this image look like to you-if you didn't know what it was?

You need to label:

Bowmans Capsule

Proximal convoluted Tubule

Distal Convoluted tubule

Ascending and descending Loop of Henle



The Nephron cheat sheet

Did you get all of the structures correct?

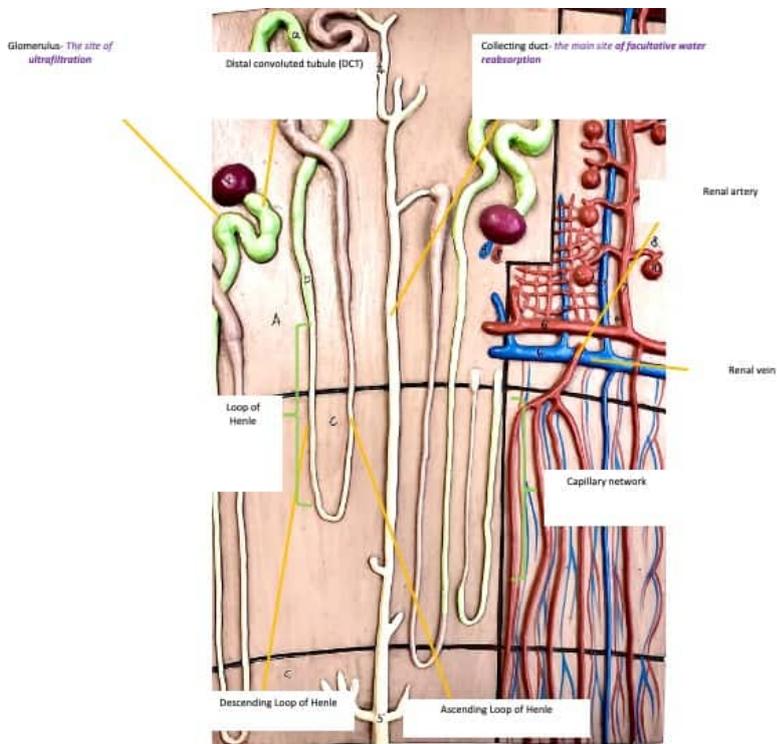


Image for creating tonal range

To draw the kidney nephron- you need to draw this image freehand! If you don't feel up to the challenge of copying- you can print it out and go straight to the next



part of labelling structure/function.

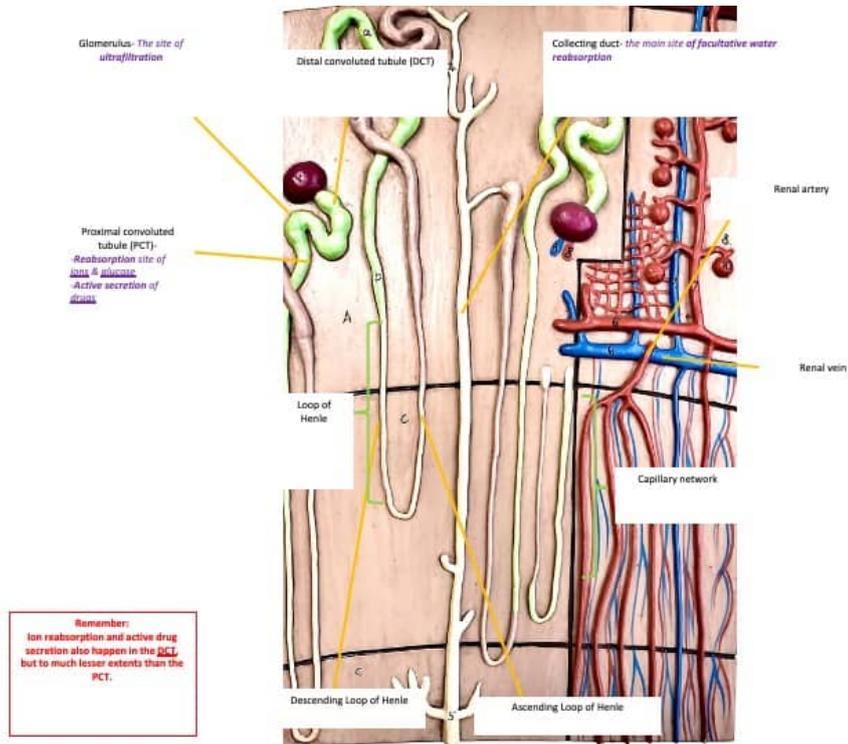
Structure function of the kidney

Can you identify what each part of the kidney does?

Label on your image where on the kidney the following occur?

- the main site for reabsorption of glucose
- the main site for reabsorption of ions
- ultrafiltration
- active secretion of drugs
- facultative water reabsorption
- active transport of solutes
- ADH(What is this???)

Nephron function cheat sheet



Forum

Upload your work to the forum here

[Click Here](#)

Other weeks

Part 1: bACKGROUND INFORMATION

General instructions

Get the kit required and find out any course requirements

Background

Loads of reading- 4 hours

[View Week](#)

Part 2: Practice sketching

Learn to sketch & draw

Learn how to sketch using a wide range of pencil grades and also a variety of sketching techniques

Brush up on your sketching techniques

5 lessons - 2 hours

[View Week](#)

“I worked with Fran for many miserable years, but I should emphasize that it wasn’t her fault. She is without doubt one of the nicest and most talented scientists that I have ever met and what sets her apart from the others is the mysterious hold she has over me.”

Philip Miller Tate Surrey, UK

“She puts students at the heart of what she does and is an amazing role model for them. As well as a sparky and inspiring colleague.”

Hilary Wason Kingston University, London

“This course is amazing. Why is it free?”

anonLondon

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