<u>Inglese Scientifico</u> Christopher Berrie, PhD

Course materials

Week VII

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Articles	practice:	<u>A</u> or	<u>AN</u>	???
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- 1. __AN__ unlocked door
- **2.** _ **AN**_ hour
- 3. __AN__ outside toilet
- 4. __ A __ stomach ulcer
- 5. __ A __ university
- **6.** __ **A** __ house
- **7.** __**AN**__ umpire
- **8. __AN**__ unacceptable reply
- **9.** __**AN**__ uncle
- 10. __AN__ electrician
- **11. AN** unusual problem
- **12.** A habitual smoker
- **13.** __ **A** __ UV detector
- 14. __AN__ unnecessary noise
- 15. AN actor
- **16. AN** unappetising meal
- 17. A hacienda
- **18.** __ **A** __ ubiquitous problem
- **19.** __**AN**__ overpass
- **20.** __ **A** ___ unicorn
- 21. __AN__ umbrella
- **22. __AN**__ upstairs room
- **23.** __ **A** __ ureter
- 24. __AN__ engineer
- **25. AN** island

- **26.** __ **A** __ headache
- **27.** __**AN**__ agent
- 28. __ A __ Ukrainian woman
- **29.** __ **A** __ teacher
- **30.** __**AN**__ orange bag
- **31.** __ **A** __ honeybee
- **32.** __**AN**__ airplane
- **33.** __ **A** __ hall
- 34. __AN__ umbilical chord
- **35.** __ **A** __ hypocrite
- **36.** __AN__ urgent request
- **37.** A haggis
- **38.** __**AN**__ usher
- **39.** A travel agent
- **40. A** useful tool
- **41. A** TOEFL score
- **42. AN** ant
- **43.** __ **A** __ hag
- 44. __AN__ uploaded programme
- **45. AN** unidentified flying object
- **46.** __ **A** __ haematologist
- **47.** __ **A** __ hybrid car
- 48. __AN__ hourly injection
- **49.** __ **A** __ hymn
- **50.** __**AN**__ arrow

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Prepositions practice: IN, AT or ON

- 1. Lina's birthday will be _IN_ a few months.
- 2. _ON_ what day were you born?
- 3. By eleven o'clock _IN_ the evening, I am _IN_ bed.
- **4.** I swim **_IN**_ the pool **_AT**_ the University campus.
- **5.** _AT_ breakfast-time we do not eat salad.
- **6.** Lina was born **_ON**_ a Wednesday.
- 7. I am up _AT_ five o'clock _IN_ the morning.
- **8.** Do you like to shop **_IN/AT**_ the Supermarket?
- **9.** My husband is **_ON**_ his way home now.
- **10.** We eat cereal **_AT**_ breakfast-time **_AT**_ the weekend.
- **11.** The keys are **_ON**_ the kitchen counter.
- **12.** Your sister is arriving **_IN**_ Texas **_AT**_ seven o'clock **_IN**_ the morning.
- **13.** I am **_IN**_ bed by eleven o'clock **_IN**_ the evening.
- **14.** Diamond was born **_AT**_ 7:37 am.
- **15.** What day were you born **_ON**_?
- **16.** Do your parents live **_IN**_ Mexico?
- **17.** I like to swim **_IN**_ the sea **_AT**_ the beach, not just **_IN**_ the pool.
- **18.** Diamond's birthday will be _**IN**_ a week or two.
- **19.** Ron was born **_IN**_ the twentieth century.
- **20.** I swim **_IN**_ the school pool **_ON**_ Mondays.
- **21. _IN**_ what year were you born?
- **22.** Lina was born **IN** 1954, **ON** a Wednesday.
- **23.** We always put tomatoes **_IN**_ the salad.
- **24.** At eight o'clock **_IN**_ the morning, I am hard **_AT**_ work.

- **25.** I like to put make-up **_ON**_ when I dress up.
- **26.** Put your big toe **_IN**_ the water.
- **27.** I put my big toe **_IN**_ the pool first.
- **28.** Will you drop me **_AT**_ my house **_ON**_ your way home?
- **29.** What year were you born **_IN**_?
- **30.** Will we arrive **_IN**_ Rome **_IN**_ time for the party **_AT**_ John's house?
- **31.** I don't jump **_IN**_ the pool before testing the water temperature.
- **32.** Diamond was born **_ON**_ 30th July.
- **33.** He always **_IN**_ a hurry when he leaves for school **_IN**_ the morning.
- **34.** Her grandmother will arrive there **_AT**_ half-past seven **_IN**_ the morning.
- **35.** We will go out to dinner **_ON**_ Friday night.
- **36.** We sprinkle parsley **_ON**_ the tomatoes.
- **37.** We will stop **_AT**_ Megalò **_ON**_ the way home.
- **38.** Did you grow up **_IN**_ Mexico or California?
- **39.** Diamond was born **_ON_** a Monday.
- 40. Do you live _IN_ Los Angeles?
- **41.** Is the water **_ON**_ your big toe warm or cold?
- **42.** The train leaves **_IN**_ five minutes, hurry up.
- **43.** I'm going to America _**IN**_ April.
- **44.** He doesn't work **_ON**_ Sundays or Mondays.
- **45. _IN**_ England, the shops shut **_AT**_ 5:30 pm.
- **46.** She never feels very good **_IN**_ the morning.
- **47.** She is starting work **_ON**_ June 4th.
- **48.** What do you do _**IN**_ the evenings?
- **49.** I can't sleep **_AT**_ night these days. It is too hot.
- **50.** I was born _**IN**_ 1966.

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Put the words in the correct order to make a sentence

1. always France to go we spring in	We always go to France in spring.
2. stay hotel a usually we in	We usually stay in a hotel.
3. plane sometimes by go we	We sometimes go by plane.
4. sometimes train go we by	We sometimes go by train.
5. children with never our us go	Our children never go with us.
6. we restaurant go a often evenings Frid	day to on
We often	go to a restaurant on Friday evenings

Match each line in A with a line in B and a line in C

Α	В	С	
Cats	live	uniforms.	Cats <u>eat fish</u> .
Policemen	look after	cars.	Policemen wear uniforms.
Mechanics	write	teeth.	Mechanics mend cars.
Children	wear	for newspapers.	Children go to school.
Cars	eat	in Africa.	Cars <u>are expensive</u> .
Dentists	go	fish.	Dentists look after teeth.
Journalists	mend	expensive.	Journalists write for newspapers.
Elephants	are	to school.	Elephants <u>live in Africa</u> .

Number the daily activities in the correct order

(14 activities of daily living: **ADLs**)

8	Have lunch	11	Cook dinner
2	Have a shower	12	Watch television
6	Go to work	1	Get up
4	Have breakfast	13	Read a book
7	Start work	14	Go to bed
10	Arrive home	9	Finish work
3	Get dressed	5	Leave home

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Making comparisons

Complete the sentences using the comparative form of the adjective.

- **1.** The town isn't very <u>clean</u>. The country <u>is cleaner than</u> the town.
- **2.** My car isn't very <u>new</u>. Your car <u>is newer than</u> my car.
- **3.** Ann's house isn't very modern. Your house <u>is more modern than</u> Ann's.
- **4.** Bob's garden isn't very <u>big</u>. Your garden <u>is</u> much <u>bigger than</u> Bob's.
- **5.** Yesterday wasn't very <u>hot</u>. Today <u>is</u> much <u>hotter than</u> yesterday.
- **6.** Sue's homework wasn't very good. Your homework <u>is better than</u> Sue's.
- **7.** Your car isn't very <u>dirty</u>. My car <u>is dirtier than</u> yours.
- **8.** This exercise isn't very <u>difficult</u>. The next exercise <u>is</u> much <u>more difficult</u> <u>than</u> this one!

Everybody, somebody, nobody, everywhere, nowhere, everything, nothing... Chose the correct word:

- **1. Q:** Who's in the bathroom? **A: Nobody** . It's empty.
- **2. Q:** Who'd like an ice cream? **A: _Everybody** . We all want one.
- 3. Q: Did you find your keys?A: No. I looked <u>everywhere</u>, but I couldn't find them.
- **4. Q:** What did you buy at the shops? **A: Nothing** . I didn't have any money.
- **5.** Things in London are very expensive. **<u>Everything</u>** is cheaper in Italy.
- **6. Somebody** told me it's your birthday today.
- **7. Q:** Where did you go last night? **A: Nowhere** . I stayed at home to watch TV.
- **8. Q:** How much is it to get into the museum? **A: Nothing** . It's free.
- **9.** The fridge is empty. Justin ate <u>everything</u>.
- **10.** Two plus two is four. **Everybody** knows that.

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What is "it"?

- 1. It's very interesting. I've just read Chapter 10. (a book)
- 2. We stood on it and looked down at the river. (a bridge)
- 3. <u>It</u> landed 10 minutes ago. (an aeroplane)
- 4. It's next Saturday in St Mary's Church. The reception's in the Bedford Hotel.
- **5.** <u>It</u> isn't very sharp. I can't cut the meat. (a knife)
- **6.** I can't see my face in **it**. It's cracked. **(a mirror)**
- 7. It barked and ran after us. (a dog)
- 8. Can I have it well done, please, with chips? (a steak)
- **9.** I like <u>it</u> dry and white. (a wine)
- 10. I don't take it in tea, but I take one spoonful in coffee. (sugar)

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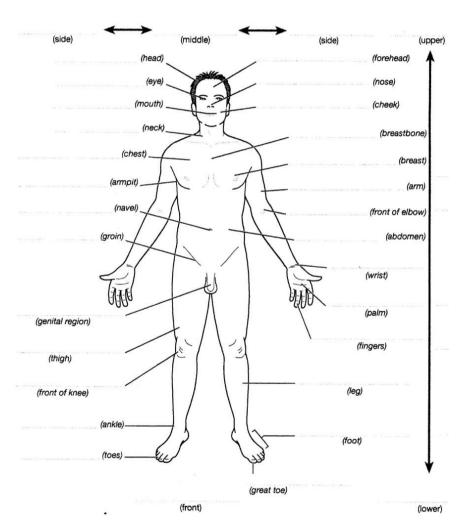
Medical abbreviations (acronyms)

	Abbr./ acronym	Meaning
1	NSAIDS	non-steroid anti-inflammatory drugs
2	N/S	normal saline
3	O ₂	oxygen
4	o.d.	daily/ once a day (Latin)
5	O/E	on examination
6	OA	on admission
7	OAP	old-age pensioner
8	ОСР	oral contraceptive pill
9	Obs.	observations
10	ОЈ	orange juice
11	OPD	Outpatient Department
12	ОТ	operating theatre/ occupational therapist
13	ОТС	over-the-counter (medication)

	Abbr./	Meaning
	acronym	
14	Р	pulse / protein / parity
15	p.o.	by mouth (Latin)
16	p.r.	by rectum (Latin)
17	p.r.n.	as required (Latin: <i>pro re nata</i>)
18	p.v.	by vagina (Latin)
19	PACU	Post-Anaesthesia Care Unit
20	PCA	patient-controlled analgesia
21	PE	pulmonary embolism
22	PEG	percutaneous endoscopic gastrostomy
23	PERLA	Pupils equal and reactive to light and accommodation
24	PH	past history
25	PICC	peripherally inserted central catheter
26	PMH	past medical history

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Regional and directional terminology - front

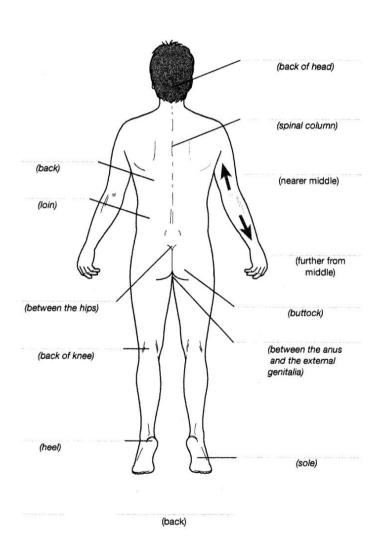


Insert the terms given below into the figure.

1. abdominal	abdomen	16. inguinal	groin
2. antecubital	front of elbow	17. lateral	side
3. anterior	front	18. mammary	breast
4. axillary	armpit	19. medial	middle
5. brachial	arm	20. nasal	nose
6. buccal	cheek	21. oral	mouth
7. carpal	wrist	22. orbital	eye
8. cephalic	head	23. palmar	palm
9. cervical	neck	24. patellar	front of knee
10. crural	leg	25. pedal	foot
11. digital/phalangeal	fingers, toes	26. pubic	genital region
12. femoral	thigh	27. sternal	breastbone
13. frontal	forehead	28. superior	upper
14. hallux	big toe	29. tarsal	ankle
15. inferior	lower	30. thoracic	chest
		31. umbilical	navel
		ı	

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Regional and directional terminology - back



Insert the terms given below into the figure.

1. calcaneal heel

2. distal further from middle

3. dorsal back

4. gluteal buttock

5. lumbar loin

6. occipital back of head

7. perineal between anus and external genitalia

8. plantar sole

9. popliteal back of knee

10. posterior back

11. proximal nearer middle

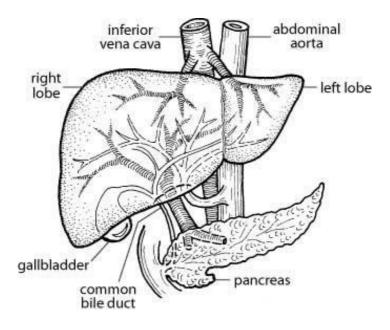
12. sacral between the hips

13. shoulder* acromial

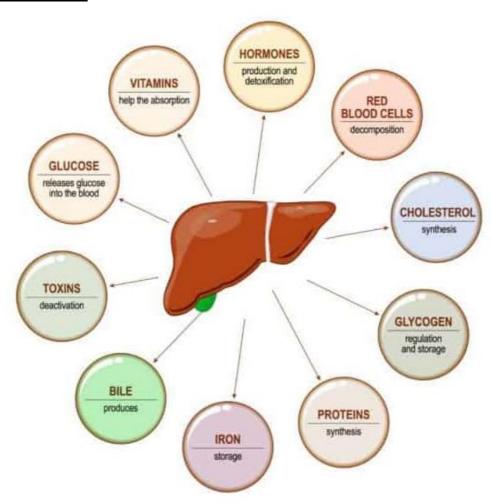
14. vertebral spinal column

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The liver



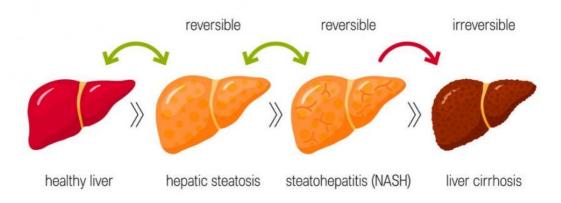
Functions of the liver



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Diseases of the liver

STAGES OF LIVER DAMAGE



Hepatitis	Inflammation of the liver, caused by hepatitis A, B and C viruses. Hepatitis also has non-infectious causes, including heavy drinking, drugs, allergic reactions, or obesity
Cirrhosis	Long-term damage to the liver from any cause, with permanent scarring. The liver then does not function well
Liver cancer	Hepatocellular carcinoma is the most common liver cancer, and almost always occurs after cirrhosis
Liver failure	Many causes, including infection, genetic diseases, and excessive alcohol
Ascites	During cirrhosis, the liver leaks fluid (ascites) into the abdomen, which becomes distended and heavy
Gallstones	A gallstone stuck in the bile duct that drains from the liver can result in hepatitis and bile duct infection (cholangitis)
Haemochromatosis	Causes iron to deposit in the liver, damaging it. The iron also deposits throughout the body, causing many other health problems
Primary sclerosing cholangitis	A rare disease with unknown causes that results in inflammation and scarring in the bile ducts in the liver
Primary biliary cirrhosis	A rare disorder, and an unclear process that slowly destroys the bile ducts in the liver. Permanent liver scarring (cirrhosis) eventually develops

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Liver tests: blood

Liver function panel	The liver function panel checks how well the liver is working and consists of many different blood analyses
Alanine aminotransferase (ALT)	Elevated ALT helps to identify liver disease or damage from many causes, including hepatitis
Aspartate aminotransferase (AST)	Along with elevated ALT, the AST can also show liver damage
Alkaline phosphatase	Alkaline phosphatase is present in bile-secreting cells in the liver, and also in bones. High levels often mean the bile flow out of the liver is blocked
Bilirubin	High bilirubin levels suggest a problem with the liver
Albumin	As part of the total protein levels, albumin helps to define how well the liver is working
Hepatitis A tests	If hepatitis A is suspected, the doctor will test liver function and for antibodies to detect the hepatitis A virus
Hepatitis B tests	Antibody levels can be tested to determine if you have been infected with the hepatitis B virus
Hepatitis C tests	In addition to checking liver function, blood tests can determine if you have been infected with the hepatitis C virus
Prothrombin time (PT)	The prothrombin time (PT) is commonly monitored to see if the patient is taking the correct dose of the blood thinner warfarin (Coumadin). It also checks for blood clotting problems
Prothrombin thromboplastin time (PTT)	The PTT is used to check for blood clotting problems

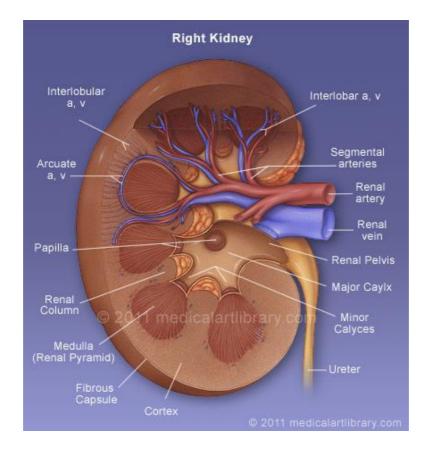
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Liver tests: imaging

Ultrasound (US)	Abdominal ultrasound can test for many liver conditions, including cancer, cirrhosis, or problems from gallstones
Computed tomography (CT) scan	A CT scan of the abdomen gives detailed pictures of the liver and other abdominal organs
Liver biopsy	A liver biopsy is most commonly done after another test, such as a blood test or ultrasound, to further define a possible liver problem
Liver and spleen scan	This nuclear scan uses radioactive material to help to diagnose a number of conditions, including abscesses, tumours, and other liver function problems

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The kidneys

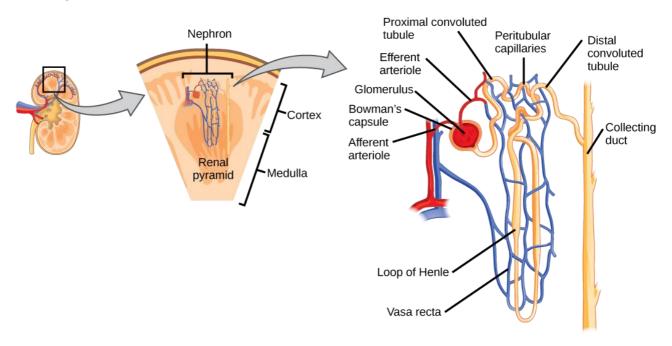


Unfiltered blood enters the **kidneys** for filtration through the **renal artery** from the **heart**. Blood passes through the kidneys in large quantities so that it can be filtered well and have most of the **waste products removed**. The **renal veins** carry the cleaned blood away from each kidney. The renal veins are wider than the renal arteries because they transport blood towards the inferior vena cava to the heart. The blood that arrives from the heart through the renal artery contains a toxic product, called **urea**, and also high levels of **salts** and large amounts of **water**. The function of the kidneys is to **filter out** the **unwanted materials**. In addition, the kidneys **reabsorb** any products the body needs and **secrete** their waste material as **urine**.

Blood enters the kidneys through the hard outer layer, or **cortex**. The filtration units of the kidneys, called **nephrons**, are in the **renal cortex**. The nephrons help to filter out waste from the blood, leaving a **filtrate** of important **salts** and **glucose**. The next section of the kidneys is called the **renal medulla**. This is where the levels of salts and water in the urine are controlled. **Sodium ions** are concentrated in the medulla so that very concentrated urine is produced. Any excess water and waste products are then secreted as **urine**. The urine initially collects in the **renal pelvis**, which is the fan-shaped section at the narrowest part of the kidney that joins onto each **ureter**. The ureters are the two tubes that transport the urine from the kidneys to the **bladder**, which is the **urine storage organ**. From the bladder there is another tube called the **urethra** through which the urine is **passed out of the body**.

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The nephron



The basic unit of the **structure and function of the kidneys** is the **nephron**, which comprises the **glomerulus** and the **renal tubule**. Each human kidney contains about 1,200,000 nephrons, a number that is constant from birth, as new nephrons cannot develop. The renal tubule starts in the **cortex** of the kidney with the **glomerulus**, where the blood enters the **capillary network** (with **fenestrated epithelium**) that is **enveloped** by the **Bowman's capsule**, the start of the renal tubule. The glomerulus is where the initial **filtration** from the blood into lumen of the renal tubule takes place. The renal tubule then continues into the **proximal convoluted tubule**, which is still in the **renal cortex**. It then becomes the **loop of Henle**, which generally passes deep into the **medulla inner zone** (**thick/ thin descending limb**) before **looping** back to the **kidney cortex** (**thin/ thick ascending limb**). The **distal convoluted tubule** then joins the **collecting duct**, which joins with further collecting ducts as they pass through the **medulla** to the **renal pelvis**.

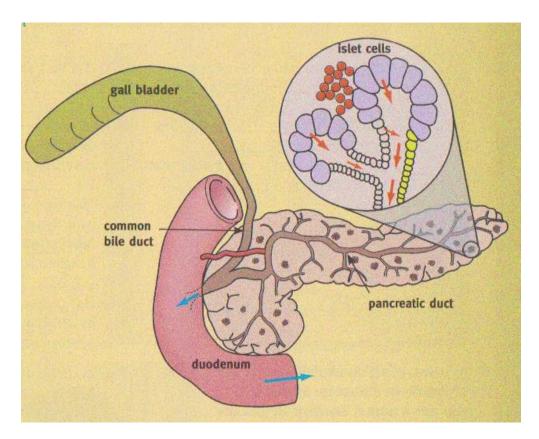
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Renal failure terms

	Term	Meaning
1	Urinalysis	The process of analysing urine using physical or chemical tests
2	Urine	The fluid that is excreted by the kidneys
3	Urinal	Also called 'bottle'; used by male patients to pass urine into
4	Bed pan	A toileting receptacle that is used by bed-bound patients
5	Renal	Related to the kidneys
6	рН	The measurement of how acid or alkaline a solution is
7	Proteinuria	Protein in the urine; also called albuminuria
8	Haematuria	Blood in the urine
9	Specimen	A sample, usually of urine or blood
10	Oedema	Excessive accumulation of fluid in the tissues
11	Anuria	No urine output
12	Nephron	Filtering unit of kidney; includes glomerulus, Bowman's capsule, loop of Henle
13	Oliguria	Low urine output
14	Glomerulus	Nephron site of primary filtration of waste products from blood
15	Henle's loop	Nephron site for reabsorption of water and ions
16	Bowman's capsule	Cup-shaped end of nephron containing capillaries that forms the glomerulus

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The pancreas



The pancreas is a small L-shaped organ that sits against the duodenum, behind the stomach. It is quite small, at around 15 cm long. The pancreatic duct runs along the middle of the pancreas and empties into the duodenum. It supplies pancreatic enzymes, also called pancreatic juices, which aid in the digestion process. This is described as the exocrine function of the pancreas, with exo meaning "out of", which is carried out by the centroacinar and pancreatic stellate cells. The pancreatic juices flow out of the pancreas through the pancreatic duct. The pancreatic duct is joined by the common bile duct before emptying into the duodenum. The pancreas also has an endocrine function, with endo meaning "within". This is the release of hormones into the bloodstream. There are four main types of hormones produced in the hormone-producing cells of the pancreas, known as the **Islets of Langerhans** (islet cells). One of the four cell types, the **beta cells**, produces insulin. The function of insulin is to lower blood sugar levels. Beta cells make up almost 80% of all of the islet cells. Alpha cells make up almost 20%, and these release glucagon, which raises the levels of glucose in the blood. This is the opposite function to insulin. The level pf glucose in the blood is called either the blood sugar level (BSL) or the blood glucose level (BGL). Insulin stimulates cells in the body to use or store the glucose that is produced from the metabolism of carbohydrates in food. Glucose is used in the body as an energy source.

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The pancreas

Medical terms: the pancreas and diabetes

1	pancreas	а	the by-product produced when fats are metabolised
2	diabetes	b	presence of glucose in the urine
3	diabetic	С	oral medication used to lower blood sugar levels
4	hypoglycaemia	d	when the blood is more acidic than the surrounding tissue
5	hypoglycaemic agent	е	a person who suffers from diabetes
6	glycosuria	f	the organ that produces insulin, which regulates blood sugar
7	ketones	g	hormone produced in the beta cells of the pancreas
8	blood sugar level (BSL)	h	a low level of sugar in the blood
9	insulin	i	disease characterised by high levels of sugar in the blood
10	diabetic ketoacidosis (DKA)	j	amount of glucose in the blood