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ЛАТИНСКИЙ ЯЗЫК.
СБОРНИК УПРАЖНЕНИЙ
ПО КЛИНИЧЕСКОЙ ТЕРМИНОЛОГИИ

Учебно-методическое пособие
по латинскому языку для студентов 1 курса
факультета по подготовке специалистов для зарубежных стран
учреждений высшего медицинского образования

LATIN LANGUAGE.
EXERCISE BOOK
ON CLINICAL TERMINOLOGY

Practical workbook
on the Latin language for first-year students
of Faculty on preparation of experts for foreign countries
of medical higher educational institutions

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CONTENTS

Gastrointestinal System	4
Term-elements	5
Exercises	7
Glossary of gastrointestinal terms	13
Respiratory System	20
Exercises	23
Respiratory System terminology	28
Tables, diagrams and figures	31
Literature	38

Gastrointestinal System

Systema digestorium

The function of the digestive system is to break down food into components the body can use.

The study of the digestive system is called **gastroenterology**. (**gastroenterologia**).

-logia — *study, field of science*

-logus — *specialist in the field of some science.*

So, **gastroenterologist (gastroenterologus)** is a specialist in field of **gastroenterology** (studying and treating the diseases of digestive system (gastrointestinal tract)).

Digestive tract is a long tube 27 feet long that starts at **mouth** and ends at **anus**.

Includes:

mouth *os, oris n* (teeth chew food, tongue positions and tastes food; epiglottis seals off the windpipe during eating to prevent choking)

pharynx *pharynx, yngis m* (passageway for food and air; participates in swallowing)

esophagus *oesophagus, i m* (moves food from pharynx to stomach)

small intestine *intestinum tenue* (digests proteins, fats and carbohydrates; absorb most of the nutrients; secretes digestive hormones and enzymes)

stomach *gaster, tris f* (stores and mixes food; begins chemical digestion of protein by enzymes and acid; regulates delivering to the small intestine)

large intestine *crassum, i n* (absorb nutrients; stores waste material)

rectum *rectum i n* (passageway for feces)

anus *anus, i m* (expels undigested material)

Digestive glands produce **chemical secretion** needed to breakdown food.

Includes:

liver *hepar, atis n* (produces bile; processes and stores nutrients)

pancreas *pancreas, atis n* (secretes digestive enzymes into the small intestine to neutralize stomach acid)

gall bladder *vesica fellea* (stores and concentrates bile)

salivary glands:

parotid gland *glandula parotis*

sublingual gland *glandula sublingualis*

submandibular gland *glandula submandibularis*

intestinal gland *glandula intestinalis*

Small intestine *intestinum tenue* contains:

duodenum *duodenum, i n*

jejunum *jejunum, i n*

ileum *ileum, i n*

Large intestine *crassum, i n* contains:
 transverse colon *colon transversum*
 descending colon *colon descendens*
 ascending colon *colon ascendens*
 cecum *caecum, i n*
 sigmoid colon *colon sigmoideum*
 rectum *rectum, i n*
 appendix, *icis f* (contains cells of the immune system)
 anal colon *colon anale*
 Indigestion (mouth)
 Digestion (mouth, stomach, small intestine)
 Accessory organs (liver, pancreas, gallbladder)
 Absorption (small intestine, large intestine)
 Excretion (large intestine)

Term-elements

Term-elements used for names of organs of the digestive system

Meaning	Latin noun	Greek term-element
mouth	os, oris	stomat-
pharynx	pharynx	pharyng-
esophagus	oesophagus	oesophag-
stomach	gaster	gaster, tris
small intestine	intestinum tenue	enter-
large intestine	crassum, i n	col-, -colon
rectum	rectum	proct-, rect-
blind intestine (cecum)	cecum	typhl-
gland	glandula	aden-
colon	colon	col-, -colon
gallbladder	vesica fellea	cholecyst-
liver	hepar	hepat-
pancreas	pancreas	pancreat-
anus	anus	man-
abdomen	abdomen	lapar-
appendix	appendix	appendic-
tongue	lingua	gloss-, -glossia
tooth	dens, dentis	odont-

Term-elements used in terms forming methods of diagnostics and special instruments

Final Term-element	Meaning
-scopia	examination of inner walls with a special instrument

-scopium	a special instrument for examination of inner walls
-graphia	method of organs examination by X-rays
-gramma	record of examination result or X-ray picture

Prefix

endo-	inside
-------	--------

Term-elements used for description of various pathological conditions

Term-element	Meaning
---------------------	----------------

Prefixes and suffixes

a-	absence, inability
dys-	impairment, disturbance
para-	cellular tissue near or around the organ;
peri-	tissue covering an organ; external coat
-itis, itidis f	inflammation
-oma, atis n	tumor

First Term-elements

tachy-	rapid
brady-	slow

Final Term-elements

-algia (-odynia)	pain
-cele	hernia, evagination, cyst
-ectasia	pathological widening
-litus	stone
-lithiasis	stone formation
-lysis	destruction, freeing from adhesions
-malacia	abnormal softening
-megalia	enlarged
-pathia	general name of pathological conditions, any disease
-paresis	partial paralysis
-phagia	swallowing
-ptosis	displacement, falling
-rrhagia	bleeding
-rrhoea	outflow of secretion, mucous
-stenosis	narrowing
-schisis	congenital splitting
-spasmus	spasm, convulsion
-trophia	tissues and organs nutrition

Term-elements used in terms for description of surgical manipulations, ways of surgical aid

Term-element	Meaning
-ectomy	surgical removal
-lysis	freeing from adhesions by surgical way
-pexia	fixation
-plastica	plastic surgical operation
-rrhaphia	suturing
-stomia	operation of making a fistula or communication between organs
-stoma	artificial opening (fistula)
-tomia	incision, dissection, partial removal

Exercises

1. Give Latin name and Greek term-element for each structure.

STRUCTURE OF THE DIGESTIVE SYSTEM ①

	Structure	Function in Digestion
1.	mouth	
2.	epiglottis	
3.	oesophagus	
4.	stomach	
5.	small intestine	
6.	large intestine	
7.	appendix	
8.	rectum	
9.	anus	
10.	liver	
11.	gall bladder	
12.	pancreas	

1.) Label the diagram of the digestive system with the structures given in the table to the right.
 2.) In the table, give the function of each of the structures you have labelled on the diagram of the digestive system.

2. Divide the terms into their component parts and explain their meaning:

- | | |
|--------------|------------------------------|
| gastrolithus | hepatitisgastroduodenostomia |
| gastrectasia | enteritisgastroenterostomia |
| gastrinoma | proctitisgastrojejunostomia |
| gastrocele | colitisgastrocolostomia |

gastroplastica	appendicitisgastroesophagostomia
duodenolysis	coloptosispharyngostenosis
gastrolysis	oesophagoptosislaryngostenosis
enterolysis	proctoptosisproctostenosis
pancreatolysis	laryngoptosisgastrostenosis

3. Form terms with the following term elements, explain their meaning:

- 1) -gastr- (-ectomy, - lithus,- megalia, -lysis, -pexia, -scopium);
- 2) -scopia (colon-, lapar-, esophag-, gastr-, endo-, stomat-);
- 3) -tomia (cholecyst-, lapar-, gastr-, col-, proct-)
- 4) -pathia (gastr-, cholecyst-, enter-, hepat-, stomat-)
- 5) -algia (proct-, stomat-, aden-, enter-, odont-, gloss-)
- 6) -phagia (a-, dys-, brady-, tachy-)

4. Determine term elements common to each word row. Explain the meaning of the terms:

- 1) gastroenterologus, proctologus, stomatologus;
- 2) enterohepatocele, hepatomegalia, hepatitis, hepatopathia, hepatopexia;
- 3) glossoplastica, proctoplastica, pharyngoplastica, enteroplastica, gastroplastica;
- 4) rectocele, enterocele, gastrocele, pharyngocele, esophagocele;
- 5) pharyngospasmus, esophagospasmus, enterospasmus, proctospasmus;
- 6) laryngoplegia, pharyngoplegia, proctoplegia
- 7) dystrophia, dysenteria, dysphagia

5. Add necessary term-element part to form the term:

- 1) Inflammation of cellular tissue near colon ... *colitis*;
- 2) Impairment of swallowing ... *phagia*;
- 3) Surgical removal of the gallbladder ... *ectomy*;
- 4) Displacement of the stomach *gastro* ... ;
- 5) Inflammation of the pancreas ... *itis*;
- 6) Suturing of the tongue wound *glosso* ...;
- 7) Bleeding from tooth socket after removal of a tooth ... *rrhagia*;
- 8) X-ray examination of gallbladder *cholecysto* ... ;
- 9) Making a communication between the stomach and esophagus *gastroentero* ... ;
- 10) A specialist treating diseases of the rectum *procto* ...;
- 11) An artificial opening (a fistula) of the stomach *gastr* ...

6. Explain the meaning of the term-element –stomia (making a fistula of making an anastomosis)

Cholecystoenterostomia, proctostomia, cholecystostomia, colostomia, gastroesophagostomia, enterostomia, gastroduodenostomia, gastroenterostomia, gastrostomia.

7. Add missing Greek term-elements to the term-element gastr(o)

-pain in the stomach

-stone in the stomach

..... - surgical removal of all or some part of the stomach

..... - an instrument for visual inspection of the inside of the stomach

..... - a bleeding from the stomach lining

..... - inflammation of the stomach lining

..... - dislocation of the stomach down

(-itis; -ectomy; -ptosis; -rrhagia; -scopium; -algia; -lithus)

8. Give Greek and Latin equivalents for the following English words:

stomach, large intestine, small intestine, tongue, mouth, gallbladder, liver, rectum.

9. Form terms with the following meaning:

A 1) stomach cyst, 2) an operation of making a communication between the stomach and the colon; 3) a branch of medicine focused on the diseases of the digestive system, 4) a specialist who specializes in diseases of the digestive system; 5) any disease of the stomach and intestine, 6) plastic surgery of the stomach and the small intestine; 7) a falling of the stomach and the small intestine; 8) an operation of making a communication between the stomach and the small intestine; 9) an operation of making a communication between the stomach and jejunum; 10) a stone in the stomach; 11) the formation of stones in the stomach and the morbid symptoms occasioned by their presence; 12) the surgical operation of freeing the stomach from adhesions; 13) abnormal softening of the stomach walls; 14) enlargement of the stomach; 15) paralysis of the muscles of the stomach; 16) any kind of stomach disease; 17) stomach fixation (a surgical operation in which the stomach is sutured to the abdominal wall or the diaphragm); 18) plastic operation of the stomach; 19) suture of perforation in the stomach; 20) an abnormal displacement of the stomach;

B 1) bleeding from the stomach; 2) excessive secretion of gastric juice or mucus by the stomach; 3) an abdominal wall defect in which the anterior abdomen does not close properly; 4) a lighted flexible tubular instrument for examining the stomach; 5) an examination of the stomach with a special instrument called a gastroscope; 6) contractions of muscles of the stomach; 7) narrowing of the stomach; 8) excision of the pylorus of the stomach; 9) pain in swallowing; 10) bleeding from the mouth.

10. Form the terms with the following term elements:

-itis:

1) inflammation of the lining of the stomach; 2) inflammation of the small intestine; 3) inflammation of the colon; 4) inflammation of the appendix; 5) in-

inflammation of the peritoneum, the thin layer of tissue covering the inside of the abdomen; 6) inflammation of the pancreas; 7) inflammation of the anus and the lining of the rectum; 8) inflammation of glands of the stomach; 9) inflammation of the stomach and small intestine; 10) inflammation of the stomach, small intestine and colon; 11) inflammation of the stomach and esophagus; 12) inflammation of the stomach and colon; 13) inflammation of the stomach and duodenum;

-scopia:

1) the endoscopic examination of the large intestine and the distal part of the small intestine with a thin flexible tube with a camera; 2) examination of internal organs of the body with a special instrument called an endoscopium – a special instrument for examination of inner organs and surfaces; 3) examination of the lower part of the colon, also known as the rectum and sigmoid colon; 4) examination of the anus with a small, rigid, tubular instrument called an anoscope; 5) operation performed in the abdomen using small incisions (usually 0.5-1.5cm) with the aid of a camera; 6) internal examination of the peritoneum with a peritoneoscope passed through the incision in the abdominal wall; 7) an examination of the inside of the esophagus using a thin-lighted tube called an endoscope; 8) an examination of the lining of the stomach and duodenum with a gastroscope – a special instrument for examination of the inside of the stomach; 9) an examination of the internal part of the stomach with an endoscope.

-pathia:

1) Any disease of the pharynx; 2) any disease of the larynx; 3) any disease of the stomach; 4) any disease of the liver; 5) any disease of the gallbladder; 6) any disease of the oral cavity; 7) any disease of the large intestine; 8) any disease of the intestine.

11. Here is a list of different disorders of the organs of the digestive system. Read the information, compare English words with their Greek equivalents.

1. Peritonitis is the peritoneal inflammation.
2. Caries, gingivitis and periodontitis are diseases of the oral cavity.
3. Pharyngitis is the inflammation of the pharynx.
4. Gastritis, ulcer and cancer are diseases of the stomach.
5. Enteritis, diarrhea, appendicitis, and cancer are disorders of the intestines.
6. Diseases of the liver are hepatitis, cirrhosis, and cancer.
7. Pancreatitis is the inflammation of the pancreas.
8. Gallstones (or cholelithiasis) and cholecystitis are disorders of the gall bladder.

Vocabulary

abdominalis, e abdominal

abscessus, us m abscess – boil, pyogenic abscess

acutus, a, um acute

ascites, ae m ascites – dropsy of the abdominal cavity
 atrophicus, a, um atrophic
 biliaris, e biliary
 benignus, a, um benign
 botulismus, i m botulism – neuromuscular poisoning
 chronicus, a, um chronic
 coeliakia, ae f coeliac disease is a long term autoimmune disorder that primarily affects the small intestine because of a sensitivity to gluten which is found in wheat, rye, barley and oats
 cirrhosis, is f cirrhosis – replacement of normal liver tissue with nonfunctional scar tissue
 cancer, cri m cancer, malignant tumor
 carcinoma, atis n malignant tumor developing from scaly or glandular epithelium
 cysta, ae f cyst – hollow tumor with liquid or semi-liquid contents
 congenitus, a, um congenital
 constipatio, onis f constipation – difficult or infrequent passage of feces
 descensus, us m descensus – falling
 diagnosticus, a, um diagnostic
 diarrhoea, ae f diarrhea – more frequent bowel movement with the texture of the stool is thin and sometimes watery
 dilatatio, onis f dilation – widening
 diverticulosis, is f diverticulosis – presence of small sacs (diverticula) of the inner lining of the intestine which protrude through the intestinal wall.
 dyspepsia, ae f – dyspepsia- common discomfort gaseousness, fullness or pain that is gnawing or burning in quality and localized to the upper abdomen or chest
 emesis, is f -vomiting
 fistula, ae f fistula – artificial opening
 gastricus, a, um gastric, related to the stomach
 globus, i m –globus – the subjective sensation of a lump or mass in the throat
 haematochezia, ae f –passage of fresh blood through anus
 haematemesis, is f –vomiting of blood
 infectiosus, a, um infectious
 morbus, i m disease
 refluxus, us m reflux – reverse flow
 malignus, a, um malignant
 melena, ae f melena –passage of black tarry stool
 metastaticus, a, um metastatic
 obstructio, onis f obstruction
 paracentesis is f paracentesis is a procedure performed to obtain a small sample of ascetic fluid for diagnostics.
 perforatio, onis f perforation
 polypus, i m polyp – pathologic formation protruding above the organ surface and connected to it with a pedicle

prolapsus, us m prolapse – falling, displacement of and inner organ through a natural opening

rectalis, e rectal

resectio, onis f resection –removal of an organ part

stenosis, is f stenosis – morbid narrowing of canals and openings

tumor, oris m tumor

ulcerosus, a, um ulcerative

ulcus, eris n ulcer– local destruction of the main skin layer or mucous lining

varicosus, a, um varicose

varix, icis m, f – limited vein distention, distended coiled vein

Exercises on multiword clinical terms

1. Translate multiword terms into Latin:

a) acute diarrhea; chronic gastritis; acute pancreatitis; carcinoma of transverse colon; gastric ulcer; squamous carcinoma of the esophagus; esophageal varices; adenocarcinoma of the jejunum; diverticulosis of the colon; ulcerative colitis; pancreatic cancer; colorectal cancer; cancer of the pancreas; chronic peritonitis; malignant tumor; benign tumor of the small intestine; polyp of the colon; polyp of the rectum; gastrointestinal endoscopy; anorectal abscess; cyst of the pancreas;

b) anorectal fistula; rectal prolapse; abdominal paracentesis; atrophic gastritis; congenital ascites; abscess of the liver; resection of the rectum; chronic hepatitis;

cirrhosis biliaris; malignant carcinoma; perforation of the ulcer of the stomach;

superficial gastritis; pancreatic abscess; acute infectious gastroenteritis; acute constipation; mucous colitis; spastic colon; hepatic cyst; biliary cirrhosis; diagnostic laparoscopy; metastatic carcinoma; infectious hepatitis.

2. Translate multiword terms into English:

a) descensus gastris; diarrhea chronica; ascites pancreaticus; ascites nephrogenicus; paracentesis diagnostica; morbus hepatis chronicus; biopsia hepatica; aneurysma arteriae hepaticae; cysta hepatica; adenoma hepatocellulare; hyperplasia nodularis focalis; carcinoma hepatis metastaticum; carcinoma hepatocellulare; diverticulosis ductuum biliferorum; diarrhea infectiosa acuta; dyspepsia functionalis; nausea functionalis;

b) emesis psychogenica; globus hystericus; ulcus gastricum acutum; gastritis haemorrhagica; gastrectomia totalis; obstructio intestini; abscessus hepaticus; allergia gastrointestinalis; fissura analis; enteritis regionalis; ileitis granulamata; stenosis pyloric; fibrosis hepatica congenita; adenoma ductus biliaris; hepar polycysticum congenitum; constipatio atonica.

Glossary of gastrointestinal terms

Adenoma *adenoma* – glandular lesion thought to be the precursor to colorectal cancer.

Adhesio *adhesion* – a band of scar tissue that connects two surfaces of the body that are normally separate.

Anastomosis *anastomosis* – a surgical joining of two ducts, blood vessels or bowel segments to allow flow from one to the other.

Aneurysma *aneurysm* – the abnormal enlargement or bulging of a blood vessel, caused by damage or weakness in the blood vessel wall.

Angiogramma *angiogram* – a technique that uses dye to highlight blood vessels.

Anus *anus* – the opening at one end of the digestive tract from which waste is expelled.

Appendectomy (appendicectomy) *appendectomy (appendicectomy)* – surgical removal of appendix to treat appendicitis.

Appendicitis *appendicitis* – inflammation of the appendix that requires immediate medical attention.

Appendix *appendix* – a small finger-like tube located where the large and small intestine join. It has no known function.

Barium *barium* – a substance that, when swallowed or given rectally as an enema, makes the digestive tract visible on X-rays (also referred to as a “contrast medium”).

Biopsia *biopsy* – removal of a sample of tissue for study, usually under a microscope.

Cancer coli *colon cancer* – a malignant tumor arising from the inner wall of the large intestine.

Cancer gastricus *gastric cancer* – disease in which cancer cells are found in the lining of the stomach.

Cancer pancreatis *pancreatic cancer* – growth of abnormal cells in the pancreas.

Cannula *cannula* – tube which hold the laparoscope and instruments and allow access to the abdominal cavity for performance of laparoscopic surgery.

Carcinoma *carcinoma* – malignant (cancerous) growth that tends to invade surrounding tissue and metastasize (travel to and grow in) to other regions of the body. The tumor is firm, irregular and nodular with a well-defined border.

Cholecystectomy *cholecystectomy* – surgical removal of the gallbladder.

Cholecystitis *cholecystitis* – an inflammation of the gallbladder.

Cirrhosis *cirrhosis* – a slowly progressing disease in which healthy liver tissue is replaced with scar tissue eventually preventing the liver from functioning properly.

Colectomia *cholectomy* – the surgical removal of part or all of the colon, performed to treat cancer of the colon or severe, chronic ulcerative colitis.

Colectomia abdominalis totalis total abdominal colectomy – surgical removal of the entire colon.

Colitis colitis – inflammation of the colon.

Colon colon –the last three or four feet of the intestine (except for the last eight inches which is called the rectum). Synonymous with the “large intestine” or “large bowel”.

Colitis ulcerosa ulcerative colitis – a disease that causes inflammation and sores, called ulcers, in the top layers of the lining of the large intestine. The inflammation usually occurs in the rectum and lower part of the colon but it may affect the entire colon. Ulcerative colitis rarely affects the small intestine except for the lower section called the ileum.

Colon spasticum spastic colon (irritable bowel syndrome IBS) – a condition in which the colon muscle contracts more readily and causes abdominal pain and cramps, excess gas, bloating and a change in bowel habits that alternate between diarrhea and constipation.

Colostomia colostomy – the surgical creation of an opening between the surface of the skin and the colon. Also referred to as a large intestine stoma.

Concrementum biliare (ductus biliaris) gallstone –pieces of solid material that develop in the gallbladder when substances in the bile, primary cholesterol, and bile pigment form hard, crystal-like particles

Constipatio (obstipatio) constipation– difficult, infrequent or incomplete passage of stools.

Crassum large intestine – this digestive organ is made up of the ascending (right) colon, the transverse (across) colon, the descending (left) colon and the sigmoid (end) colon. The appendix is also part of the large intestine. The large intestine receives the liquid contents from the small intestine and absorbs the water and electrolytes from this liquid to form feces or waste.

Diaphragma diaphragm– thing, dome-shaped muscle that separate the abdomen from chest. When the muscle contracts the dome flattens, increasing the volume of the chest.

Diarrhoea diarrhea a condition in which bowel movement are passed more often than usual and in a liquid state.

Diversio fecalis fecal diversion – surgical creation of an opening of part of the colon (colostomy) or small intestine (ileostomy) to the surface of the skin.

Diverticulitis diverticulitis – an inflammation of small sacs or outpouchings (diverticula) of the inner lining of the intestine which protrude through the intestinal wall.

Diverticulosis diverticulosis –presense of small sacs or outpouchings (diverticula) of the inner lining of the intestine which protrude through the intestinal wall.

Encephalopathia encephalopathy confused thinking and forgetfulness caused by liver function.

Fistula *fistula* – an abnormal connection that forms between two internal organs or between two different parts of the intestine. This is a common complication of Crohn's disease.

Fissura analis *anal fissure* - a split or crack in the lining of the anal opening, usually caused by the passage of very hard or watery stools.

rectum and advances it to the large intestine to view the lining of the rectum and the lower third of the large intestine (sigmoid colon).

Gastrectomia *gastrectomy*– surgical procedure in which all or part of the stomach is removed.

Gastricus *gastric* – pertaining to the stomach.

Gastritis *gastritis* – an inflammation of the lining of the stomach from any cause including infection or alcohol.

Haemorrhagia rectalis *rectal bleeding* – a symptom of digestive problems rather than a disease. Most causes of bleeding are related to conditioned that can be cured or controlled such as hemorrhoids. However, rectal bleeding may be an early sign of rectal cancer so it is important to locate the source of the bleeding.

Haemorrhoids *hemorrhoids* – swollen blood vessels which line the anal opening caused by excess pressure from the straining during a bowel movement, persistent diarrhea or pregnancy.

Helicobacter pylori (H. pylori) *Helicobacter pylori (H. pylori)* a bacterium believed to be a major cause of peptic ulcer.

Hepar *liver* – one of the most complex and largest organs in the body which performs more than 5000 life-sustaining functions.

Hepatitis *hepatitis* – a disease in which the liver is inflamed. A viral infection is usually the cause of hepatitis, although sometimes toxins or drugs are the cause.

Hernia hiatalis *hiatal hernia* – abnormal bulge or protrusion of the stomach

Hernia inguinalis *inguinal hernia* – abnormal bulge or protrusion that can be seen in the groin area (area between the abdomen and thigh). An inguinal hernia develops when a portion of an internal organ, such as intestine, along with fluid, bulges through a weakened area in the muscular wall of the abdomen. through a hole in the diaphragm where the esophagus of the stomach joint.

Hypertensio portalis (colon) – *portal hypertension (colon)* – an increase of pressure within the portal vein (the vein that carries blood from the digestive organs to the liver). This increase in pressure is caused by a blockage of blood flow through the liver. Increased pressure in the portal vein causes large veins to develop across the esophagus and stomach to bypass the blockage.

Ileocolectomia *ileocolectomy* – surgical removal of a section of the terminal ileum and colon lying close to the ileum (the lowest part of the small intestine).

Ileostomia *ileostomy* – the surgical creation of an opening between the surface of the skin and the ileum.

Icterus jaundice – a condition in which the skin and eyes turn yellow because of increased level of bilirubin in the blood. This happens whenever the flow of bile from the liver to the gallbladder is blocked when the liver is severely diseased or when too much bilirubin is produced by excessive red blood cell destruction.

Intestinum tenue *small intestine* – the portion of the digestive tract that first receives food from the stomach. It is divided into three sections: the duodenum, the jejunum and the ileum.

Morbus celiacus *celiac disease* – digestive disease that damages the small intestine and prevents the proper absorption of nutrients from food. Celiac disease occurs when the body reacts abnormally to gluten, a protein found in wheat, rye, barley and oats. Gluten causes an inflammatory response in the small intestine.

Morbus hepaticus *liver disease* – more than 100 types of liver disease have been identified including hepatitis, cirrhosis and liver tumors. When liver disease develops, the liver's ability to perform its metabolic, detoxification and storage functions is impaired.

Morbus ulcerosus gastricus *peptic ulcer disease* – a disorder in which sores or ulcers form on the tissue lining the stomach or the first part of the small intestine (duodenum).

Mesenterium *mesentery* – membranous tissue which carries blood vessels and attaches various organs to the abdominal wall.

Transpositio musculi – *muscle transposition* – a procedure in which gluteal (buttock) or gracilis (inner thigh) muscles are used to encircle and strengthen the anal canal. When the inner thigh muscle is used, pacemaker-like electrodes are implanted into the grafted muscle to train it to remain contracted.

Nausea *nausea* – a queasy feeling which leads to stomach distress, a distaste for food and an urge to vomit. Nausea is not a disease but a symptom of many disorders. It can be brought on by systemic illness such as influenza, medications, pain and inner ear disease.

Oedema *edema* – fluid retention.

Oesophagus *esophagus* – the “food pipe” leading from the mouth to the stomach.

Pancreas *pancreas* – an organ behind the stomach next to the duodenum, the first part of the small intestine. The pancreas has two basic functions in the body. It produces enzymes that help digest food and hormones (such as insulin) that regulate how the body stores and uses food.

Pancreatitis *pancreatitis* – a rare disease in which the pancreas becomes inflamed. The pancreas, a gland which produces enzymes to digest food, is located next to the duodenum and behind the stomach. The most common causes for pancreatitis are alcohol and gallstones. There are two forms of pancreatitis, acute and chronic. The acute form occurs suddenly and may be a severe, life-threatening illness with many complications. Usually the patient recovers completely. A chronic

form of the disease may develop if injury to the pancreas continues, such as when a patient persists in drinking alcohol, bringing severe pain and reduced functioning of the pancreas that affects digestion and causes weight loss.

Paracentesis *paracentesis* – the removal of the accumulation of fluid in the abdomen.

Pathologia *pathology* – the study of the characteristics, causes and effects of a disease.

Peristalsis *peristalsis* – the means by which food is propelled through the esophagus in a series of muscular contractions. The same process is used by the intestines to propel digested food and waste.

Polypus *polyp (colon)* – small, non-cancerous growth on the inner colon lining that may develop into cancer. Colon polyps and the early stages of cancer can have no symptoms. Therefore, regular screening is important.

Polyposis familiaris *familial polyposis* – a rare condition tending to run in families in which the moist layer of tissue lining the colon (mucosa) is covered with polyps.

Proctosigmoidectomy *proctosigmoidectomy* – an operation that remove a diseased section of the rectum and sigmoid colon.

Pyrosis *heartburn* – an uncomfortable feeling of burning and warmth occurring in waves rising up behind the breastbone (sternum) toward the neck. It is usually due to gastroesophageal reflux which is the backing up of stomach acid into the esophagus.

Radiologia *radiology* – a branch of medicine that uses radioactive substances and visual devices to diagnose and treat a wide variety of diseases.

Prolapsus rectalis *rectal prolapse* – dropping down of the rectum outside the anus.

Rectopexia *rectopexy* – surgical placement of internal sutures (stitches) to secure the rectum in its proper position.

Rectum *rectum* – the chamber connected to the large intestine which receives solid waste (feces) from the descending colon to be expelled from the body.

Reflux gatrointestinalis *gastroesophageal reflux disease (GERD)* – a condition in which acid –containing contents of the stomach travel back up into the esophagus causing a burning sensation (heartburn).

Resectio abdominoperinealis *abdominoperineal resection* – surgical removal of anus, rectum and sigmoid colon, resulting in the need for a permanent colostomy.

Sanguis occultus *occult blood* – blood in the stool that is not visible to the naked eye. This type of bleeding is detected by performing a laboratory test on a stool sample.

Sclerotherapia *sclerotherapy* – the use of sclerosing chemicals to treat varicosities such as hemorrhoids or esophageal varices.

Systema biliare *biliary system* – The gall bladder and bile ducts.

Sphincteroplastica *sphincteroplasty* – the most common procedure used to correct a defect in the anal sphincter muscles. There are two anal muscles that control bowel movements, similar to two round doughnuts, one inside of the other. If a defect exists in the complete circle of muscle, the problem can be corrected with the surgery. During the sphincteroplasty the two ends of the muscle are cut and overlapped onto one another then sewn in place. This procedure then restores the complete circle of muscles.

Stoma *stoma* – an artificial opening of the intestine to outside the abdominal wall.

Thrombosis *thrombosis* – a blood clot.

Trocar *trocar* – sharp, pointed instrument used to make a puncture incision in the abdominal wall. Used for placement of cannulas.

Vesica fellea (vesica biliaris) *gallbladder* – a small pear-shaped organ on the right side of the abdomen. The gallbladder's primary functions are to store and concentrate bile and secrete it into the small intestine to help digest food.

esophagus and stomach to bypass the blockage. These varices are fragile and bleed easily, causing internal bleeding.

Varix Varices(pl.) *varices* – large, swollen veins that develop across the stomach and esophagus that cause internal bleeding.

Vomitus *vomiting* – the forcible expulsion of the contents of the stomach through the mouth which occurs with symptoms of nausea.

Ulcus *ulcer* – a break in the lining of the stomach or in the first part of the small intestine (the duodenum), a result of an imbalance between digestive fluids (hydrochloric acid and pepsin) in the stomach and the duodenum. Much of that imbalance is related to infection with the bacterium *Helicobacter pylori* (*H.pylori*).

Laboratory investigations:

Air contrast barium enema – an X-ray examination of the entire large intestine (colon) and rectum in which barium and air are introduced gradually into the colon by a rectal tube.

Colonoscopy – an outpatient procedure in which a physician inserts a colonoscope (a long, flexible instrument) in the rectum and advances it to the large intestine (colon) to view the rectum and entire colon.

Computerized axial tomography (CAT scan), an X-ray technique that produces a film showing a detailed cross-section of tissue.

Endoscopy – a method of physical examination using a lighted flexible instrument that allows physician to see the inside of the digestive tract. This meth-

od is referred to by different names depending on the area of examination such as: esophagoscopy (esophagus), gastroscopy (stomach), sigmoidoscopy (lower part of the large intestine), colonoscopy (entire large intestine).

Endosonography also called ultrasound is a diagnostic tool used to visualize the gastrointestinal organs. High frequency sound waves are used to produce images and precisely identify abnormalities such as tumors of the esophagus, stomach, pancreas or rectum.

Flexible sigmoidoscopy– a routine outpatient procedure in which a physician inserts a sigmoidoscope (a long flexible instrument into the rectum and advances it to the large intestine to view the lining of the rectum and the lower third of the large intestine (sigmoid colon)

Fluoroscopy –a continuous X-ray technique that allows the physician to observe how an organ performs its normal function, for example how the esophagus works during swallowing.

Gastroscopy – procedure performed along with a biopsy to examine the stomach and the esophagus using a thin, lighted tube called a gastroscope which is passed through the mouth and into the stomach.

Intravenous pyelogram (IVP) – a technique to evaluate the function of the urinary tract by injecting dye into the tract and then viewing its flow by X-ray.

Laparoscopy – a method of surgery that is much less invasive than traditional surgery. Tiny incisions are made to create a passageway for a special instrument called a laparoscope. This thin telescope like instrument with a miniature video camera and light source is used to transmit images to a video monitor. The surgeon watches the video screen while performing the procedure with small instruments that pass through small tubes placed in the incisions.

Magnetic resonance imaging (MRI) – a test that produces images of the body without the use of X-rays. MRI uses a large magnet, radio waves and a computer to produce these images.

Ultrasound (ultra + L. sonus, sound) – a test used to diagnose a wide of diagnosis and conditions in which high-frequency sound waves, inaudible to the human ear are transmitted through body tissues. The echoes vary according to the tissue density. The echoes are recorded and translated into video or photographic images that are displayed on a monitor.

Respiratory system

Systema respiratorium

The function of the respiratory system is to exchange oxygen from the bloodstream and carbon dioxide from the bloodstream to the air.

The study of lungs is called **pulmonology** (pulmonologia).

-logia – study, field of science

-logus – specialist in the field of some science.

Respiratory system consists of:

Nasal cavity *cavum nasale*

Pharynx *pharynx*

Epiglottis *epiglottis*

Larynx *larynx*

Trachea *trachea*

Bronchi *bronchi*

Lungs (*right and left*) *pulmo dexter et pulmo sinister*

Diaphragm *diaphragma*

Pleural cavity *cavum pleurae*

Root words and combining forms associated with the respiratory system include the following.

Greek Term-element (prefix)

a-, an

dys-

endo-

inter-

intra-

Meaning

without, absence of smth., inability

disturbance, impairment

inside

between

within

Greek Term-element (suffix)

-itis

-oma

Meaning

inflammation

tumor

Final Greek Term-element

-ar, -aria

-capnia

-centesis

-ectasia

-ectomy

-gramma

-graphia

Meaning

pertaining to

carbon dioxide

surgical puncture with needle to aspirate fluid

widening

surgical removal

record of the examination result

process of recording

-logia	field of science
-lysis	destruction, freeing from adhesions
-lythus	stone
-malacia	abnormal softening
-necrosis	mortification
-osmia	smell
-stomia	creation an artificial opening
-scopium	instrument used to visually examine
-scopia	visual examination
-spasmus	spasm, convulsion
-staxis	bleeding
-sphyxia	pulse
-stenosis	narrowing, constricting
-phagia	eating up, swallowing
-plastica	plastic surgical operation
-plegia	paralysis
-pnoea	breathing
-ptosis	falling
-thorax	chest, plural cavity
-tomia	dissection, incision, partial removal
-rrhaphia	sururing

First Greek Term-element

adenoid-
 alveoli-
 atel-
 brady
 bronch-
 bronchiol-
 capn-
 chyl
 con-
 cyan-
 epiglott-
 haem-
 hydr-
 laryng-
 lyth-
 mediastin-
 ox-, oxy-
 pector-
 pharyng

Meaning

adenoids
 alveolus, air sac
 imperfect, incomplete
 slow
 bronchus
 bronchilole
 carbon dioxide
 gastric juice, lymph
 dust
 blue
 epiglottis
 blood
 water
 larynx (voice box)
 stone
 mediastinum
 oxygen
 chest
 throat

phren-	diaphragm
pleur	pleur
pneum-, pneumat-	air, gas
pneum-, pneumon-	lung
py-	pus
rhin-	nose
spir-	breathe
tachy	rapid
thorac	chest
tonsil-	tonsils
trache-	trachea (windpipe)

Here is a list of different disorders of the organs of the digestive system. Read the information; compare English words with their Greek equivalents.

Asthma is a common long inflammatory disease in which your airways narrow and swell and produce extra mucus.

Sinusitis is the inflammation of the sinuses, located close to the nasal cavities. Chronic sinus infection may cause changes or tumor formation, called polyps.

Rhinitis means a cold in the head or running nose. It's an unpleasant symptom of the common cold. The mucosa of the respiratory tract is one of the most important portals of entry for disease-producing organisms. Droplets from one sneeze may be loaded with many billions of disease-producing organisms. Among the infections transmitted through the respiratory passages are the common cold, diphtheria, chickenpox, measles, influenza, pneumonia, and tuberculosis.

Sensitivity to plant pollens, smells, dust, certain foods, and other allergens may lead to **hay fever** or **asthma**, or both. Hay fever is characterized by a watery discharge from the eyes and nose. The symptoms of asthma are spasms of the bronchial tube walls.

Chronic obstructive pulmonary disease (COPD) involves **emphysema** and **bronchitis**. In chronic bronchitis the linings of the airways are chronically inflamed and produce excessive secretions. Emphysema is characterized by dilation and finally destruction of the alveoli. In the popular press the word emphysema is used to mean COPD.

Emphysema—is a lung disease where the walls of the small air sacs and small airways are damaged losing their elasticity and making it difficult to breath in and out.

Lung cancer is a common disease in the person who smokes cigarettes. Smokers suffer from lung cancer ten times as often as nonsmokers.

Pneumonia – an acute infection of lung parenchyma including alveolar spaces and interstitial tissue

Pneumothorax is an accumulation of air in the plural space. Blood in it is called **hemothorax**.

Tuberculosis – an acute or chronic infection caused by Mycobacterium tuberculosis.

Cystic Fibrosis (CF) is a life threatening inherited disease. CF affects internal organs, especially the lungs and digestive system by causing sticky mucus to be produced which clogs up the systems making it hard to breathe and digest food.

Read the information about special equipment for respiratory tract treatment.

The bronchoscope is a flexible fiber optic tubular instrument for inspection of the bronchi and the larger bronchial tubes.

Oxygen therapy is used to sustain life when some condition interferes with adequate respiration; oxygen may be delivered to the patient by mask, catheter or nasal prongs.

A suction apparatus is used for removing mucus or other substances from the respiratory tract.

A tracheostomy tube is used when the pharynx or larynx is obstructed. A small metal or plastic tube is inserted through a cut made in the trachea, and it acts as an artificial airway for ventilation.

Artificial respiration is made when a patient has temporarily lost the capacity to perform the normal motions of respiration.

Exercises:

1. Divide the terms into their component parts and explain their meaning:

Bronchostenosis	pneumonectomy	pharyngitis
bronchiectasia	pneumolysis	tonsillitis
bronchitis	pneumothorax	rhinitis
bronchoscope	pneumotomy	tracheitis
bronchostomy	pneumonorrhaphy	laryngitis
hemothorax	rhinoscopy	oesophagotomy
chylothorax	rhinostenosis	bronchotomy
pneumothorax	rhinology	pharyngotomy
hydrothorax	rhinalgia	laryngotomy
pyothorax	rhinocoele	pneumonotomy

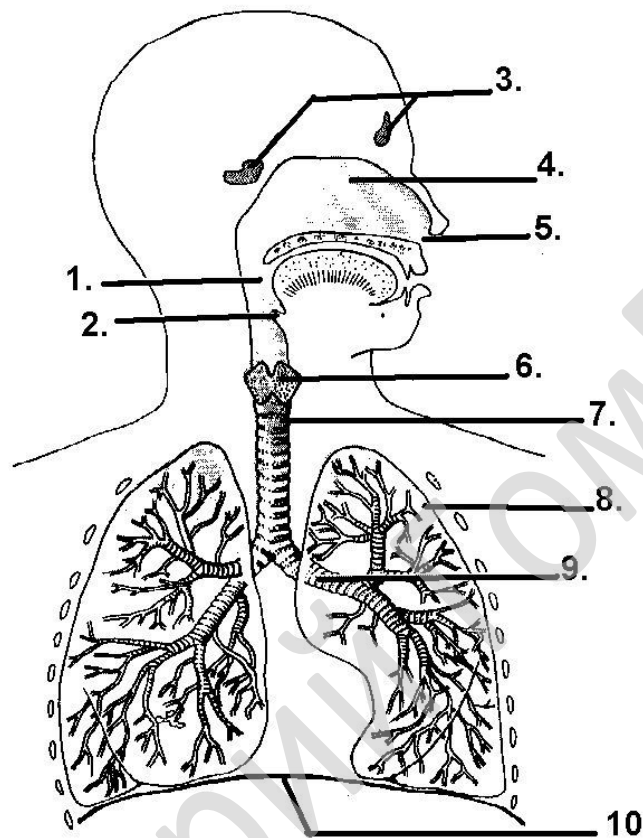
2. Form terms with the following term elements, explain their meaning:

- 1) dys- (-pnoea, -phagia)
- 2) pneum-, pneumon- (-tomia; -lysis; -ectomy, -centesis, -graphia)
- 3) bronch- (-stenosis; -ectasia, -spasmus, -staxis, -scopia)
- 4) thorac- (-centesis; -odynia, -plastica; -scopia; -pathia)
- 5) rhin- (-itis; -stenosis; -lithus, -plastica, -rhagia, -pathia)
- 6) laryng-(-tomia, -stomia, -plegia, -scopia, -ptosis, -plastica)
- 7) pharyng- (-itis, -algia, -cele, -logia, -pathia, -scopium)
- 8) pleur- (-odynia, -lysis, -tomia, -lithus, -centesis, -itis)
- 9) stomath- (-scopia, -itis, -rrhagia, -necrosis, -malacia, -algia)

3. Form terms with the following meaning:

- 1) surgical removal of the lungs;
- 2) narrowing of bronchus;
- 3) pathological widening of bronchus
- 4) impairment of breathing;
- 5) inflammation of bronchus
- 6) freeing of the lungs from adhesions
- 7) inflammation of the lining of the nose
- 8) inflammation of the pharynx
- 9) inflammation of the tonsils
- 10) removal of tonsils
- 11) dissection of the lungs
- 12) inflammation of the lining of the nose and larynx
- 13) plastic operation of the nose
- 14) narrowing of the pharynx
- 15) paralysis of muscles of the pharynx
- 16) making an artificial opening in the trachea
- 17) a flexible fiber optic tubular instrument for inspection of the bronchi and the larger bronchial tubes.
- 18) accumulation of air in the plural cavity
- 19) a condition of severely deficient supply of oxygen to the body that arises from abnormal breathing
- 20) X-ray examination of the lungs
- 21) suturing of the rupture of the bronchus
- 22) bleeding from bronchi
- 23) slow breathing
- 24) rapid breathing
- 25) absence of breathing

4. Write Latin names of parts of the respiratory system and their Greek equivalents



5. Add necessary term-element part to form the term:

1. X-ray examination of the lungs ...*graphia*
2. Spasm of the larynx *laryngo*...
3. Plastic operation of the nose ... *plastic*
4. Field of medicine studying diseases of ear, nose and throat *otorhino... logia*
5. Resection of part of the pharynx *pharyng*...
6. Examination of inner side of the trachea *tracheo*...
7. Bleeding from mouth cavity *stomato* ...
8. Surgical removal of the lungs ... *ectomia*
9. Freeing of the lungs from adhesions with surrounding tissue by surgical way *pneumo* ...
10. Discharge of mucus by mucous membrane of the bronchus *broncho* ...

6. Form any respiratory system terms with the following final term – elements and first term- elements, explain their meaning:

- a) *-itis* *-scopia* *-stenosis* *-ectasia* *-spasmus* *-tomia*
 b) *pneum(on)-* *bronch-* *rhin-* *pharyng-* *laryng-* *dys-*

Vocabulary:

abscessus,us m abscess – a painful collection of the pus, can develop anywhere in the body

acutus,a, um acute

acquisitus, a, um acquired

allergicus, a, um allergic

angiographia, ae f angiography – X-ray examination of vessels

asthma, atis n asthma – suffocation attacks of different origin

asthmaticus, a, um –asthmatic

atelectasis, is f – a shrunken and airless state of part or all of the lungs;

aspergillois , is f – a non-invasive form of aspergilosis occurring in asthmatic patients as an eosinophilic pneumonia resulting from an allergic reaction

benignus, a, um - benign

biopsia, ae f – biopsy – a sample of tissue taken from the body for examination

bronchialis, e – bronchial

bronchitis, itidis f bronchitis – inflammation of bronchi

bronchoectasia, ae f – widening of bronchi

bronchopulmonalis,e bronchopulmonary

byssinosis, is f bronchoconstriction occurring in cotton, flax and hemp workers

cardiacus, a, um cardiac

congenitus, a, um congenital

cysticus, a, um cystic

chronicus, a, um chronic

diffusus, a, um diffuse

embolia, ae f – embolism – obstruction of the flow of blood by an embolus

emphysema, atis n emphysema – a chronic lung disease caused by damage to the alveoli

endotrachialis, e endotrachial

fibrosis, is f fibrosis –is the formation of excess fibrous connective tissue in a reparative or reactive process

hypoxemia,ae f

hypoxia, ae f

herpes,

haemorrhagia, ae f

haemoptysis,is f haemoptysis – coughing up blood as a result of of bleeding from the respiratory tract

insufficiencia, ae f insufficiency

intubation, onis f intubation – is a process of inserting a tube through the mouth

idiopathicus, a, um idiopathic

infarcus, us f infarction

laryngeus, a, um laryngeal

mediastinalis, e mediastinal

morbis, i m disease

oedema, atis n edema – the abnormal accumulation of fluid in certain tissues within the body.

obstructivus, a, um obstructive

obstructio, onis f obstruction

obstructivus, a, um obstructive

pulmo, onis m lung

pleuritis, itidis f pleurisy

pneumonia, ae f pneumonia – an acute infection of lung parenchyma including alveolar spaces and interstitial tissue

parenchyma, atis n parenchyma – the functional tissues

transbronchialis, e transbronchial

thromboembolicus, a, um thromboembolic

varicosus, a, um varicose

Exercises on multiword clinical terms

1. Translate multiword terms into Latin:

Chronic asthmatic bronchitis; acute pneumonia; pulmonary edema, cystic fibrosis; idiopathic pulmonary fibrosis; alveolar hypoxia; congenital bronchiectasis; chronic atelectasis; pulmonary emphysema; streptococcal pneumonia; pulmonary infarction; chronic hypoxemia; varicose bronchiectasis; pulmonary embolism; acute bronchitis; parenchyma of the lung; abscess of the lung; allergic pulmonary disease; diaphragmatic pleurisy; fibrosis of the pleura; malignant tumor of the lungs; chronic sinusitis; bronchial adenoma; progressive pneumonia.

2. Translate multiword terms into English

Morbis pulmonalis obstructivus chronicus; biopsia pulmonis; embolia pulmonalis; bronchitis acuta; asthma bronchiale; hypoxia acuta; morbus pulmonalis diffusus; asthma cardiacum; parenchyma pulmonale; biopsia transbronchialis; oedema laryngeum; intubation endotrachealis; insufficientia pulmonalis chronica; bronchoectasia diffusa; emphysema mediastinale; bronchoectasia acquisita; haemorrhagia pulmonalis; atelectasis acuta, obstructio pulmonalis; angiographia pulmonalis; herpes simplex; bronchitis acuta; aspergillosis bronchopulmonalis allergica; tumor pulmonum benignus;

Respiratory System Terminology

The following is a list of commonly used respiratory terminology:

Airways- These are the tubes that carry air in and out of the lungs (bronchi and bronchioles).

Alpha-1-Antitrypsin deficiency- An inherited condition in which an enzyme (α 1Antitrypsin) is lacking. The result, particularly in smokers, is early onset and fast-progressing emphysema, and also liver damage.

Alveoli- Tiny air sacs at the end of the bronchioles. Oxygen in the air you have inhaled passes through the thin walls of the alveoli into the tiny blood vessels (capillaries) surrounding the alveoli.

Asthma- Asthma affects in excess of 5 million people in the UK and costs the NHS approximately £1 Billion per year in treatment and care. Asthma affects the airways (the tubes that carry air into and out of the lungs). People with asthma have sensitive airways that when triggered tighten and become narrower. The airways can become swollen and mucus can be produced, making it difficult to breathe. There is no cure for asthma but it can be controlled and asthma attacks minimised. Most people who receive and take their treatments correctly can lead normal lives.

Bronchi/Bronchioles- The large and small tubes that carry air in and out of the lungs – the airways

Bronchiectasis- is a long-term lung condition where the airways of the lungs become widened, leading to a build-up of excess mucus, which can make the airways of the lungs more vulnerable to infection.

Bronchitis- Acute bronchitis is a chest infection. Chronic bronchitis is a permanent cough, producing phlegm, and is one of the conditions that is called COPD.

Bronchoscopy A bronchoscopy is a test whereby a telescope in a flexible narrow tube is passed through the nose into the lungs; this is usually done with sedation. The tube has an eyepiece so the doctor can see inside to look for anything abnormal and can take cell samples for testing. They can also take photographs of the inside of the airways if necessary.

Carbon Dioxide (CO₂)- A waste gas that is breathed out.

Chronic Obstructive Pulmonary Disease (COPD)- COPD is the name for a collection of lung diseases including chronic bronchitis and emphysema. In excess of 800,000 people in the UK have been diagnosed with COPD. People with COPD have trouble breathing in and out, referred to as airflow obstruction. Breathing difficulties are caused by long-term damage to the lungs, usually because of smoking.

CT Scan- Similar to an X-ray, a CT (computerised tomography) scan can provide a sharper and more detailed image of the lungs to help a specialist reach a diagnosis.

Cystic Fibrosis (CF)- Cystic Fibrosis is a life-threatening inherited disease and affects in excess of 9,000 people in the UK. CF affects internal organs, especially the lungs and digestive system by causing sticky mucus to be produced which clogs up the systems making it hard to breathe and digest food. In excess of 2 million people in the UK carry the faulty gene that causes CF. If 2 carriers of the gene have a child, they have approximately a 1 in 4 chance of having CF. Approximately only half the people with CF are likely to live beyond their late 30s.

Emphysema- Emphysema is a lung disease where the walls of the small air sacs and small airways (bronchioles) are damaged, losing their elasticity and making it difficult to breathe in and out. It is one of the conditions included in the term COPD.

Exacerbation- When symptoms get temporarily worse in lung conditions.

Exhaled Carbon Monoxide Test- This test measures the amount of carbon monoxide a person exhales. Carbon monoxide is increased if a cigarette has recently been smoked.

Idiopathic- This means the cause is unknown.

Idiopathic Pulmonary Disease (IPF)- IPF is caused by repeated injury to small areas of the lungs resulting in inflammation and scarring. IPF is a fairly rare condition affecting approximately 10 in 10,000 people in the UK, but recent figures show that the number of newly diagnosed cases is on the increase. The condition predominantly affects people over the age of 50 and is more common in men than women; it is also more common in smokers than non-smokers. The lung function of people with IPF gradually worsens over time. The scarring prevents the lungs from effectively taking oxygen from the air and passing it to the blood, meaning that people with IPF have breathing difficulties and breathlessness from simple activities.

Inhaler- A device which gives a dose of medication to breathe in.

Interstitial Lung Disease (ILD)- A group of lung disorders that cause scarring of the lung tissue, making it difficult to get enough oxygen into the body; around a third of people with interstitial lung disease may have pulmonary hypertension.

Lymphangioloio-myomatosis (LAM)- Lymphangioloio-myomatosis (LAM) is a rare disorder which affects women only. It affects approximately just over 1 person in 1 million with 75 women currently being diagnosed in the UK. The condition mainly affects the lungs and causes an overgrowth of the smooth muscle cell around the airways, blood vessels and lymph vessels that drain the excess fluid from the lungs. This leads to cysts developing in the lung and some patients also have a non-malignant tumour or tumours in the kidneys that can cause bleeding. LAM patients generally develop the onset of their symptoms in their 30s.

Medical Device- Medical devices may be classified as Class I, Class IIa, IIb and III, with Class III covering the highest risk products. Classification of a

medical device will depend upon a series of factors, including: how long the device is intended to be in continuous use, whether or not the device is invasive or surgically invasive, whether the device is implantable or active, whether or not the device contains a substance, which in its own right is considered to be a medicinal substance and has action supplementary to that of the device.

Metabolism- The series of processes by which food is converted into the energy and products needed to sustain life.

Methacholine Test- This test measures how sensitive the airways are to methacholine (a substance that causes the airways to narrow).

Mucus- A sticky fluid which protects against particles moving down into the lungs and causing damage.

Nebuliser- This is a machine that delivers medication as a mist.

Oximetry- A test that monitors the amount of oxygen in your blood, using a small device often placed on the finger or earlobe

Oxygen Saturation- If an individual has lung disease or other types of medical conditions, fewer red blood cells carry their usual load of oxygen and the oxygen “saturation” will be lower than 95%. The blood oxygen level can be measured in two ways; with a clip that fits onto the finger or through an arterial blood gas.

Phlegm- Thick mucus.

Pulmonary- To do with the lungs.

Pulmonary Hypertension- This is high pressure inside the pulmonary arteries, which are the vessels carrying blood from the right-hand side of the heart to the lungs.

Pulmonary Rehabilitation- A course of exercise and education which helps some people with lung conditions to become more active.

Spacer- A chamber used with an inhaler to increase the amount of medication reaching the smaller airways.

Spirometry Test- A spirometry test is a breathing test which measures the amount of air that can be blown out of the lungs (pulmonary or lung function). The test is performed by blowing into a machine at least 3 times to make sure the results are consistent.

Sputum- Mucus or phlegm coughed up from the airways.

Sputum Induction Test- This test involves producing a fresh sample of sputum to be analysed in the laboratory, to find any inflammatory cells or chemicals that may present and causing a problem. This procedure involves inhaling mildly salty water for 5 minutes to loosen the mucus on the chest so that it can be coughed up, producing a sputum sample.

Steroids- Medication which reduces inflammation. Steroids for the lungs can be taken from an inhaler or as tablets; they are not the same as the steroids that some body-builders use.

Wheeze- A squeaking or whistling sound when breathing out.

Tables, diagrams and figures

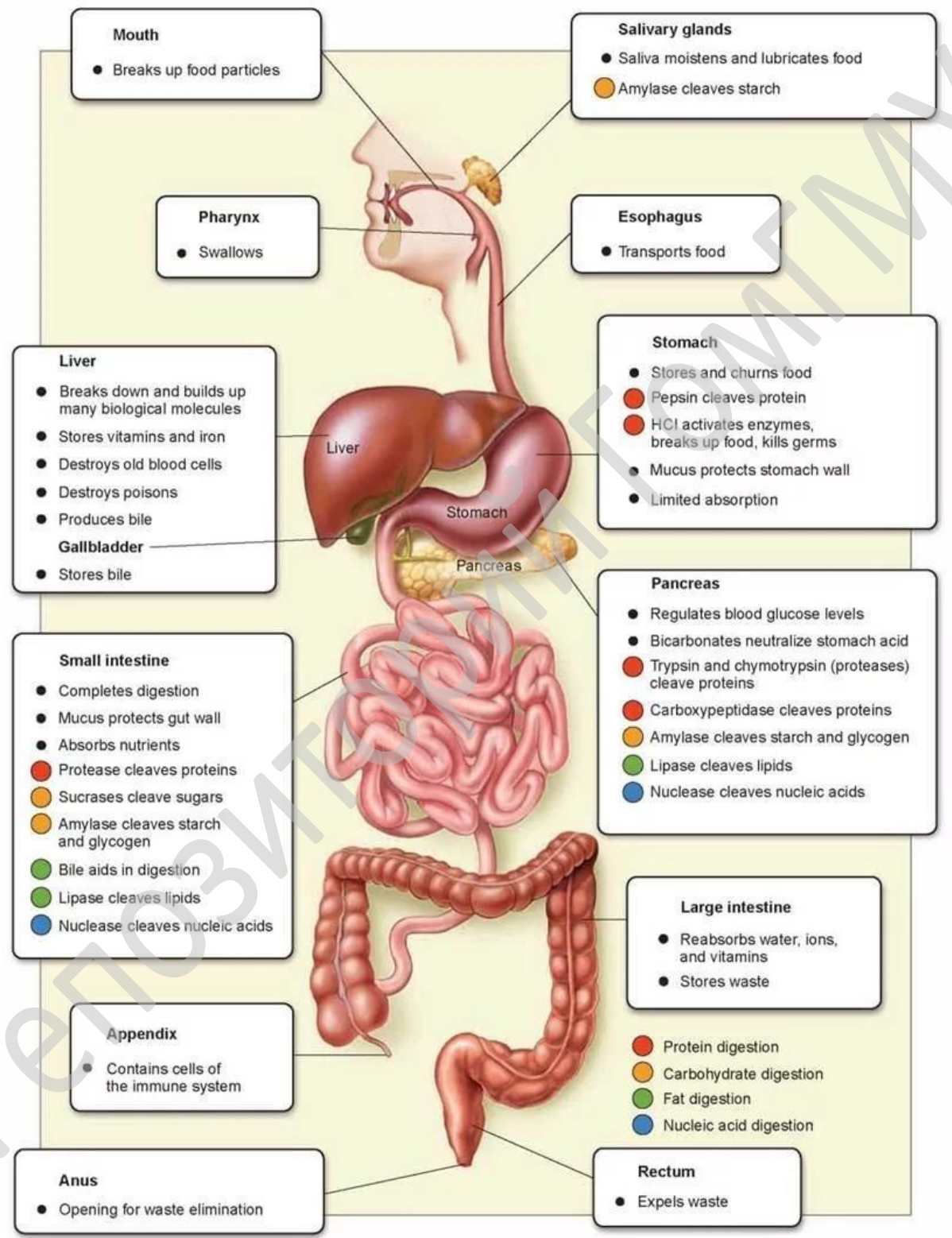
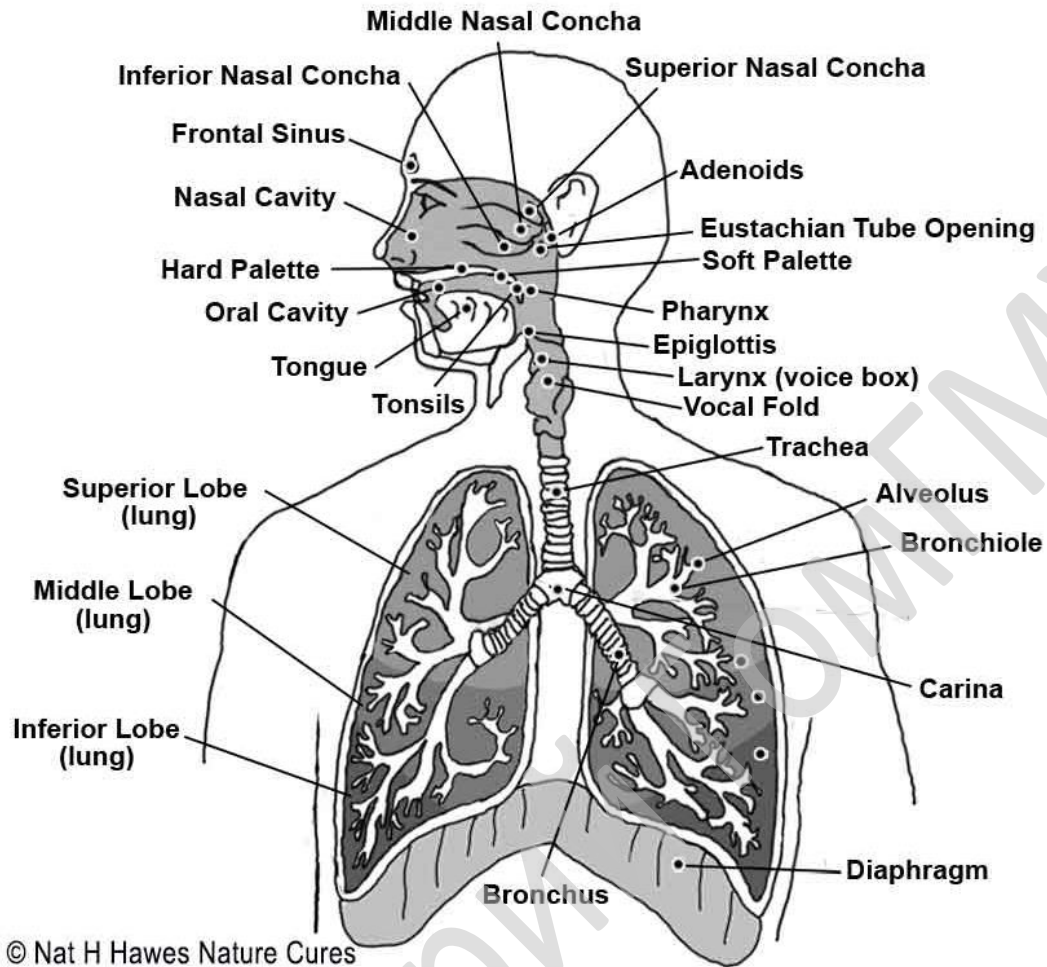


Figure 1



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The respiratory system

Figure 2

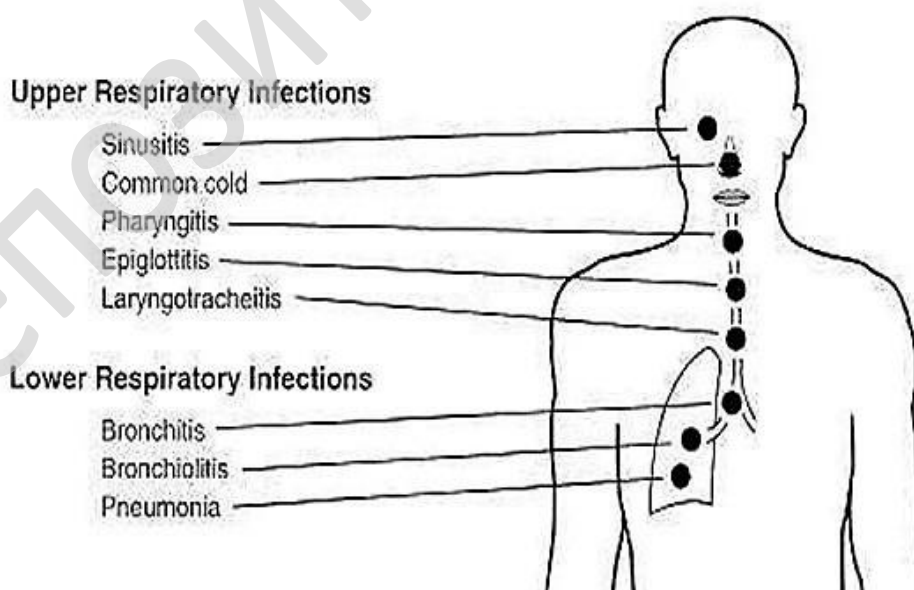


Figure 3

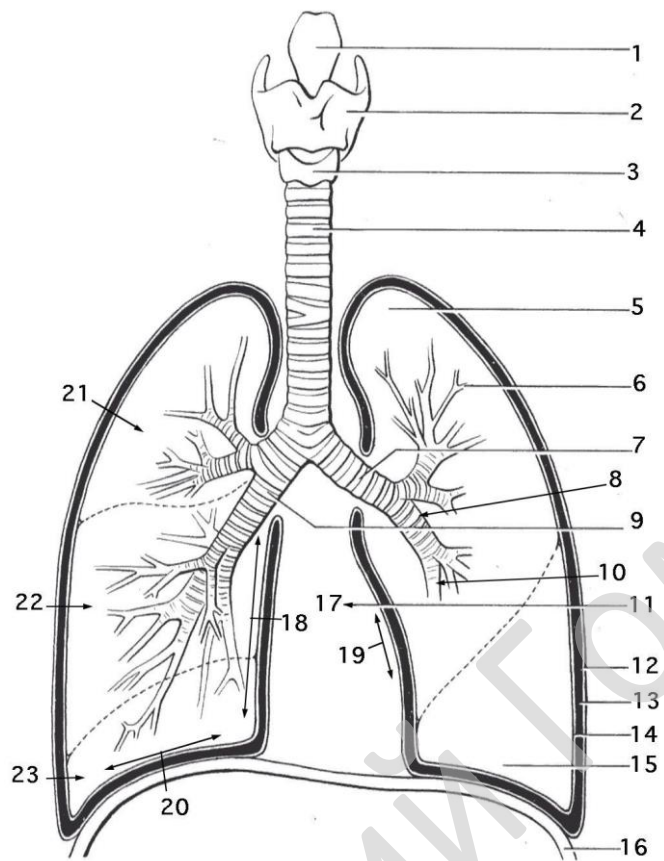


Figure 4

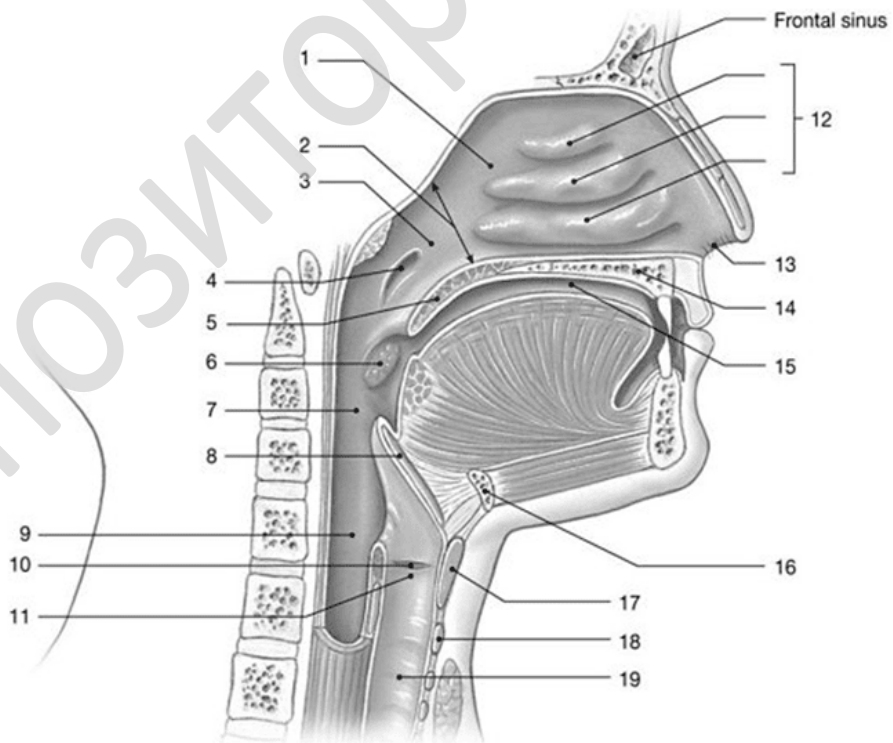
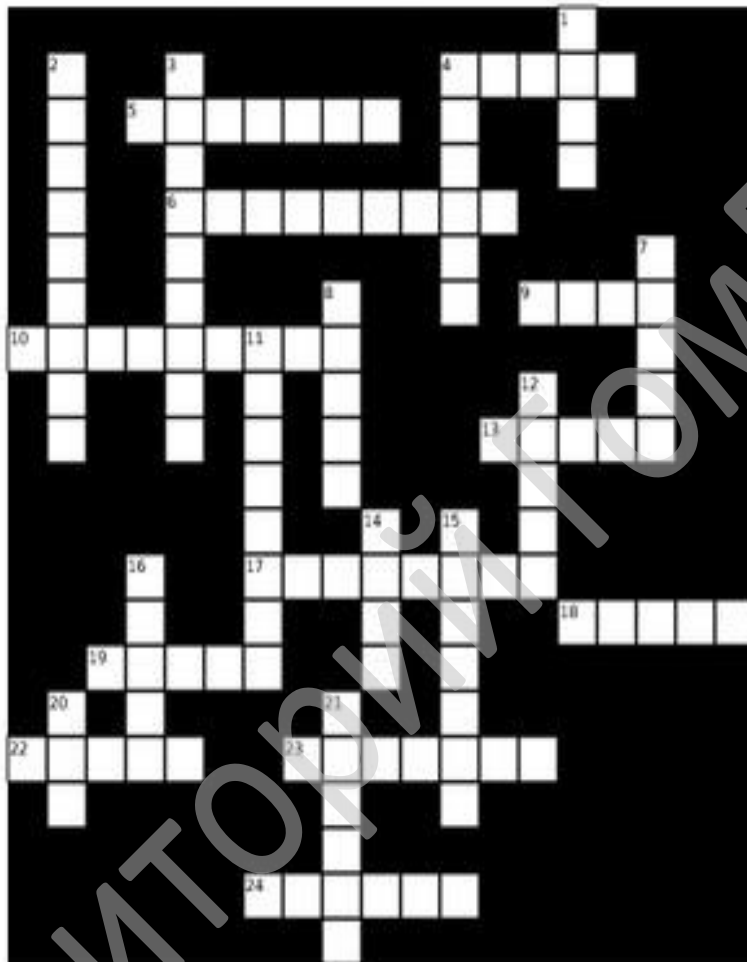


Figure 5

Respiratory System

Mrs. Allen

crossword puzzle using vocabulary terms



- Across**
- 4 tiny hairs
 - 5 windpipe
 - 6 describes breathing
 - 9 part of lung
 - 10 bone-like substance
 - 13 bronchial
 - 17 tiny air sac of the lung
 - 18 carries oxygen
 - 19 organs for breathing
 - 22 Lung with three lobes
 - 23 let air out
 - 24 membranes

- Down**
- 1 protects lungs and heart
 - 2 Strong breathing muscles
 - 3 using air
 - 4 describes sinuses
 - 7 vessels to heart
 - 8 four chambered organ
 - 11 alveoli
 - 12 Thick fluid in sinuses
 - 14 Lung with two lobes
 - 15 air sacs
 - 16 opening for air
 - 20 what we breathe
 - 21 element we need to live

Figure 6

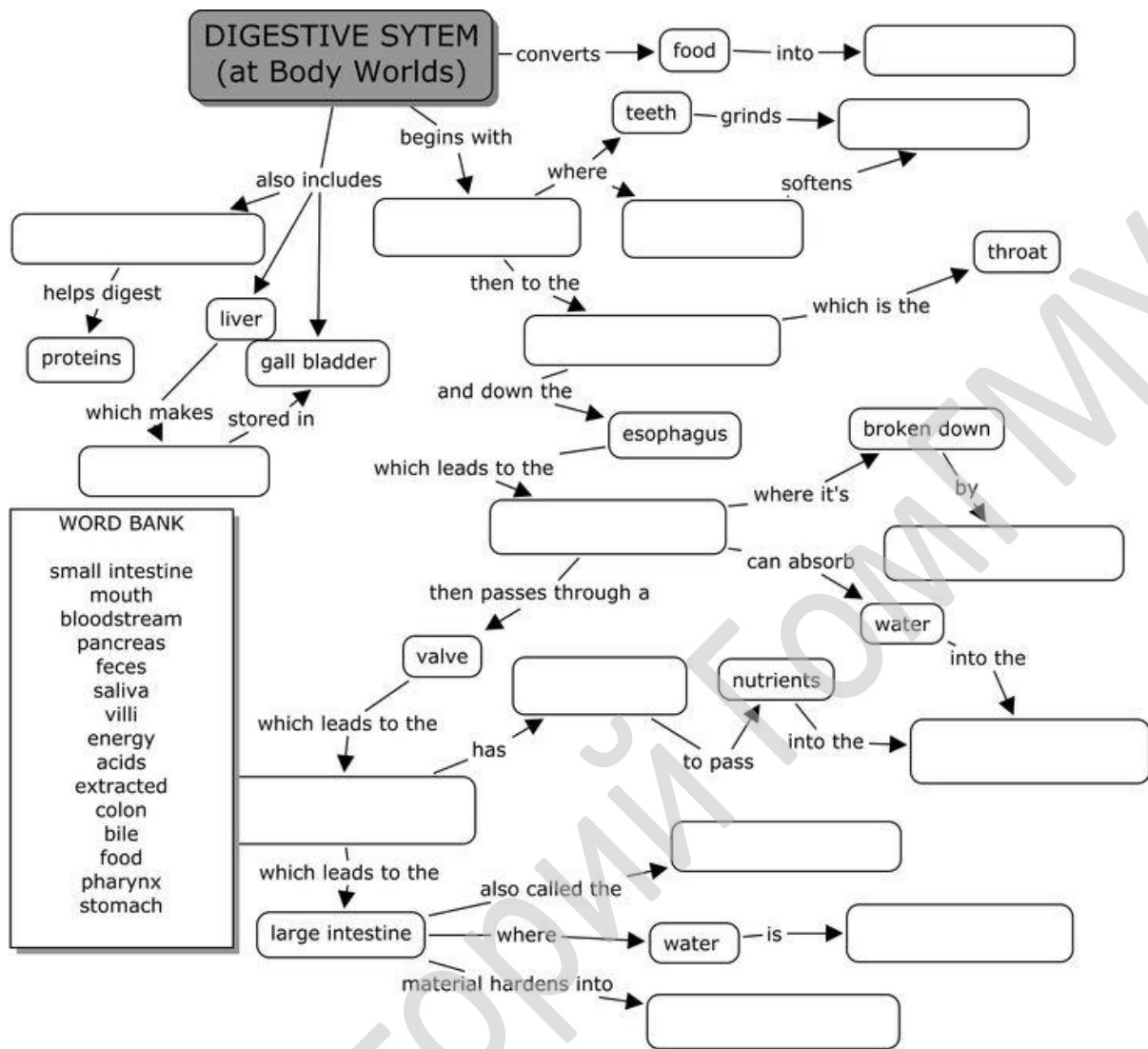
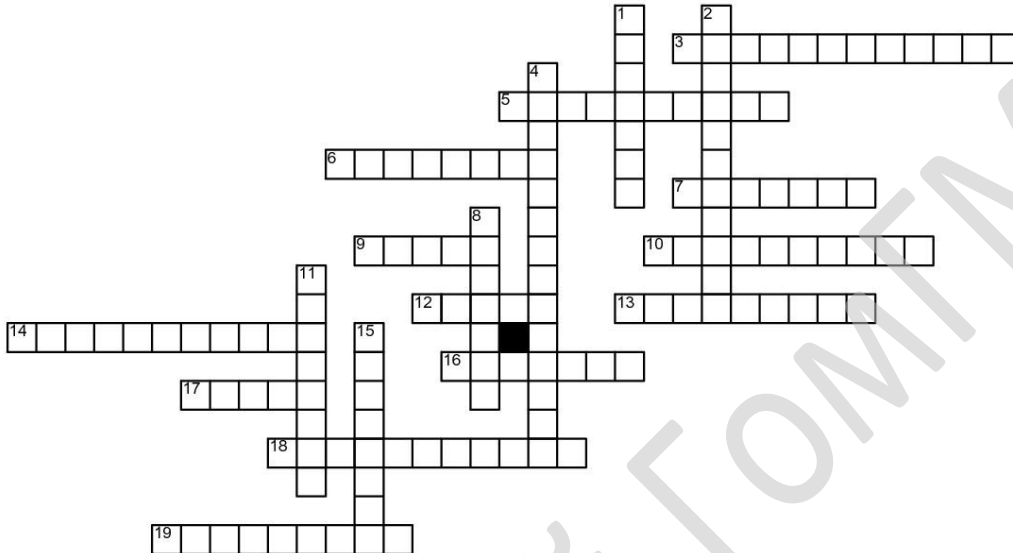


Figure 7

Digestion Crossword #2

Complete the puzzle using the clues shown below.



Across

3. Muscular contractions that result in mixing of the contents of the digestive tract.
5. What whole proteins are eventually broken down to.
6. One of two types of changes that occur during digestion.
7. The sphincter that prevents stomach contents from re-entering the esophagus.
9. The name for the inside of the tube of the gastrointestinal tract.
10. Process of taking nutrients into the body.
12. The food released from the stomach is called _____.
13. The specific substance being acted upon by an enzyme a _____.
14. The molecule formed for transport of fat soluble nutrients after absorption.
16. A pH of 7.0 is considered _____.
17. Water soluble nutrients are taken to the _____ after digestion.
18. Storage site for bile.
19. A muscle that opens and closes to allow or disallow the passage of food.

Down

1. The sphincter that controls stomach emptying rate.
2. Muscular contractions that propel food along the digestive tract.
4. Site where fat digestion begins.
8. The proteins that act to chemically change food are digestive _____.
11. Creates enzymes that act on carbohydrates, protein and fats.
15. A pH greater than 7.0 is considered _____.

Created with Discovery Channel School's PuzzleMaker.



Figure 8

Table 1 — Digestive Juices Produced by the Digestive and Accessory Organs

Organ	Main Digestive Juices Secreted	Action
Salivary glands	Salivary amylase	Begins starch digestion
Stomach	Hydrochloric acid(HCl)	Breaks down proteins
	Pepsin	Begins protein digestion
Small intestine	Peptidases	Digest proteins to amino acids
	Lactase, maltase, sucrase	Digest disaccharides to monosaccharides
	Sodium bicarbonate	Neutralizes HCl
	Amylase	Digests starch
Pancreas	Trypsin	Digests proteins to amino acids
	Lipases	Digest fats to fatty acids and glycerol
Liver	Nucleases	Digest nucleic acids
	Bile salts	Emulsify fats

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