**Roots and Combining Forms**

A *root* is the foundation of a medical term. A root usually indicates the structure of the body involved (oste = bone), but it can also indicate other things such as a colour (melan = black) or a substance (lip = fat). Often two different roots have the same or similar meaning (pneum, pulmon = lung). This occurs because one is derived from Greek and the other from Latin.

Sometimes a medical term can include more than one root. In this case the two roots are joined using a combining vowel which is normally the letter *o*. A root with a combining vowel is called a *combining form*(oste/o, melan/o, pneum/o, pulmon/o).

**Common Combining Forms**

**Exercise 1: Match the combining form with its meaning**

1. glyc/o-, glycos/o- ………. bent
2. kyph/o ………. solid, three- dimensional
3. necr/o- ………. narrow, contracted
4. orth/o- ….…. dry
5. scoli/o- ………. sweet, glucose, sugar
6. sten/o ….….. dead
7. stere/o- ….…. curved, bent
8. therm/o- ………. straight, correct
9. xer/o- ………. hot

**Other common combining forms**

**Exercise 2: Match the combining form with its meaning**

1. acr/o- ………. hernia
2. andr/o ……… clot
3. cel/o ……… relating to water
4. chol/e ……… menstruation
5. gynaec/o ……… extremities
6. hydr/o- ……… pleura
7. lip/o ……… male
8. lith/o ……… mind
9. men/o ………. bile
10. onc/o ………. female, woman
11. pleur/o …..…. urine
12. psych/o …..…. tumour
13. sarc/o ……… fat
14. thromb/o …..… flesh, connective tissue
15. ur/o ……... stone, calculus

## Exercise 3: Add an appropriate combining form to create terms with the following meaning

1. **…….**iasis presence of calculi
2. **…….**logy study of cancerous tumours
3. **…….**pnoea difficulty in breathing that is relieved in the upright position
4. **…….**suria presence of glucose in the urine
5. **…….**itis inflammation of the pleura
6. **……..**megaly enlargement of the limbs
7. de**…….**tion loss of water from the body or a tissue
8. **……..o**edema swelling due to excess fat and fluid in subcutaneous tissues
9. **……..**plegia heat stroke (sunstroke)
10. **……..**lytic causing the dissolution of a blood clot

**Combining forms denoting** **colour**

|  |  |  |  |
| --- | --- | --- | --- |
| **Combining Form** | **Meaning** | **Combining Form** | **Meaning** |
| **alb/i, albin/o, leuk/o, leuc/o**  | white | **glauc/o**  | bluish grey, opaque |
| **chlor/o**  | green | **jaund/o, xanth/o**  | yellow |
| **cyan/o**  | blue | **melan/o**  | black |
| **cirrh/o**  | tawny, orange-yellow | **poli/o**  | grey |
| **erythr/o, rub/o** | red | **purpur/o**   | purple |
| **eosin/o**  | red, rosy; acidic dye |  |  |

**Exercise 4: Choose the appropriate combining form to create terms**

1. **…….**penia decrease in the number of white blood cells
2. **…….**osis bluish discolouration of skin or mucous membranes
3. **…….**phil a type of white blood cell that takes up the red dye eosin
4. **…….**ice yellow discolouration of the skin, and eyes
5. **…….**osis disease causing the liver to turn an orangish colour
6. **…….**choly gloominess once thought to be caused by excess black bile
7. **…….**a disease characterized by purple patches on the skin
8. **…….**cyte red blood cell
9. **…….**myelitis disease in which the grey matter of the spinal cord is inflamed
10. **…….**phyl any of a group of green pigments found in photosynthetic organisms

**Combining forms denoting substances**

|  |  |  |  |
| --- | --- | --- | --- |
| Combining Form | Meaning | Combining Form | Meaning |
| adip/o, lip/o, steat/o  | fat | **galact/o, lact/o, lact/e, lact/a, lact/i** | milk |
| amyl/o  | starch | **hydr/o** - | water |
| azot/o  | nitrogen | **kal/i**  | potassium |
| glyc/o, gluc/o, sacchar/o, sucr/o - | sugar | **natr/i**  | sodium |

**Exercise 5: Choose the appropriate combining term to create terms**

1. **…….**therapy treatment with water
2. **…….**ation formation of milk
3. **…….**ine a sugar like substance
4. **…….**genous producing fat
5. **…….**ose containing fat
6. **…….**uresis secretion of potassium in the urine
7. hyper**…….**aemia excess sodium in the blood
8. **…….**ose a monosaccharide sugar
9. **…….**ase any of several digestive enzymes that break down starches
10. …….oedema swelling due to excess fat