

**Oropharyngeal isthmus (isthmus faucium)** – soft palate, palatoglossal and palatopharyngeal arches, the root of the tongue. Approximation of the arches, to shut off the mouth from the oropharynx, is essential to deglutition.

**Palatine tonsil (tonsilla palatina)**

sinus tonsillaris  
plica triangularis  
fossa supratonsillaris  
cryptae tonsillares  
tonsillitis – tonsillar pegs  
paratonsillar vein – venous hemorrhage  
tonsillectomy

**Muscles of the tongue**

aponeurosis linguae, septum linguae, hypoglossal nerve (CN XII).

Extrinsic muscles:

**M. genioglossus**

**M. styloglossus**

**M. palatoglossus**

**M. hyoglossus** – (canalis paralingualis contains the lingual artery)

Intrinsic muscles:

**Superior longitudinal muscle (m. longitudinalis superior)**

**Inferior longitudinal muscle (m. longitudinalis inferior)**

**Transverse muscle (m. transversus)**

**Vertical muscle (m. verticalis)**

**Muscles of the soft palate**

**M. tensor veli palatini** - trigeminal nerve (IX., X.)

**M. levator veli palatini** - plexus pharyngeus (IX., X.)

**Musculus uvulae** - plexus pharyngeus (IX., X.)

**M. palatoglossus** - plexus pharyngeus (IX., X.)

**M. palatopharyngeus** plexus pharyngeus (IX., X.)

Movements of the palate are essential to swallowing, blowing and speech; all requires variable degrees of closure of the nasopharynx. In deglutition closure prevents regurgitation into the nasopharynx. During closure levatores veli palatini pull the soft palate up and back towards the posterior pharyngeal wall while simultaneously the palatopharyngeal muscle raises the wall.

**PHARYNX**

fornix pharyngis

pharyngeal recess

cavum pharyngis

fascia pharyngobasilaris

**Pars nasalis pharyngis (nasopharynx)**

choanae

ostium pharyngeum tubae auditivae - torus tubarius - plica salpingopharyngea, plica salpingopalatina, torus levatorius

tonsilla pharyngea - fornix pharyngis

tonsilla tubaria

Waldeyer's lymphoepithelial ring

### **Pars oralis pharyngis (oropharynx)**

- isthmus faucium

### **Pars laryngea pharyngis (laryngopharynx)**

- aditus laryngis - epiglottis, aryepiglottic folds
- recessus piriformis
- plica n. laryngei

### **Muscles of the pharynx**

**Constrictors** - raphe pharyngis

**M. constrictor pharyngis superior:**

1. Pars pterygopharyngea –lamina medialis proc. pterygoidei
2. Pars buccopharyngea –raphe pterygomandibularis
3. Pars mylopharyngea –linea mylohyoidea mandibulae
4. Pars glossopharyngea – transverse muscle of the tongue

**M. constrictor pharyngis medius:**

1. Pars chondropharyngea –cornu minus ossis hyoidei
2. Pars ceratopharyngea - cornu majus ossis hyoidei

**M. constrictor pharyngis inferior:**

1. Pars thyropharyngea –linea obliqua of the thyroid cartilage
2. Pars cricopharyngea – cricoid cartilage

**Levators:**

**M. stylopharyngeus** – from the processus styloideus caudally and medially - the fissure between the superior and middle constrictors.

**M. palatopharyngeus**

**M. salpingopharyngeus** – from the cartilaginous part of the auditory tube

The pharynx actively participates in swallowing, respiration and phonation. During swallowing the muscles of the soft palate open the auditory tube to ventilate the tympanic cavity.

### **Mechanism of the deglutition**

The first stage of the swallowing is voluntary: the anterior part of the tongue is raised and pressed against the hard palate. A bolus is pushed dorsally. The hyoid bone is moved up and forwards by the suprahyoid muscles. The root of the tongue is drawn up and back and palatoglossal arches are approximated, pushing the bolus through the isthmus of the fauces into the oropharynx.

The second stage is involuntary. The soft palate is elevated, tightened and firmly approximated to the posterior pharyngeal wall (by the upper pharyngeal constrictor). Then the

larynx and pharynx is drawn up (stylopharyngeus, palatopharyngeus, thyrohyoid muscles). Simultaneously, the aryepiglottic folds are approximated and epiglottis bends back onto the laryngeal inlet excluding the bolus from the larynx. The bolus slips into the lowest part of the pharynx.

The last stage is the expulsion of the bolus into the oesophagus, by the inferior constrictors.

## **OESOPHAGUS**

1) **Pars cervicalis**

2) **Pars thoracica**

**pars retrotrachealis**

**pars retropericardiaca**

3) **Pars abdominalis** - cardia - gastrooesophageal junction

3 physiological narrowings

hiatus oesophageus

adventitia, serosa

oesophagoscopy, oesophagography

## **STOMACH (GASTER, VENTRICULUS)**

regio hypochondriaca sinistra

J-shaped stomach, steer horn (transverse type)

cardia

pars cardiaca

fundus (fornix) ventriculi - stomach bubble

incisura cardiaca

corpus ventriculi - canalis gastricus

pars pylorica - antrum pyloricum, canalis pyloricus

pylorus - ostium pyloricum

paries anterior

paries posterior

curvatura minor - incisura angularis

curvatura major

Functionally:

**Pars digestoria** (digestive segment) - fundus and canalis gastricus.

**Pars egestoria** (evacuating segment) - gastric sinus (antrum) and canalis pyloricus

Plicae gastricae – sulcus salivarius

Mucinous glands – mucus

Tubulous glands - succus gastricus

Areae gastricae - foveolae gastricae

Musculature – fibrae obliquae

- stratum circulare - m. sphincter pylori

- stratum longitudinale

After the stomach is filled the musculature contracts and is in the rest (peristole), the mucosa adheres to the content (20 min). Then rhythmical contractions (peristalsis) begin. Peristaltic waves start in the cardia each 15 -30 seconds and get to the pylorus in 60 seconds. Four waves

may be seen together at the X-ray picture. Peristalsis serves for the mixing of the content to the pulpy chyme that in small portions is emptied to the duodenum.

Omentum minus – lig. phrenicogastricum, hepatogastricum, hepatoduodenale  
 Omentum majus - lig. gastrocolicum, lig. gastrolienale

## **INTESTINUM**

### **Intestinum tenue**

ansae intestinales

#### **Duodenum**

pars superior - bulbus duodeni

flexura duodeni sup.

pars descendens duodeni

flexura duodeni inf.

pars horizontalis

pars ascendens

flexura duodenojejunalis

plicae circulares Kerkringi

villi intestinales

crypts of Lieberkuhn – glandulae intestinales

glandulae duodenales Brunneri

plica longitudinalis duodeni - papilla duodeni major Vateri

- papilla duodeni minor

#### **Jejunum and ileum - jejunioileum**

<b>JEJUNUM</b>	<b>ILEUM</b>
<b>upper left part of the inframesocolic space</b>	<b>lower right part of the inframesocolic space</b>
<b>wider (3-4 cm)</b>	<b>narrower (2-3 cm)</b>
<b>more plicae circulares</b>	<b>fewer plicae circulares</b>
<b>1-2 arcades</b>	<b>2-3 arcades</b>
<b>folliculi lymph. solitarii</b>	<b>folliculi lymph. aggregati</b>

mesenterium

ostium ileocaecale - valva ileocaecalis