Contents

1 Learning the Language of Anatomy 1

The subject of anatomy 1
Main subdivisions of the human body 1
Descriptive terms 2
Structures constituting the human body 5
Introduction to the skeleton 6
Some features of joints 11
Organ systems 11
Introduction to the respiratory system 11
Introduction to the alimentary system 13
Introduction to the urinary system 14
Introduction to the reproductive system 14
Introduction to the endocrine glands 16
The lymphoid organs 17
Introduction to the cardiovascular system 17
Introduction to the nervous system 22
Autonomic nervous system 24

2 The Skull, Mandible & Hyoid bone 25

General review of the skull 25
The skull as seen from the front 31
The orbit 36
The skull as seen from above 37
The skull seen from behind 37
The skull as seen from the lateral side 38
The skull as seen from below 46
The cranial fossae 55
Foramina of the skull 59
The nasal cavity 66
The paranasal sinuses 67
The mandible 68
The hyoid bone 72

3 Relevant Anatomy of: The Vertebral Column The Sternum and Ribs The Clavicle and Scapula 75

Structure of a typical vertebra 75
Atypical cervical vertebrae 79
The sacrum and coccyx 83
The sternum and ribs 84
The clavicle and scapula 88

4 Atlas of the Head and Neck 91

5 Introduction to the Head & Neck 113

An overview of the layout of structures in the head and neck 115
Main arteries of the head and neck 126
Main veins of head and neck 127
Lymph nodes of the head and neck 128
Main nerves of the head and neck 128
Endocrine glands of head and neck 131

6 Scalp, Face, Parotid Region and Lacrimal Apparatus 133

The scalp 133
The face 135
Muscles of the face 140
Parotid gland 144
Vessels of the face and parotid region 147
Nerves of the face 148

7 Temporal and Infratemporal Regions 149

Temporal region 149
Infratemporal fossa 150
Muscles of mastication 153
The temporomandibular joint 157

8 Submandibular Region and Tongue 160

Submandibular region 160
The submandibular gland 162
The sublingual gland 164
Suprahyoid muscles 165
The tongue 168
Muscles of the tongue 170
Blood vessels, lymphatics and nerves of the tongue 172

9 Cranial Cavity and Vertebral Canal 174

The meninges 175
Intracranial venous sinuses 182
Nerves and arteries in the cranial cavity 182
The spinal cord 184

10 General Features of Joints Joints of Head & Neck 189

Classification of joints 189
Classification of joints on basis of structure 189
Classification of joints on basis of movements 193
Joints of head & neck 194
Intervertebral joints 195

11 Muscles of Neck Triangles of the Neck Deep Cervical Fascia 200

Muscles of the neck 200
Sternocleidomastoid..... 201
Infrahyoid muscles..... 203
Lateral vertebral muscles..... 204
Anterior vertebral muscles (Prevertebral muscles)..... 206
Deep muscles of the back 207
Triangles of the neck..... 211
The posterior triangle..... 211
Subdivisions of the anterior triangle 213
Suboccipital triangle 214
Deep cervical fascia..... 215
Two muscles of the upper limb seen in the neck..... 216

12 Blood Vessels of Head and Neck..... 218

Arteries 218
The common carotid arteries..... 218
Internal carotid artery..... 220
The external carotid arteries 224
The subclavian arteries..... 233
The veins 241
The internal jugular veins 241
The subclavian veins..... 243
The intracranial venous sinuses 244
Veins draining the eyeball and orbit..... 248
Tributaries of internal jugular veins in the neck..... 249
Other veins of the head and neck 251

13 Nerves of Head and Neck.....254

Cervical nerves 254
The cervical plexus and its branches 256
Brachial plexus 261
The cranial nerves 262
Types of fibres in peripheral nerves.....263
The olfactory nerves.....263
The optic nerve.....264
The oculomotor nerve 265
The trochlear nerve 268
The abducent nerve.....269
The trigeminal nerve.....270
The facial nerve 285
The vestibulocochlear nerve 292
The glossopharyngeal nerve.....294
The vagus nerve 298
The accessory nerve 300
The hypoglossal nerve 303
The sympathetic trunk 304
Cervical part of the sympathetic trunk.....305
Some basic facts about autonomic nerves 306

14 Brief Consideration of the Orbit, Eye and Ear 310

The orbit.....310
The lacrimal gland.....313
The eyeball 314
The ear and some related structures 315
The auricle 317
External acoustic meatus 317
The middle ear 318
The internal ear.....320

15 Oral Cavity, Nasal Cavity, Pharynx, Larynx, Trachea, Oesophagus 324

The oral cavity..... 324
The palate..... 326
The teeth..... 327
The nasal cavity and paranasal sinuses..... 329
The paranasal sinuses 334
The pharynx..... 336
Muscles of the pharynx..... 338
The palatine tonsils..... 340
The larynx..... 342
Interior of the larynx 345
Muscles of the larynx..... 346
The trachea..... 347
The oesophagus 349

16 Endocrine Glands of the Head and Neck..... 351

The hypophysis cerebri 351
The pineal body..... 353
The thyroid gland..... 354
The parathyroid glands 357
The carotid sinus 357
The carotid bodies..... 358

17 Lymphatics of the Head and Neck..... 359

Lymph nodes and lymphatic drainage 359
Lymph nodes of head and neck..... 360
Lymphatic drainage of some regions of the head and neck..... 362

18 Gross Anatomy of the Brain 367

Introduction to the central nervous system 367
Gross anatomy of the brain 368
Some features of the internal structure of the brainstem.....371
Gross anatomy of the cerebellum.....376
Gross anatomy of the cerebral hemispheres 378
An introduction to some structures within the cerebral hemispheres.....386
Important functional areas of the cerebral cortex.....388
White matter of cerebral hemispheres 388

19 The Ventricles of the Brain Blood Supply of the Brain.....390

The lateral ventricles 390
The third ventricle 392
The fourth ventricle 392
The cerebrospinal fluid.....393
Arteries that supply the brain....394
Arterial supply of the cerebral cortex.....397
Venous drainage of the brain.....400

20 Brief Consideration of the thorax 401

Some facts about the thoracic wall..... 401
The thoracic cavity..... 405
Trachea, bronchi, lungs and pleura 407
Heart and pericardium..... 410
Arteries of the thorax 416
Veins of the thorax..... 420
Nerves of the thorax..... 424
Lymphatics of the thorax..... 425

21 Brief Consideration of the Abdomen..... 428

Some aspects of the skeleton 428
The abdominal walls 435
Muscles of anterior abdominal wall..... 440
Nerves of anterior abdominal wall..... 444
Blood vessels of anterior abdominal wall 445
Posterior abdominal wall..... 445
Walls of the pelvis 446
Regions of the abdomen 447
Some remarks about the peritoneum 448
The perineum and related genital organs 450
Gastrointestinal tract..... 455
The liver..... 464
The pancreas 467
The spleen 470
The suprarenal glands 470
Urinary organs..... 471
Male genital organs 475

Brief Consideration of the Abdomen (Continued)

Female reproductive organs.....478
Arteries of the abdomen and pelvis.....480
Veins of the abdomen.....490
The hepatic portal system.....491
Nerves of the abdomen 491
Lymphatics of abdomen & pelvis 496

22 General Review of The Upper and Lower Extremities 499

The Upper Extremity 499
Muscles of the Upper Limb.....501
Blood Vessels of Upper Limb 510
Nerves of the Upper Limb 512
The Lower Extremity.....517
Muscles of the Lower Limb 519
Arteries of the Lower Limb.....525
Veins of the Lower Limb 527
Nerves of the Lower Limb 527

Index.....532