

Contents

Heart	Heart rate	9
	Intracardiac and intravascular pressures	17
	Pericardial pressure	23
	Jugular vein pulse	24
	Arterial blood pressure	25
	Systemic vascular resistance	41
	Flow:	
	– Introduction	43
	– Invasive measurements:	
	Cardiac output, stroke volume	44
	– Noninvasive measurements:	
	Cardiac output, stroke volume	50
	Flow velocity	55
	Cardiac dimensions, volumes and masses:	
	– Autopsy data	63
	– Invasive measurements	72
	– Noninvasive measurements	75
	Total heart volume	99
	Cardiothoracic ratio	100
	Blood volume	101
	Systolic function:	
	– Introduction	107
	– Invasive measurements:	
	Wall stress	109
	Ejection fraction	110
	Wall motion	112
	Isovolumic contraction	115
	– Noninvasive measurements:	
	Wall stress	116
	Ejection fraction	116
	Wall motion	119
	Systolic time intervals	123
	Heart sounds	128
	Diastolic function:	
	– Introduction	129
	– Relaxation	132
	– Rapid filling	133
	– Diastasis	138
	– Atrial filling	139
	Electrical activity of the heart:	
	– Recordings from the body surface	140
	– Intracardiac recordings	166
	Coronary circulation	173
Pulmonary circulation	Pulmonary vascular resistance	182
	Pulmonary blood volume	184
	Pulmonary capillary blood volume	184
	Pulmonary capillary blood flow	186
	Ventilation/perfusion ratio	187
	Venous admixture	187
	Alveolar–arterial oxygen pressure difference	188
	Blood gases	190
	– Oxygen pressure, carbon dioxide pressure and pH in arterial blood	191
	– Oxygen pressure, carbon dioxide pressure and pH in mixed venous blood	195
	– Arteriovenous oxygen content difference	195
	– Oxygen saturation	197
	Lactate	201
	Oxygen uptake	204
	Anaerobic threshold	215
Peripheral circulation		220
Hormones	Introduction	230
	Catecholamines	231
	Renin–angiotensin system	241
	Kallikrein–kinin system	248
	Aldosterone	251
	Atrial natriuretic factor	254
	Serotonin	258
	Vasopressin	259
	Endothelin-1	262
Exercise test protocols		263
	Abbreviations and symbols	265
	Index	267