

Contents

Foreword to the First edition	v
Preface to the Fifth Edition	vii
Preface to the First Edition	ix
Units in chemical pathology with conversion factors	xiii
Common abbreviations	xvii
1 The kidney: renal calculi	1
2 Sodium and water metabolism	25
3 Potassium metabolism: diuretic therapy	56
• Investigation of renal, water and electrolyte disorders	70
4 Hydrogen ion homeostasis: blood gas levels	76
• Investigation of hydrogen ion disturbances	103
5 The hypothalamus and pituitary gland	107
6 Adrenal cortex: ACTH	118
7 The reproductive system: pregnancy	133
• Investigation of pituitary, adrenal and gonadal disorders	150
8 Thyroid function: TSH	158
• Investigation of thyroid function	169
9 Calcium, phosphate and magnesium metabolism	172
• Investigation of disorders of calcium metabolism	194
10 Carbohydrate metabolism and its interrelationships	200
• Investigation of disorders of carbohydrate metabolism	225
11 Plasma lipids and lipoproteins	231
• Investigation of suspected hyperlipidaemia	245
12 Intestinal absorption: gastric and pancreatic function	248
• Investigation of suspected malabsorption, gastric and pancreatic function	267
• Principles of intravenous feeding	270
13 Vitamins	274
14 Liver disease and gall stones	287
• Investigation of suspected liver disease	304
15 Plasma enzymes in diagnosis	307
16 Proteins in plasma and urine	323
• Indications for protein estimation	345
17 Clinical chemistry of the newborn	347
18 Inborn errors of metabolism	360

xii Contents

19	Purine and urate metabolism	379
20	Iron metabolism	388
	• Investigation of disorders of iron metabolism	400
21	The porphyrias	402
	• Investigation of suspected porphyria	410
22	Biochemical effects of tumours	412
23	The cerebrospinal fluid	426
	• Procedure for examination of CSF	432
24	Drug monitoring	433
25	The clinician's contribution to valid results	444
26	Requesting tests and interpreting results	454
	Reference values	463
	Index	465