

Contents



PREFACE	5
HISTORICAL INTRODUCTION	7
FETAL DEVELOPMENT	10
Morphology	11
Blood Supply	11
Histology	13
STEROID BIOCHEMISTRY	15
Nomenclature	15
Systematic Names of Steroids	17
Trivial Names	19
Biosynthesis	19
Control of Synthesis	21
Steroid Transport Systems	21
Metabolism of Adrenal Steroids	22
Cortisol Metabolism	22
Aldosterone Metabolism	22
Metabolism of Adrenal Androgens	24
Clinical Biochemistry of Adrenal Steroids	24
Urinary Steroid Metabolites	25
Secretion Rates of Adrenal Steroids	28
PHYSIOLOGY AND PHARMACOLOGY OF ADRENOCORTICAL STEROIDS	29
Control	30
Diurnal (Circadian) Cortisol Secretion	30
Biological Effects	31
Pharmacology	31
Beneficial Effects of Pharmacologic Doses of Adrenocortical Steroids	32
Adverse Effects	33
<i>Glucocorticoid Side Effects</i>	33
<i>Mineralocorticoid Side Effects</i>	35
Aldosterone	35
Variations of Plasma Aldosterone Concentrations	37
Mineralocorticoid Action	37
Aldosterone Antagonists	38
Synthetic Steroids	39
ADDISON'S DISEASE	41
Adrenocortical Insufficiency	41
Addison's Disease	41
Clinical Manifestations	43
Treatment	47
CUSHING'S SYNDROME	48
Diagnosis	52
Screening Test for Cushing's Syndrome	52
Differential Diagnosis of Cushing's Syndrome	54
Treatment	57
CONN'S SYNDROME	58
Primary Hyperaldosteronism	58
Other Causes of Hyperaldosteronism	60
Bartter's Syndrome	60
CONGENITAL ADRENAL HYPERPLASIA	61
Other Enzymatic Defects	62
GLOSSARY	66
ACKNOWLEDGEMENTS	68