Female reproductive success relies upon coordinated interactions among the hypothalamus, the pituitary, and the ovaries and the subsequent hormonal priming of the endometrium for implantation. The absence of oocyte fertilization or the failure of embryo implantation results in ovarian hormone withdrawal, the onset of menses, and the beginning of the next reproductive cycle. Failure of any single organ in the quartet to play its part can result in amenorrhea.

Although amenorrhea is a common problem that affects up to 10% of reproductive aged women, there has not been a major textbook solely dedicated to this clinical problem for more than 20 years. The main purpose of this first edition of Amenorrhea: A Case-Based Clinical Guide was to organize a comprehensive review that updates clinicians on our current knowledge regarding normal female reproductive physiology and to discuss the pathophysiology, diagnostic algorithms, and therapeutic intervention for amenorrhea. With this principal goal, we have invited several world experts on female reproductive physiology to provide clinicians with highly practical information regarding the epidemiology and management of amenorrhea. To that end, the content of this textbook has been divided into three sections; the first section is composed of two chapters that provide a comprehensive updated review on our basic science and clinical knowledge about the organ systems responsible for normal physiology of the menstrual cycle. This section focuses on the roles of the endometrium and the hypothalamic–pituitary–ovarian axis in the menstrual cycle. The second section includes discussions about menstrual cycle disruption as it relates to hypothalamic–pituitary dysfunction, surgical and natural menopause, genetic defects, premature ovarian failure/insufficiency, and the effects of caloric excess and restriction. The third section of this book provides an update on the physiological effects of prolonged amenorrhea induced surgically or by hypothalamic dysfunction. The third section also includes an original chapter that focuses solely on the impact of race and ethnicity on the prevalence and diagnosis of amenorrhea. When appropriate, we have also created clinical scenarios and management plans that readers may be confronted with in their daily practice.
We would like to express our deep gratitude to our incredibly supportive administrative staff, Karen Knickens and Elizabeth Abbate, without whose determined efforts this project could not have been completed. We would also like to thank all of the contributors to this book for their diligence and outstanding efforts to update clinicians on the physiology of the menstrual cycle and pathophysiology and the clinical consequences of amenorrhea. We hope that the readers will find this book to be a complete resource for information regarding amenorrhea and that this book will be a well-used reference for doctors and other health professionals who care for women.

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