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Section

1

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Chapter

1

Anatomy of the female pelvis

Caroline de Costa

LEARNING OUTCOMES

After studying this chapter you should be able to:

Knowledge criteria

- Describe the anatomy of the bony pelvis, external genitalia and internal genital organs
- Describe the blood, lymphatic and nerve supply to the external and internal genital organs
- Describe the pelvic floor and the perineum

Knowledge of the major features of the female pelvis is essential to the understanding of the processes of reproduction and childbearing and to the effect that various pathological processes may have on the pelvic organs and on the health of the woman.

The structure and function of the genital organs vary considerably with the age of the individual and her hormonal status, as will be apparent in [Chapter 16](#), which covers the changes that take place in puberty and menopause. This chapter aims to outline the major structures comprising the female pelvis, predominantly in the sexually mature female.

The bony pelvis

The bony pelvis consists of the paired innominate bones (each consisting of an ilium, ischium and pubis) and the sacrum and coccyx ([Fig. 1.1](#)).

The innominate bones are joined anteriorly at the symphysis pubis, and each articulates posteriorly with the sacrum in the sacroiliac joints. All three joints are fixed in the non-pregnant state, but during pregnancy there is

a relaxation of the joints to allow some mobility during labour and birth. The sacrum articulates with the fifth lumbar vertebra superiorly and the coccyx inferiorly.

The bony pelvis is divided into the false pelvis and the true pelvis by the pelvic brim. The true pelvis is divided into three sections: the pelvic inlet (bounded anteriorly by the superior surface of the pubic bones and posteriorly by the promontory and alae of the sacrum); the mid-pelvis (at the level of the ischial spines); and the pelvic outlet (bounded anteriorly by the lower border of the symphysis, laterally by the ischial tuberosities and posteriorly by the tip of the sacrum).

The ischial spines are easily palpable on vaginal examination during labour and provide the reference point for assessing the descent of the fetal head during labour and birth.



The external genitalia

The term *vulva* is generally used to describe the female external genitalia and includes the mons pubis, the labia majora, the labia minora, the clitoris, the external urinary meatus, the vestibule of the vagina, the vaginal orifice and the hymen ([Fig. 1.2](#)).

The **mons pubis**, sometimes known as the *mons veneris*, is composed of a fibrofatty pad of tissue that lies above the pubic symphysis and, in the mature female, is covered with dense pubic hair. The upper border of this hair is usually straight or convex upwards and differs from the normal male distribution. Pubic hair generally begins to appear between the ages of 11 and 12 years.

The **labia majora** consist of two longitudinal cutaneous folds that extend downwards and posteriorly from the