

Microscopic anatomy

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The appendix varies considerably in length and circumference. The average length is between 7.5 and 10 cm. The lumen is irregular, being encroached on by multiple longitudinal folds of mucous membrane lined by columnar cell intestinal mucosa of colonic type (Figure 76.4). Crypts are present but are not numerous. In the base of the crypts lie argentaffin cells (Kulchitsky cells), which may give rise to neuroendocrine tumours (NETs) (see Neuroendocrine tumours of the appendix). The submucosa contains numerous lymphatic aggregations or follicles. While no discernible change in immune function results from appendicectomy , the prominence of lymphatic tissue in the appendix of young adults seems to be important in the aetiology of appendicitis (see Acute appendicitis).

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Figure 76.4 Normal vermiform appendix. The narrow lumen is bounded by mucosa, which may be arranged in folds. There is usu

ally abundant lymphoid tissue in the mucosa, especially in younger individuals. This may encroach on and further narrow the lumen. The mucosa is bounded by a relatively thin muscularis mucosa (courtesy of Dr P Kelly, FRCPath, Dublin, Ireland).

While there are isolated reports of perityphlitis (fatal inflammation of the caecal region) from the late 1500s, recognition of acute appendicitis as a clinical entity is attributed to Reginald Fitz, who presented a paper to the first meeting of the Association of American Physicians in 1886 entitled 'Perforating inflammation of the vermiform appendix'. Soon afterwards, Charles McBurney described the clinical manifestations of acute appendicitis, including the point of maximum tenderness in the right iliac fossa that now bears his name. The incidence of appendicitis seemed to rise greatly in the first half of the twentieth century , particularly in Europe, America and Australasia, with up to 16% of the population undergoing appendicectomy . In the past 30 years , the incidence has fallen dramatically in these countries, such that the individual lifetime risk of appendicectomy is 8.6% and 6.7% among males and females, respectively . Acute appendicitis is relatively rare in infants and becomes increasingly common in childhood and early adult life, reaching a peak

incidence in the teens and early twenties. After middle age, the risk of developing appendicitis is quite small. The incidence of appendicitis is equal among males and females before puberty. In teenagers and young adults, the male-to female ratio increases to 3:2 at age 25; thereafter, the greater incidence in males declines.

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