

Pathophysiology

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Classic teaching points to a reflex inhibition of intestinal motility caused by deranged ANS inputs. This teaching, which fits nicely with basic 'fight and flight' concepts of increased sympathetic signalling and parasympathetic withdrawal during trauma (including surgery), has been superseded by the concept of a two-phase response. First, an immediate stress response, mediated by spinal reflexes and activation of the hypothalamic-pituitary-adrenal axis (HPA) axis, leads to a decrease or abolition of motility. This is then followed very rapidly by evolution of a more prolonged inflammatory response in the bowel wall itself, mediated first by mast cell activation and thence recruitment and activation of macrophages and neutrophils (Figure 73.3). These lead to inhibition of enteric neuronal and smooth muscle function as well as further effects on spinal reflexes.

Nomenclature Ileus (including postoperative ileus) Acute colonic pseudo-obstruction Intestinal pseudo-obstruction Megacolon Constipation and irritable bowel syndrome

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This is poorly understood. It can however be appreciated that, like ileus, risk factors reflect both 'imbalanced' extrinsic autonomic innervation and an 'inflammatory' state. Evidence to support the former is provided by the response to anticholinesterase pharmacological therapy.

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