ENHANCED RECOVERY AFTER SURGERY

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Modern understanding of the metabolic response to surgical injury and the mediators involved has led to a complete reappraisal of traditional perioperative care and the process known as ERAS. ERAS is evidence based on the strong scien tific rationale for avoiding unmodulated exposure to stress, prolonged fasting and excessive administration of intravenous (saline) fluids (Figure 1.8). ERAS principles are now applied by protocol to many types of major surgery , bringing considerable benefit in terms of improved outcomes. Reductions in length of hospital stay after surgery of 30–50% are common, with associated savings in healthcare costs . ERAS depends on a multimodal approach where the combined e ff ects of several interventions achieve significant benefits. The widespread adoption of minimal access (e.g. laparoscopic) surgery is a key Figure 1.8 of surgical injury and enhance the rate of patients' return to homeostasis and recovery . Modulating the stress/inflammatory response at the time of surgery may have long-term sequelae over periods of months or longer. For example, β -blockers are associated with improved short- and long-term survival after major surgery , perhaps by modulating the e ff ects of the hyper - adrenergic state induced by surgical stress. Equally , in 'open' surgery the use of epidural analgesia to reduce pain, block the cortisol stress response and attenuate postoperative insulin resistance may , via e ff ects on the bod y's protein economy , favourably a ff ect many of the patient-centred outcomes that are important to postoperative recovery . However, because of the reduction in wound size and tissue trauma, it should be noted that epidural analgesia is no longer recommended for laparoscopic surgery . Patient-controlled analgesia is usually su ffi cient and avoids the fluid shifts and hypotension seen with epidurals. Adjuncts such as 'one-shot' spinal diamorphine and/or a 6–12-hour infusion of intravenous lidocaine have been suggested to be opiate sparing, to improve gut function and to enhance overall recovery . Summary box 1.9 A proactive ERAS approach to prevent unnecessary aspects of the surgical stress response /uni25CF /uni25CF /uni25CF /uni25CF -

Surgery Multimodal ERAS intervention Functional capacity Traditional care Days Weeks Enhanced recovery after surgery (ERAS) programmes use multimodal techniques to limit pain, /f_l uid shifts and tissue damage and to enhance nutrition and rehabilitation in order to minimise the stress response. They have been hugely successful in improving outcomes. Minimal access techniques Blockade of afferent painful stimuli (e.g. epidural analgesia, spinal analgesia, wound catheters) Minimal periods of starvation Early mobilisation

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