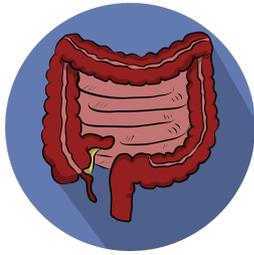


EUPEMEN PROTOCOL

BOWEL OBSTRUCTION

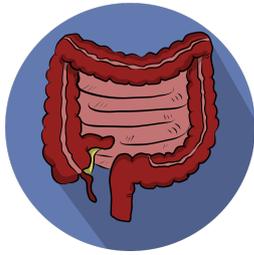
1	Preoperative Anaesthetist, Surgeon
1.1	Routine preoperative assessment Physical examination, abdominal X-ray and full blood laboratory analysis including C-reactive protein.
1.2	Clinical scoring systems For elderly patients, fragility scores should be used such as the modified frailty index and VIG Express. The Beers criteria should be reviewed for preventing delirium in adults over 65 years old.
1.3	Normothermia Ensure preoperative normothermia in frail patients by using heat blankets.
1.4	Avoid urinary catheterization Use only if necessary.
1.5	Perioperative glycemia control For diabetic patients use local hospital protocol for diabetics undergoing surgery. In patients at risk of developing insulin resistance (obese and elderly patients) and in surgeries lasting more than 1 hour, avoid blood glucose levels higher than 180 mg/dL.
1.6	Antibiotic prophylaxis Antibiotic prophylaxis should be given in all cases and the type of antibiotics should be chosen according to the local hospital policy.
1.7	Nasogastric tube Nasogastric tube placement is recommended.
1.8	Perioperative care bundles Perioperative care bundles to prevent surgical site infections are recommended.
1.9	Informed Consent The patient should be fully informed of the planned procedure and its potential complications. Competent patients should give signed informed consent.
2	Perioperative
2.1	Intraoperative Anaesthetist, Surgeon, Nurse
2.1.1	WHO Surgical Safety Checklist



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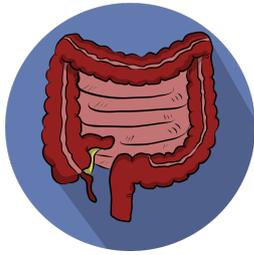
2.1.2	Routine intraoperative monitoring
2.1.3	Surgical approach Minimally invasive approaches should only be used in highly selected cases according to the experience of the surgeon. In most cases open surgery should be preferred.
2.1.4	Rapid sequence induction Rapid sequence induction for anaesthesia should be used to reduce aspiration of gastric contents.
2.1.5	Perioperative oxygenation A fraction of inspired oxygen between 0.6 and 0.8 should be used.
2.1.6	Fluid therapy Goal-directed fluid therapy using non-invasive hemodynamic monitoring systems should be used. If such systems are not available, balanced solutions should be given continuously according to the surgical approach: 3-5 ml/kg/h for laparoscopy and 5-7 ml/kg/h for laparotomy.
2.1.7	Avoid urinary catheterization Use only if necessary.
2.1.8	Maintain normothermia Use thermal blankets and heated fluids.
2.1.9	Perioperative glycemia control For diabetic patients use local hospital protocol for diabetics undergoing surgery. In patients at risk of developing insulin resistance (obese and elderly patients) and in surgeries lasting more than 1 hour, avoid blood glucose levels higher than 180 mg/dL.
2.1.10	Epidural analgesia Epidural analgesia should be used in open surgery.
2.1.11	Prophylaxis of postoperative nausea and vomiting Give antiemetic therapy according to the Apfel score.
2.1.12	Avoid abdominal drains
2.1.13	Thromboembolic prophylaxis Thromboembolic prophylaxis consisting of compression stockings or intermittent compression and low-molecular weight heparin should be given according to the local hospital policy.
2.1.14	Perioperative care bundles Perioperative care bundles to prevent surgical site infections are recommended.



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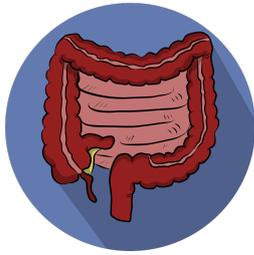
2.2	Immediate Postoperative Anaesthetist, Surgeon, Nurse
2.2.1	Active temperature maintenance Body temperature should be routinely measured with the goal to prevent hypothermia.
2.2.2	Oxygen therapy Oxygen saturation should be routinely measured to prevent hyposaturation.
2.2.3	Opioid-sparing multimodal analgesia
2.2.4	Restrictive fluid therapy
2.2.5	Perioperative glycemia control For diabetic patients use local hospital protocol for diabetics undergoing surgery. In patients at risk of developing insulin resistance (obese and elderly patients) and in surgeries lasting more than 1 hour, avoid blood glucose levels higher than 180 mg/dL.
2.2.6	Early mobilisation Patients should sit up by 2 hours after surgery and should begin ambulation 8 hours after surgery with respect to night time hours for sleeping.
2.2.7	Nil per os and nasogastric tube Assess withdrawal at 12 hours after surgery.
2.2.8	Urinary catheter removal If a urinary catheter has been used, assess whether to remove it 12 hours after surgery.
2.2.9	Thromboembolic prophylaxis Thromboembolic prophylaxis consisting of compression stockings or intermittent compression and low-molecular weight heparin should be give according to the local hospital policy.
3	Postoperative Day 1 (Ward) Surgeon, Nurse
3.1	Perioperative glycemia control For diabetic patients use local hospital protocol for diabetics undergoing surgery. In patients at risk of developing insulin resistance (obese and elderly patients) and in surgeries lasting more than 1 hour, avoid blood glucose levels higher than 180 mg/dL.
3.2	Early mobilization



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	Patients should be fully ambulated.
3.3	Respiratory physiotherapy
3.4	Antibiotic therapy Antibiotic therapy should be given in cases of bacterial translocation or abdominal cavity contamination. Broad spectrum antibiotics should be given according to the local hospital policy.
3.5	Opioid-sparing analgesia
3.6	Nasogastric tube removal Assess removal of the nasogastric tube. If the nasogastric tube is removed consider commencing a liquid diet or semisolid diet.
3.7	Urinary catheter removal Consider removing urinary catheter.
3.8	Epidural catheter removal Consider removal of epidural catheter.
3.9	Thromboembolic prophylaxis Thromboembolic prophylaxis consisting of compression stockings or intermittent compression and low-molecular weight heparin should be give according to the local hospital policy.
4	Postoperative Day 2 Surgeon, Nurse
4.1	Perioperative glycemia control For diabetic patients use local hospital protocol for diabetics undergoing surgery. In patients at risk of developing insulin resistance (obese and elderly patients) and in surgeries lasting more than 1 hour, avoid blood glucose levels higher than 180 mg/dL.
4.2	Early mobilization Patients should be fully ambulated.
4.3	Respiratory physiotherapy
4.4	Oral analgesia Opioid sparing analgesia in peroral form should be given.
4.5	Nasogastric tube removal Assess removal of the nasogastric tube. If the nasogastric tube is removed consider commencing a liquid diet or semisolid diet.



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4.6	<p>Thromboembolic prophylaxis Thromboembolic prophylaxis consisting of compression stockings or intermittent compression and low-molecular weight heparin should be give according to the local hospital policy.</p>
4.7	<p>Early discharge Assess discharge criteria for cases without intestinal resection.</p>
5	<p style="text-align: center;">Postoperative Day 3</p> <p style="text-align: center;">Surgeon, Nurse</p>
5.1	<p>Early feeding</p>
5.2	<p>Early mobilisation</p>
5.3	<p>Respiratory physiotherapy</p>
5.4	<p>Thromboprophylaxis</p>
5.5	<p>Assess discharge criteria</p>
6	<p style="text-align: center;">At discharge</p> <p style="text-align: center;">Surgeon, Nurse, Primary Care</p>
6.1	<p>Thromboprophylaxis Continued individualized thromboprophylaxis according to risks.</p>
6.2	<p>Antibiotic therapy Consider continuing antibiotic therapy in an outpatient setting.</p>
6.3	<p>Laboratory blood tests Laboratory blood test with at least a 50% decline in C-reactive protein prior to discharge.</p>
6.4	<p>Follow-up Follow-up after discharge at 24 hours in an outpatient setting or via telephone. Invite patients for a further follow-up visit according to local hospital policy. Coordinate home support with primary care physician if necessary.</p>
6.5	<p>Discharge criteria General discharge criteria: no complications that cannot be managed in an outpatient setting, return of regular bowel movements, no fever, pain controlled with oral analgesia, acceptance by the patient.</p>