

## Acute Appendicitis Treatment

CT scan is utilized as part of the clinical work-up of acute appendicitis which requires prompt surgical treatment. Patients should be designated NPO and receive IV fluids, as they will undergo immediate appendectomy. All patients will receive intraoperative antibiotics, but only those with a perforated appendix will continue antibiotics postoperatively. In order to prevent wound infections, delayed primary closure is routinely used in perforated appendicitis cases.



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### Diagnosis

#### CT Scan

##### Cat Scanner

Prompt diagnosis of acute appendicitis is imperative because immediate surgery is needed to prevent appendix perforation. Diagnosis may be made by clinical findings alone, however, CT scan is utilized in the clinical work-up in most settings to decrease the false-negative appendectomy rate.

### Treatment

#### Immediate Appendectomy

##### Appendix-pen cut off by scalpel

In patients with suspected appendicitis, immediate appendectomy is warranted to prevent perforation and the spread of bacteria throughout the peritoneum. An open (laparotomy) or laparoscopic approach may be used.

#### NPO

##### NPO-zipper-mouth

Before surgery, patients should not ingest anything by mouth to prevent vomiting and aspiration. Therefore, patients should receive IV fluids to maintain hydration and volume status.

#### IV Fluids

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IV fluids are administered in patients prior to surgery to maintain hemodynamic stability.

#### Antibiotics

##### ABX-guy

In patients with non-perforated appendicitis, pre-treatment with one dose of antibiotics is sufficient for infection control. Antibiotics should cover gram-negative and anaerobic organisms, with cephalosporins or ampicillin/sulbactam in combination with metronidazole as common regimens. There is no need for postoperative antibiotics in cases without perforation.

### Perforation

## **Tertiary Intention**

### **(3) Tree In-tent**

Tertiary wound healing or intention, also known as delayed primary closure, is a technique where the surgical wound is left open after surgery for a couple of days, and then sutured closed when no signs of infection develop. Historically this has been the preferred technique over primary closure, where the wound is sutured closed immediately after surgery. However, more recent studies have refuted this, showing that primary closure may reduce hospital stays without increasing the risk of post-op infection. No definite technique appears to be preferred since studies have differed based on factors like antibiotic use and statistical significance. Overall, heavily contaminated wounds are likely to do better healing by tertiary intention, while more routine cases should take into consideration the current literature and risks/benefits reported.

## **Antibiotics Until Afebrile**

### **ABX-guy and Fever-beaver**

Patients with a perforated appendix should receive antibiotics until they are no longer febrile. At first, broad spectrum antibiotics that cover gram-negative rods and anaerobes should be used. Antibiotics may be modified pending culture results.