



EMS System for Metropolitan Oklahoma City and Tulsa 2026 Medical Control Board Treatment Protocols



Approved 7/1/26; Effective 10/1/26; new protocol issuance, no prior versions.

16TT – ACETAMINOPHEN INTRAVENOUS (ACETAMINOPHEN INJECTION)

ADVANCED EMT

PARAMEDIC

Class: Analgesic

Actions/Pharmacodynamics: Acetaminophen (in oral or liquid form, widely known by trade name Tylenol®; in intravenous form, formerly branded as Ofirmev®) is an analgesic that acts centrally on the brain and spinal cord, rather than peripherally at the site of injury. Its exact mechanism is complex and still partially debated, but it exerts action through multiple processes, including:

- COX Inhibition: weakly inhibits cyclooxygenase (COX-1, COX-2) enzymes in the central nervous system, blocking production of prostaglandins that cause pain and fever.
- Serotonergic Pathways: stimulates descending serotonergic (pain-inhibiting) pathways in the central nervous system, raising the threshold for pain perception.

Indications: Abdominal Pain/Nausea/Vomiting/Diarrhea (9A)
Pain Management (Acute Onset & Chronic Type) (9D)
Eye Injury (10B)
Dental Injury/Pain (10C)
Chest/Abdomen/Pelvis Injury (10D)
Extremity Injury/Amputation Injury (10G)
Burns (10L)
Lightning/Electrical Injury (11C)
Pelvic Pain (13E)

Contraindications and Precautions: Avoid use in any patient weighing less than estimated 10 kg. The toxic dose of acetaminophen is 140 mg/kg. Thus, avoiding any use in pediatric patients less than 10 kg will avoid inadvertent toxic dosing.

Known hypersensitivity to acetaminophen. Avoid use if the adult patient has taken over 3 grams of acetaminophen in the preceding 24 hours. Acetaminophen should also be avoided in patients with known hepatic dysfunction.

Pharmacokinetics: Onset of action within 15 mins, peak effect onset at approximately 1 hour, with analgesia for 4 to 6 hours.

Side Effects: None expected immediately. Can be associated with nausea, vomiting, and cephalgia. Rare association with Stevens-Johnson syndrome.



EMS System for Metropolitan Oklahoma City and Tulsa 2026 Medical Control Board Treatment Protocols



Approved 7/1/26; Effective 10/1/26; new protocol issuance, no prior versions.

PROTOCOL 16TT: Acetaminophen Intravenous (Acetaminophen Injection), cont.

- Dosage:**
- Abdominal Pain/Nausea/Vomiting/Diarrhea - Adult (9A)**
 - Pain Management (Acute Onset & Chronic Type) – Adult (9D)**
 - Eye Injury - Adult (10B)**
 - Dental Injury/Pain - Adult (10C)**
 - Chest/Abdomen/Pelvis Injury – Adult (10D)**
 - Extremity Injury/Amputation Injury – Adult (10G)**
 - Burns – Adult (10L)**
 - Lightning/Electrical Injury - Adult (11C)**
 - Pelvic Pain – Adult (13E)**
 - Est weight less than 70kg, 500mg IVPB over 10+ mins.
 - Est weight 70kg or greater, 1000mg IVPB over 10+ mins.
-
- Abdominal Pain/Nausea/Vomiting/Diarrhea - Pediatric (9A)**
 - Pain Management (Acute Onset & Chronic Type) – Pediatric (9D)**
 - Eye Injury – Pediatric (10B)**
 - Dental Injury/Pain - Pediatric (10C)**
 - Chest/Abdomen/Pelvis Injury – Pediatric (10D)**
 - Extremity Injury/Amputation Injury – Pediatric (10G)**
 - Burns – Pediatric (10L)**
 - Lightning/Electrical Injury – Pediatric (11C)**
 - Pelvic Pain – Pediatric (13E)**
 - Est weight 10kg or greater, 15 mg/kg (max 1000mg) IVPB over 10+ mins.
- How Supplied:** 10mg/ml in a 100 ml premixed infusion bag
- (Always check concentration and dose per container at time of patient medication administration)