

Tylenol use for the Treatment of Febrile Adults by Triage Paramedics.

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Clinical Introduction: Tylenol has been used as an effective antipyretic. Many patients present to triage with fevers and feel uncomfortable as a result. In many cases, these patients may stay in the waiting room for several hours until they are assessed in the department and receive their first does of antipyretic treatment. This CAT queries the idea that we can mitigate these uncomfortable symptoms hours earlier if the patients received Tylenol treatment by the triage paramedics. This follows the mission of “Better Care Sooner” and improving the overall emergency room experience by our patients.

PICO: In adult patients, presenting to emergency with a fever, can Tylenol be administered by triage paramedics safely to reduce temperature/febrile symptoms?

Search strategy: A search of the Cochrane library, PubMed and briefly Google scholar was conducted to find related articles.

PubMed search strategy: ((((((Tylenol OR PARACETAMOL OR acetaminophen)) AND (PYREXIA OR PYRETIC OR FEBRIL OR FEVER OR TEMPERATURE) AND (Humans[Mesh] AND (Clinical Trial[ptyp] OR Randomized Controlled Trial[ptyp] OR systematic[sb] OR Meta-Analysis[ptyp]) AND English[lang]))) AND (ORAL OR PO) AND (Humans[Mesh] AND English[lang])))

Inclusion criteria: Studies must include information on oral Tylenol, include adult data (over 16), and be generalizable to an emergency setting preferably prehospital.

This search resulted in 87 results; 2 of which fit our inclusion criteria.

The evidence is graded according to the 3-point Level of Evidence Scale, used by the Canadian Prehospital Evidence-Based Practice Project.

Author/date	Population sample characteristics	Design (LOE)	Outcomes	Results	Weaknesses /notes
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Houry, D. et al. (1999)	17 adult patients presenting with a fever of greater than oral 100.4 F (38.0C)	Prospective double blind Tylenol vs. Ketrolac (LOE 1)	Tylenol vs. Ketrolac; Efficacy of reducing fever.	Mean Tylenol temp reduction was 1.6 degree F at 90 min. There was no significant difference b/w either drug's efficacy.	-Small sample size. -No adverse events
Peacock, F.W. (2011)	81 healthy male volunteers	Randomized double-blind parallel study (LOE 1)	Time to effect of 1g PO vs. 1g IV Tylenol	The Weighted sum of temp. differences were in favor of the IV group (p<.004) in the first 120 min. The onset of effect reduction of temp in the PO group was at the 75 min mark.	-Fever was induced by endotoxin and not a natural infection. -No AE were considered to be attributed to the treatment in either group.

Clinical bottom line:

There were no studies found that demonstrated the use of PO Tylenol by paramedics. However, these studies reveal that Tylenol is safe and it can begin to mitigate the fever's effects in under 90 min. This time frame is well with in the time frame that a febrile patient would be waiting for physician assessment. This CAT proposes that the Emergency Department adopt a protocol to allow for triage paramedic administration of Tylenol to febrile patients with the intention to improve patient care and satisfaction.