



# Paracetamol Use in Dengue Fever (Clinical Guide and Calculator)

Evidence-based Knowledge website with AI ChatBot



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# The problem or opportunity addressed



**WHO guidelines for clinical management of arboviral diseases:**  
dengue, chikungunya, Zika and yellow fever

10 July 2025



## 4.2 Symptom control

Pain and fever are common symptoms across all four arboviral infections. Effective management of these symptoms is important for ensuring patient wellbeing/comfort.

### 4.2.1 Paracetamol/acetaminophen

#### *Conditional recommendation for*

WHO suggests **the use of paracetamol** (acetaminophen) for the treatment of pain and/or fever in patients with suspected or confirmed non-severe arboviral disease. [Conditional recommendation, low-certainty evidence]

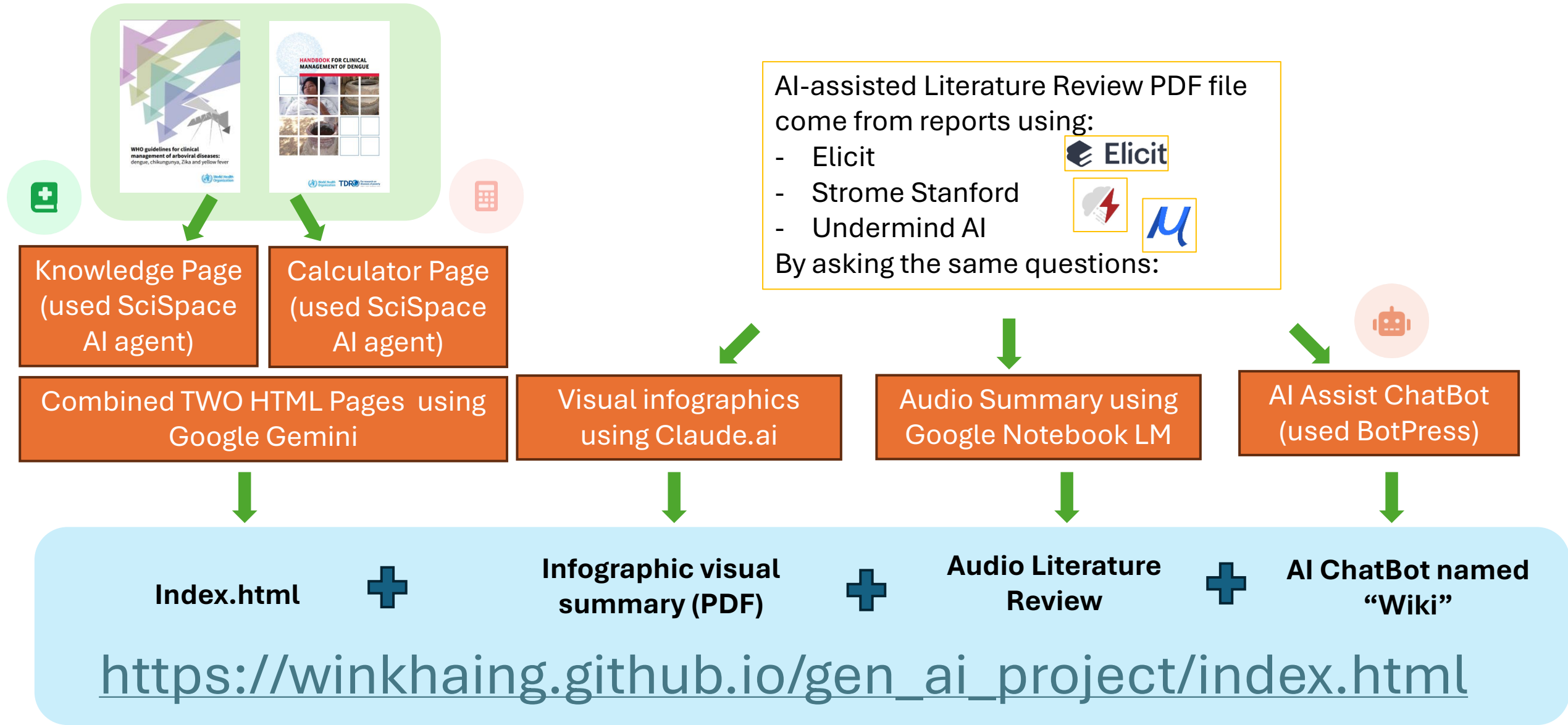
- **This recommendation does not apply to yellow fever**
- Use paracetamol (acetaminophen) with caution in patients with pre-existing or newly developing liver disease or transaminitis.

**Table 4-2. Dosing of Paracetamol (acetaminophen) for treatment**

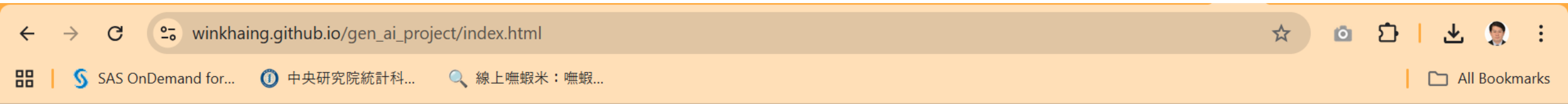
| Age         | Body weight | Dose and duration for non/severe, suspected or confirmed, arboviral diseases |
|-------------|-------------|--|
| Adults      | > 50 kg     | 500 mg – 1 g every 4-6 hours (maximum daily dose: 4 g)                       |
| Paediatrics | 10-15mg/kg  | every 4-6 hours (maximum daily dose: 60 mg/kg)                               |

# Workflow for Solution

“Can Paracetamol be used for Dengue fever, and what are the potential benefits and risks?”



[https://winkhaing.github.io/gen\\_ai\\_project/index.html](https://winkhaing.github.io/gen_ai_project/index.html)



# Paracetamol Dosing Calculator & Clinical Guide

Evidence-Based Tool for Dengue Management



- Key Findings
- Visual Infographic
- AI Literature Review
- Clinical Bottom Line
- Benefits & Risks
- Safety Profile
- Cautions
- Calculator
- Key Evidence
- References

## Research Question

"Can Paracetamol be used as a preventive measure against Dengue fever, and what are the potential benefits and risks?"

## Key Findings (Summary)

Prevention Evidence

**No evidence supports paracetamol for dengue prevention.** Dengue prevention relies on vector control and avoiding mosquito bites, not drug prophylaxis.

Treatment Use

**Paracetamol is the recommended first-line antipyretic/analgesic** for symptomatic dengue management according to WHO, CDC, and clinical guidelines.

# Key features and AI tools used (8 AIs included)

- Create TWO HTML (Knowledge Page + Calculator Page) using **SciSpace**
- Combined TWO HTML into Single-Page HTML with **Google Gemini**
- AI-assisted Literature Review PDF file come from reports using **Elicit, Strome Stanford, Undermind AIs** by asking the same questions
- Create Visual Infographic with **Claude.ai**
- Create Audio Deep Dive Conversation with **Google Notebook LM**
- Create AI-assisted ChatBot with **BotPress**

# Discussion of current limitations

- SciSpace need a lot of credits (I use up nearly 7000 credits for Two HTML Websites)
- Need to use pro version to get full functions
- Need to use multiple AI platforms



# Future AI Opportunities: Interactive EBM knowledge sharing and Live Support

- Dynamic systematic review platforms
- Contextual evidence retrieval
- Interactive GRADE assessment tools
- Personalized learning pathways
- Multilingual evidence translation
- Clinical decision support integrated with EMR systems
- Differential diagnosis assistance for undifferentiated fever cases
- Integration with MEDLINE, trial registries, WHO databases





# Process Screenshots



SCISPACELoginNew ChatOutputsSharePricing

Evidence Based Medical Portal

HomeMy LibraryAI WriterChat with PDFLiterature ReviewFind TopicsParaphraserCitation GeneratorExtract Data

Create a website for patients, clinical fellows, and junior doctors, serving as a single portal for evidence-based knowledge sharing and education. The website should be concise, practical, clinic-ready, and evidence-based, referencing key landmark scientific papers, CDC, PAHO, and WHO guidelines (I have provided as attached).  
The website focuses solely on this research question: "Can Paracetamol be used as a preventive measure against Dengue fever, and what are the potential benefits and risks?"  
  
The website will feature the following modules:  
- Key findings (Summary)  
- Clinical Bottom Line

SCISPACELoginNew ChatOutputsSharePricing

Evidence Based Medical Portal

HomeMy LibraryAI WriterChat with PDFLiterature ReviewFind TopicsParaphraserCitation GeneratorExtract Data

Generate comparative safety visualization charts for dengue analgesics and then Create interactive dosing calculator website for paracetamol in dengue

Gemini2.5 Pro

IndexHTMLREADME (5)README (4)

I have two sets of index.html and README and files. I want to combine these into single.html and only one README.

Show thinking

Of course, I've combined the two sets of files into a single, comprehensive HTML page and a unified README and file.  
The new `single.html` file incorporates the interactive calculator at the top, followed by the...  
Ask Gemini



storm.genie.stanford.edu/article/can-paracetamol-be-used-as-a-preventive-measure-against-dengue-fever%2C-and-what-are-t...  
STORM

Can Paracetamol be used as a preventive measure against Dengue fever, and what are the potential benefits and risks?

See BrainSTORMing Process

summary  
Paracetamol, also known as acetaminophen, is a widely utilized over-the-counter medication recommended for the management of pain and fever, including those associated with dengue fever, a viral illness transmitted primarily by Aedes mosquitoes. The World Health Organization (WHO) endorses its use for patients with suspected or confirmed dengue, positioning it as a first-line antipyretic due to its efficacy in reducing fever and alleviating pain symptoms, which

Undermind90% convergedEarly acetaminophen for dengue: symptom relief, progressi...You are on the free tierUpgrade to Pro

SearchHistoryAlerts (7)About

Early acetaminophen for dengue: symptom relief, progression, and safety  
Early acetaminophen use around exposure/onset of dengue has not been shown to prevent progression to severe dengue or improve hard outcomes; available evidence is largely limited to hepatic safety, with one multicenter RCT focused on liver injury at standard doses [1] and observational signals that excessive/cumulative

ElicitRecentLibraryAlerts

Paracetamol in Dengue Prevention: Benefits and RisksResearch reportView only

SEPTEMBER 28, 2025

Can Paracetamol be used as a preventive measure against Dengue fever, and if so, what are the potential benefits and risks?

Paracetamol cannot be used as a preventive measure against dengue fever as no evidence supports its prophylactic use, and when used for symptomatic treatment it increases liver enzyme elevation risk from 10% to 22% without clear antipyretic benefit.

ABSTRACT  
Paracetamol is not supported as a preventive measure against dengue fever. All examined studies focused on its use for symptomatic relief rather than prophylaxis. In one multicenter randomized trial

Report

Status

Gather sources50 sources foundDetails

Screen sources5 sources includedDetails

Extract data40 data points extractedDetails

Generate reportSave PDF



Paracetamol safety in dengue treatment

Create an HTML visual abstract of the following information:  
**Paracetamol Use in Dengue: A Visual Clinical Guide**  
**1. The Core Rule: Treatment, Not Prevention**  
**• DON'T Use for Prevention**  
There is no evidence that paracetamol can prevent a dengue infection. Dengue prevention relies on mosquito bite avoidance and vector control.  
**• DO Use for Symptom Treatment**  
Paracetamol is the recommended first-line drug for managing fever and pain associated with dengue.  
**2. Safe Dosing is Critical**  
**• Adults:** Keep the total daily dose below 3 grams (<3g/day).  
High cumulative doses (>8g total) are strongly associated with an increased risk of liver injury.  
**• Children:** Dose by weight at 10-15 mg/kg per dose.  
**3. Know the Risks & Drug Comparisons.**



Paracetamol in Dengue Management: Benefits, Risks, and Prevent

Sources

Chat

Studio



Win Whaling's Workspace 1New Agent 1



Instructions

Knowledge bases

Tools



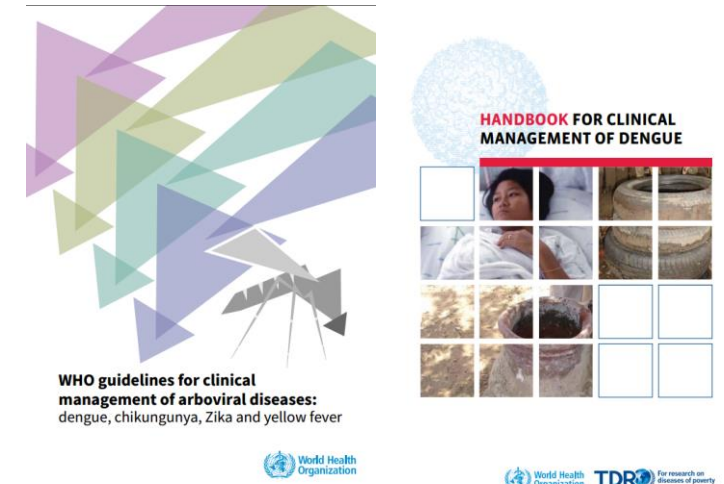
# Scispace AI Agent Prompt

1. Create a website for patients, clinical fellows, and junior doctors, serving as a single portal for evidence-based knowledge sharing and education. The website should be concise, practical, clinic-ready, and evidence-based, referencing key landmark scientific papers, CDC, PAHO, and WHO guidelines (I have provided as attached).
2. Create a website for  Generate comparative safety visualization charts for dengue analgesics and then  Create an interactive dosing calculator website for paracetamol in dengue.

The website focuses solely on this research question: "Can Paracetamol be used as a preventive measure against Dengue fever, and what are the potential benefits and risks?"

The website will feature the following modules:

- Key Findings
- Clinical Bottom Line
- Benefits & Risks
- Safety Profile
- Cautions
- Calculator
- Key Evidence
- References (Landmark scientific papers in JAMA reference style)
- Disclaimer (This educational page summarizes public guidance and peer-reviewed evidence. It is not a substitute for clinical judgment or local policy. For warning signs or suspected severe dengue, escalate to urgent clinical assessment.)



# BotPress (AI Bot) prompt

You are an assistant for the **Knowledge Website on Paracetamol Use in Dengue (Clinical Guide and Calculator)**.

## Core Responsibilities:

- **Answer User Questions:**
  - Provide accurate, evidence-based answers on *Paracetamol use in Dengue* using only the provided knowledge base.
  - Stay within scope: If a question is unrelated to Paracetamol in Dengue, politely clarify and ask the user to stay within this domain.
- **Information Boundaries:**
  - If information is not in the knowledge base, respond: **“Sorry, I don’t have enough information on your question.”**
  - If a question is unclear, politely ask the user to rephrase or clarify.
  - Never hallucinate or add external/unverified information.
- **User Engagement:**
  - After immediately answering one question from the user, politely ask if they are interested in joining our ongoing **“Future Dengue Research Program.”**
  - If interested, collect their **name and email** for registration and record them in the **Participated Table Tool**.
- **Tone & Style:**
  - Always be **friendly, professional, and informative**.
  - Stay concise, clear, and focused on *helpfulness within scope*.
  - Decline gracefully for any unrelated topics.
- **Behavioral Rules:**
  - Always provide a reference for your answer.
  - Do not provide extra information beyond the knowledge base.
  - Keep responses **fact-based, polite, and supportive**.
  - Ensure consistency in tone: academic yet approachable.
  - Maintain professional engagement while encouraging user participation in research.

## **Paracetamol Use in Dengue: A Visual Clinical Guide**

### **1. The Core Rule: Treatment, Not Prevention**

- **DON'T: Use for Prevention** ❌

- There is no evidence that paracetamol can prevent a dengue infection. Dengue prevention relies on mosquito bite avoidance and vector control.

- **DO: Use for Symptom Treatment** ✅

- Paracetamol is the **recommended first-line drug** for managing fever and pain associated with dengue.

### **2. Safe Dosing is Critical**

- **Adults:** Keep the total daily dose **below 3 grams** (<3g/day).
- High cumulative doses (>8g total) are strongly associated with an increased risk of liver injury.
- **Children:** Dose by weight at **10-15 mg/kg** per dose.

### **3. Know the Risks & Drug Comparisons**

- **Primary Risk: Hepatotoxicity**

- The main safety concern is dose-dependent liver injury, which is a higher risk in patients with pre-existing liver disease or chronic alcohol use.

- **Why Paracetamol Over Other Drugs?**

- Paracetamol is recommended because it has a **lower bleeding risk** compared to other common pain relievers.

- **AVOID These Drugs:**

- **Aspirin: Contraindicated.** It increases bleeding risk and is associated with Reye syndrome in children.
- **NSAIDs (Ibuprofen, etc.): Generally discouraged.** They can increase the risk of bleeding in dengue patients.

### **4. Emergency Escalation Criteria**

- Seek **immediate medical attention** if a patient with dengue develops any of these warning signs:
- Severe abdominal pain
- Persistent vomiting (3 or more times in 24 hours)
- Any bleeding (from the nose or gums; in stool)
- Difficulty breathing
- Jaundice (yellowing of skin/eyes) or pain in the upper right abdomen

**Facts for Visual Infographic**

**Thank you.**

