



To: ALL HEALTH CARE PROVIDERS including Emergency Physicians, Nurses
From: Ron Kirschner, MD
Medical Director, Nebraska Regional Poison Center
Subject: Acetaminophen update
Date: November 29th 2021

Acetaminophen (APAP) is one of the most common pharmaceuticals taken in overdose.

It is very safe at therapeutic dosing but is also the leading cause of liver failure in the US due to either acute overdose or repeated supratherapeutic ingestion.

APAP is present in many prescription and non-prescription products so patients may not be aware they've taken it. Patients may also confuse one non-prescription analgesic with another.

Liver damage is caused by an APAP metabolite, so after acute overdose patients may initially be asymptomatic or have only mild nausea and vomiting with normal liver enzymes.

Liver enzymes might not become elevated until around 24 hours after APAP overdose.

Elevated liver enzymes on presentation should raise the suspicion of recent APAP overdose.

The treatment N-acetylcysteine (NAC) is most effective when given within 8 hours of the overdose. NAC should be considered if APAP overdose is a possibility.

Because APAP levels are not available in American Samoa, intentional overdose patients with a history of APAP ingestion or newly elevated liver enzymes should be treated with a 21 h course of IV NAC.

All patients should have liver enzymes checked initially and 1-2 h before the end of the IV NAC infusion.

If AST and ALT are rising, NAC should be continued with an additional 3rd bag (16h) and PT or INR should be checked.

With normal AST and ALT 21 h after ingestion, significant liver injury is unlikely, and NAC can be discontinued.

Please call our Poison Center for any dosing questions or protocols regarding IV NAC.

Our trained staff of nurse specialists in poison information and physician toxicologists are available 24 hours a day to answer your questions. In American Samoa call: 1-800-222-1222