

Anaphylaxis Debate

Risk of “*watching & waiting*”

after epinephrine is administered

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Learning objective

Attendees of this session would be able to council patients on the optimal immediate management of anaphylaxis episodes.

Anaphylaxis is the worst allergic reaction

- Unpredictable
- Any place
- Any age
- Any cause or “no cause”
- Sudden onset
- Involves multiple vital organs
- Rapidly progressive
- Can be quickly fatal

Global Management of Anx is T & T

**Treat immediately with epinephrine
AND Transfer to Emergency Department**

**Based on worldwide experts' common sense.
No prospective controlled studies (ethical reasons!)**

United States	Worldwide
Am Academy of Allergy, Asthma & Immunology Am College of Allergy, Asthma & Immunology National Institutes of Health - NIAID Allergy & Asthma Foundation of America Society for Academic Emergency Medicine	WAO EAACI British Allergy Society UK Resuscitation Council Canadian Allergy Society Australian Allergy Society Asian Pacific Association of Allergy, Asthma & Clinical Immunology Allergy Foundation of South Africa Others

Advantages of T & T

- In ED, clinical & lab evaluation, observation & monitoring.
- Administer needed therapies: O2, IV fluids, airway support, inhaled bronchodilators, corticosteroids, vasopressors, glucagon, etc.
- Watch (at least 4 hr) for & treat biphasic reactions (2-5%). No resp difficulty at discharge from ED.
- Counseling patient & family reg identification & avoidance of cause(s).
- Provide or review anaphylaxis action plan.
- Refill epi prescription.
- Referring for allergy evaluation.
- Hosp admission may be necessary. [May even lead to identification of the cause of Anx (diaper ointment case)].

11 ingredients

Anaphylaxis recurred just before leaving the hospital

Lecks: JAMA 1980; 244:1360.



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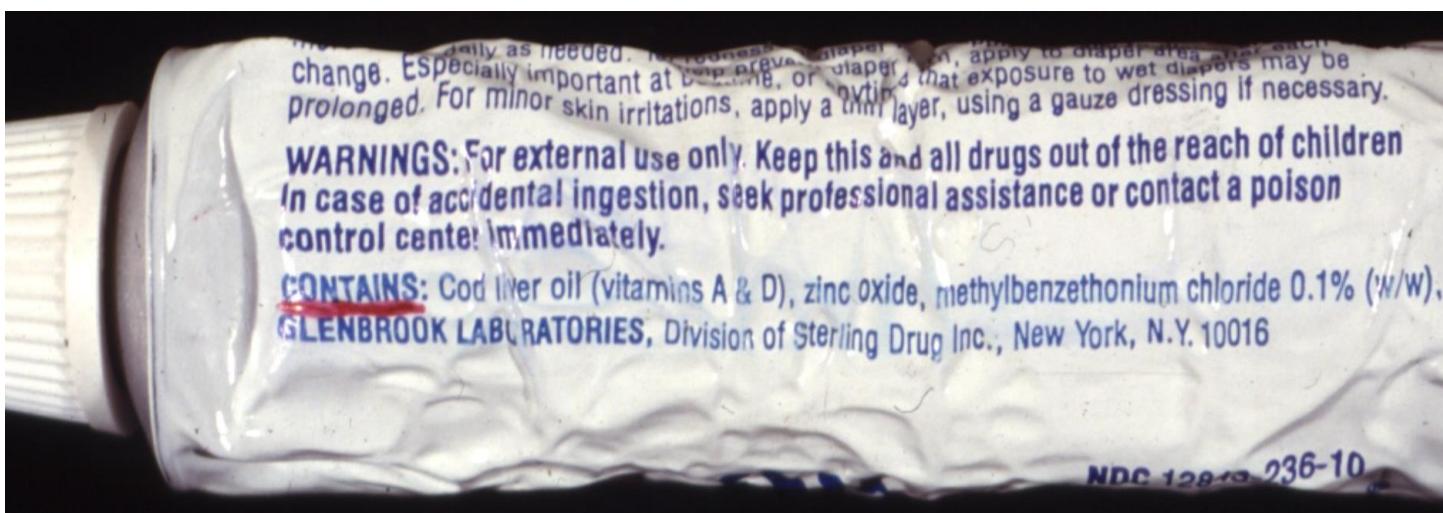
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No controlled studies on T & T “*Experiment of Nature*”!

- Many patients don't follow the recommendation of T & T.
- Most patients improve after 1 epi dose.
- Many patients improved spontaneously or after just antihistamines.
- During COVID-19, some cases of severe Anx avoided going to crowded EDs.

Findings

90% of recipients of 1 epi dose responded adequately (much inflated!!).

Conclusion

Updating the AAAAI/ACAAI Practice Parameter on Anaphylaxis in 2023
(Golden et al 2024).

The 90% reported response rate to 1 epi dose is inflated!

- Many patients were prescribed & used epi without having Anx to start with.
- Overzealous use of epi by allergic subjects for mere itching, throat discomfort, or abdominal pain.
- Many practitioners prescribed epi autoinjectors to:
 - every patient on ALT
 - every patient with food allergy, even “claimed FA”
 - overuse of epi was encouraged by health providers (*if in doubt, give*)

Anaphylaxis: A 2023 practice parameter update

Joint Task Force on Practice Parameters: David B.K. Golden, Julie Wang, Susan Waserman, Cem Akin, Ronna L. Campbell, Anne K. Ellis, Matthew Greenhawt, David M. Lang, Dennis K. Ledford, Jay Lieberman, John Oppenheimer, Marcus S. Shaker, Dana V. Wallace, Elissa M. Abrams, Jonathan A. Bernstein, Derek K. Chu, Caroline C. Horner, Matthew A. Rank, David R. Stukus. **Collaborators:** Alyssa G. Burrows, Heather Cruickshank. **Workgroup**

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34 JTF, collaborators & Workgroup; 13 Reviewers

[Neither RW nor SB participated in updating or reviewing]

Anaphylaxis: A 2023 practice parameter update

RECOMMENDATION # 26

'We suggest that clinicians counsel patients that immediate activation of EMS may not be required if the patient experiences prompt, complete, and durable response to treatment with epinephrine, provided that additional epinephrine and medical care are readily available, if needed.

We suggest that clinicians counsel patients to always activate EMS after epinephrine use if anaphylaxis is severe, fails to resolve promptly, fails to resolve completely or nearly completely, or returns or worsens after a first dose of epinephrine."

STRENGTH: Conditional

CERTAINTY OF EVIDENCE: Very low

Fatal anaphylaxis on flight despite 2 epi doses

(The Guardian, Sep 2018)



A sesame-allergic 15-y-o girl bought a baguette sandwich (artichoke, olive & tapenade) at Heathrow airport. The wrapping did not list the ingredients (not required). She ate the sandwich during the flight to Nice, but collapsed. Her accompanying father injected 2 epi doses but she died. (Sesame seeds were apparently incorporated into the baguette or the tapenade)

Early transfer to ED was not feasible unfortunately.

CBS News, July 2013

A 13-y-o peanut-allergic girl died from a severe anaphylaxis after a bite of unlabeled Rice Krispies contained peanutbutter at Camp Sacramento.

She died despite 3 epi doses administered by her accompanying father who is a physician.

Even 3 epi doses didn't save her life.
Early transfer to ED was needed for additional therapies.



PBL: ALEX, A 26-year-old with food allergy & recurrent anaphylaxis (a)

Reaction History

- “CMA” since childhood!, multiple accidental exposures or “cross-contamination”; avoiding milk.
- Prior reactions variable; some required ED care & epi (not self-administered!).

Past year

Increased reaction frequency & severity; Sx: nausea & abdominal cramps a couple of hr after meals; sometimes generalized hives; 3 ED visits.

Most recent episode required 2 doses of epinephrine, IV fluids & oxygen.

PBL: ALEX, A 26-year-old with food allergy & recurrent anaphylaxis (b)

Preparedness & Risk in Alex

- Frequent episodes, attributed to “accidental” exposure.
- Often forgets or epi autoinjector.
- Not confident in how to use it properly

Evaluation

PCP visit 3 mo ago: milk-sIgE 0.38 IU/mL, neg to selected others.

A/I Referral:

- tIgE 105 IU/mL, tryptase 4.7 ng/mL, milk-sIgE 0.4 IU/mL, milk SPT 3 mm.
- Milk challenge negative (no reaction)!!
- Serum IgE alpha-gal 4 IU/mL !!!!



**Therefore, it would be prudent to continue to recommend
“Use epinephrine, call 911, and go to the ED”**

- If Anx occurs in a restaurant, school, workplace, park, .
- Explosive onset or progressive Sx.
- Young children who may not verbalize Sx.
- After 2 epi doses or after the only available 1 dose of epi .
- Past Hx of severe, biphasic or protracted Anx. (Previous mild systemic reactions don't always predict the severity of future reactions).
- Patient's or parents' personality.
- Comorbid conditions: pregnancy, asthma, cardiac, B-blockers, mast cell disorders.
- Allergen route (injection, ingestion).

[In select instances, waiting while closely watching can be reasonable]

In conclusion,

Epi is first therapy,
Watching would be best in the ED,
Risk of waiting can be
DEATH

