

處理非預期溶劑中毒之挑戰

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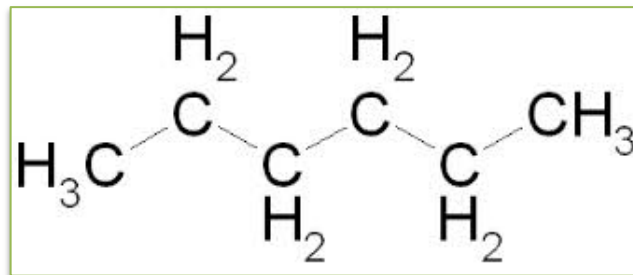
What we have Learned

- **n-Hexane**
- **Trichloroethylene**
- **Tri-o-cresyl phosphate**

n-Hexane

- **1960 in Ohio, USA**
- **1970 in Japan**
- **1980 in Taiwan**
- **2000 in China**

n-Hexane



Clinical Presentation

- Peripheral neuropathy
- CNS complaints

Peripheral neuropathy

- Develop after a few months to a year of repeated overexposure
- Longer nerves and thicker fibers are more susceptible to toxin-induced neuropathy
- The symptoms usually begin in the **feet or legs**
- The **first symptoms are sensory** and consist of tingling, numbness, burning, or prickling sensations in the feet or toes.

Peripheral neuropathy

The first symptoms

- are sensory and consist of tingling, numbness, burning, or prickling sensations in the feet or toes.
- the symptoms are usually **symmetric** and graded distally, although symptoms may appear in one foot first or may be more pronounced in one foot.

CNS complains

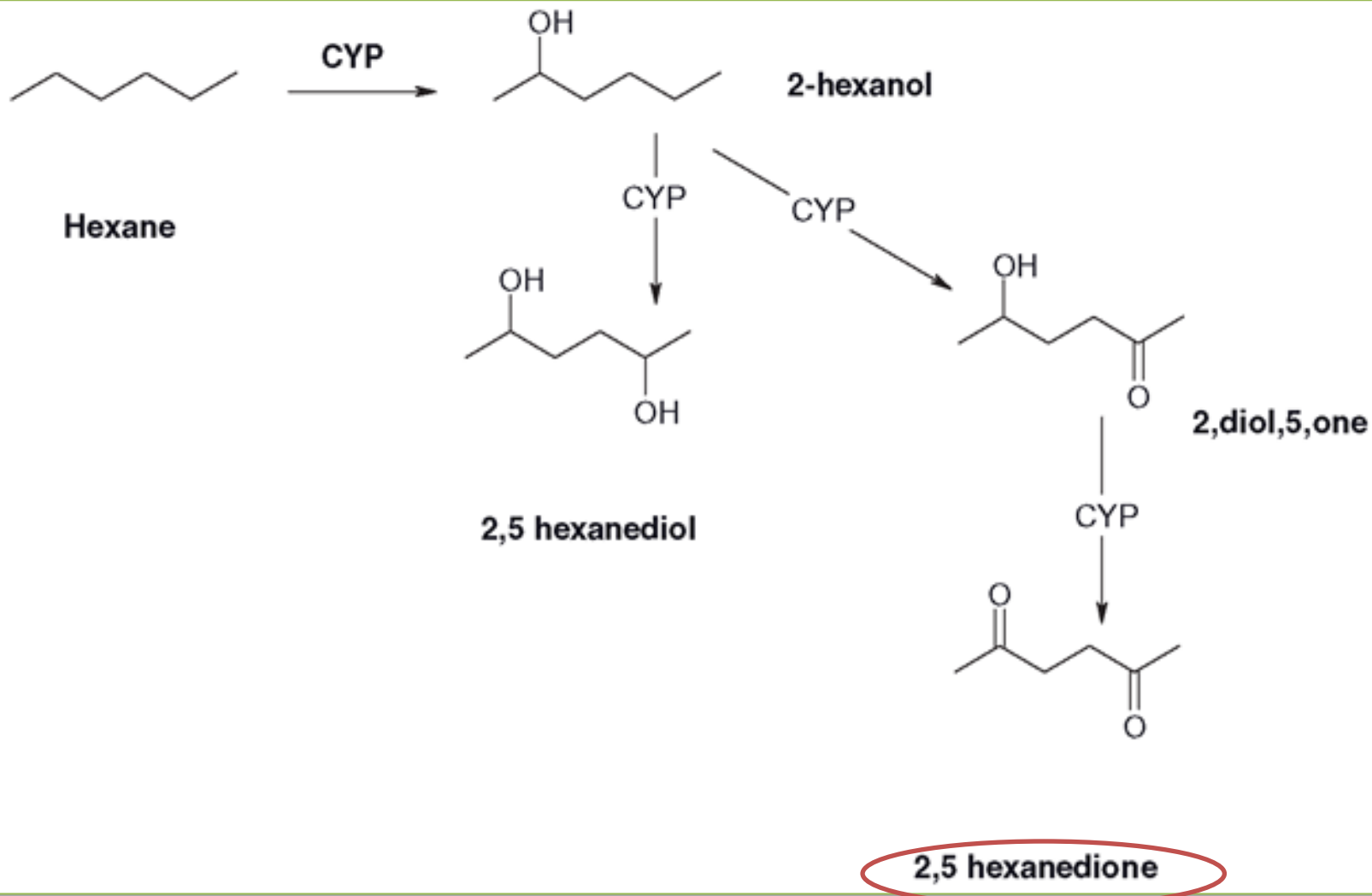
- Headache, dizziness, nausea, anorexia, giddiness, and/or drowsiness, and mucosal irritation with short-term overexposure.
- These symptoms are usually temporary and disappear within minutes to hours after removal from exposure.
- Health effects on other organ systems have not been noted in human studies.

Serious health issues from overexposure to 1-Bromopropane can include:

- Nervous system damage
- Headaches
- Dysarthria (motor speech disorder)
- Dizziness
- Loss of consciousness
- Confusion
- Difficulty walking
- Ataxia (muscle twitching)
Loss of feeling in arms and legs
- Arthralgia (non-arthritis joint pain)
- Infertility

The Diagnosis of Environmental Poisoning

- Clinical symptoms and signs observed are consistent with the findings documented in the literature.
- The toxicity observed could be reproducible in animals study.
- Foreign chemicals and or its metabolites could be identified from blood and/or urine and saliva.



What we have learned

- 周邊神經障礙的臨床表徵
- 肌電波等的檢查發現
- 病理學的檢查發現
- 有毒化學物質與代謝產物的發現

What we have learned

- Single case and cluster
- Non-specific findings
- Document clinical findings
- Exposure assessment – always difficult
- Association
 - Temporal sequence
 - Consistency
- Causal effect relationship
- Non-specific treatment

The difficulty – Be practical

- **Regulations & Enforcement of law**
 - Chemical entities
 - Industrial hygiene
 - Engineering control
 - Environmental monitoring
 - Personal protection
 - Biological monitoring
 - Medical surveillance
- **Be alert in daily practice for new hazards**
- **Capacity empowering of Union or Workers A.**

