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## Acrodyndia

Acrodyndia is a condition that primarily affects young children. It is characterised by pink discolouration of the hands and feet, irritability, photophobia (sensitivity to light) and polyneuritis (inflamed nerves). It is caused by chronic exposure to mercury.

Nowadays acrodyndia is rarely seen as the use of mercury in different preparations has declined substantially over recent years. The most common form of exposure in young children is ingesting mercury from a broken thermometer. Mercury spills are difficult to clean up and mercury can remain undetected in carpet for some time. Mercury vapours concentrate low to the ground so crawling children are more likely to inhale or ingest the heavy metal.

Dental amalgam used for fillings is also suspected of being a possible source of mercury toxicity from chronic exposure. It has been linked to systemic diseases or chronic illnesses but to date there is lack of scientific evidence supporting this. In any case, new materials to replace mercury for dental amalgam are being developed.

### What are the clinical features of acrodyndia?

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The signs and symptoms of mercury toxicity may not appear until weeks or months after exposure has occurred. A case report of two siblings showed that signs of mercury toxicity didn't appear until 3 months after the children had played with mercury from a broken sphygmomanometer (device for measuring blood pressure).

The initial signs include:

- Listlessness, drowsiness, irritability and a tendency to cry
- Loss of appetite and subsequent weight loss
- More than 50% complain of sensitivity to light
- Generalised weakness and painful extremities

Within 2–4 weeks these initial symptoms are followed by a number of skin changes.

- Tip of the nose, fingers and toes turn a pinkish colour, which progressively darkens and spreads into a net-like pattern.
- Hands and feet become painful, cold, cyanotic (blue), erythematous (red) and swollen.
- Extreme pain and itchiness in the extremity often leads to thickened scratched skin as the child rubs and scratches the area.
- [Hyperhidrosis](#) (excessive sweating) with a mouselike smell may occur. This may lead to [miliaria](#) and secondary bacterial skin infections.
- Inflammation, swelling and gum erosion may occur with subsequent loss of teeth.
- Alopecia and nail loss have also been reported.

### What is the treatment of acrodyndia?

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The goal of treatment is to remove the mercury and correct any fluid or electrolyte imbalances. Chelating agents such as meso 2,3-dimercaptosuccinic acid are used to prevent methylmercury uptake by erythrocytes (red blood cells) and hepatocytes (liver cells). Haemodialysis with and without the addition of L-cysteine as a chelating agent has been used in patients with acute renal failure from mercury toxicity.

Most patients make a complete recovery as signs and symptoms of acrodynia gradually disappear once treatment is initiated.

### Related information

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#### References:

- Book: Textbook of Dermatology. Ed Rook A, Wilkinson DS, Ebling FJB, Champion RH, Burton JL. Fourth edition. Blackwell Scientific Publications.
- [Acrodynia](#) - emedicine dermatology, the online textbook
- [Horowitz Y, Greenberg D, Ling G, et al. Acrodynia: a case report of two siblings. Letter. Archives of Disease in Childhood 2002;86:453](#)

#### On DermNet NZ:

- [Heavy metal toxicity](#)

#### Other websites:

- [Heavy Metal Toxicity](#) - Life Extension
- [Heavy Metal Handbook](#): A Guide for Healthcare Practitioners. Science Subcommittee of the Heavy Metals Remediation Committee of the Vashon-Maury Island Community Council, 2003.

#### Books about skin diseases:

See the [DermNet NZ bookstore](#)

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DermNet does not provide an on-line consultation service.

If you have any concerns with your skin or its treatment, see a [dermatologist](#) for advice.

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