

Developing Treatments



Treatments for children: Teething

Historical attitudes to teething

For centuries people believed that the teething process caused many childhood illnesses and even death in infants.

Until the 20th century the death rate among infants and small children was high, in some areas reaching 5%. Infant mortality was especially high in children aged 6 months to 2 years of age, coincidentally the time of teething. As a result, medical professionals for centuries attributed many unrelated serious childhood illnesses and the high infant mortality rates to the teething process.

Many early medical solutions for 'problematic' teething would be considered barbaric by today's standards. Methods employed included blistering, bleeding or applying leeches to the gums to help the teeth come through.

Early medicines used to treat teething infants often contained opium, due to its ability to relieve pain and induce sleep.

Proprietary medicines manufactured from the 1800s until around the mid 20th century also claimed to treat the range of symptoms and childhood diseases traditionally associated with teething.

What is teething?

Teething is the process where the teeth emerge through the gums. A baby's first set of teeth, known as the milk teeth, are already formed under the gums prior to birth.

The age teething commences varies from child to child, but in general they begin to emerge when the baby is around 6 – 9 months old. The full set of 20 milk teeth is usually through by the age of two and a half years.

The teething process can produce a range of symptoms in infants ranging from localised discomfort where the tooth is coming through-to swollen gums, flushed cheeks, irritability, low grade fevers, excessive salivation, and difficulty in sleeping.



Syrup of Poppies Wet Drug Jar, 1700-1740

This wet drug jar, inscribed 'S:De Mecon' (Syrupus de meconio), originally would have held syrup of poppies.

Syrup of white poppies is an example of an early medicine that was rubbed on babies gums, to relieve the pain of teething and to induce sleep.

Alfred Fennings, author of *Every Mothers Handbook* and manufacturer of Fennings' Cooling Powders, warned against the use of narcotics like syrup of white poppies for children.

Treatments for children: Lancing (c.1550 – early 1900s)

"A superficial incision will be of no avail; the gums must be cut down until the lancet impinges on the approaching tooth", *Medical Journal*, 1857.

Lancing, where a doctor cut the baby's gums with a lancet, was a medical procedure carried out under the belief that it helped the milk teeth come through the gums, thereby avoiding many of the problematic 'symptoms' of teething.

Lancing was introduced by the French Royal Physician, Ambroise Paré (1510-1590).

Although carried out by medical practitioners, lancing caused babies a lot of trauma, especially as it was conducted without anaesthesia. The use of non-sterile lancets may have also been a health issue in the past.

Lancing was still in use at the beginning of the 20th century. However the previously unquestioned practice became increasingly controversial. Critics questioned the validity of lancing being used indiscriminately, when they believed it should be used only as a last resort. Lancing was out of fashion by the 1920s.

Lancet, around 1900

This is an early 20th century bleeding lancet used by physicians for lancing an infant's gums in the belief that it helped the milk teeth to come through.



Treatments for children: Medicines & soothing syrup

In the 1800s many proprietary medicines for children were marketed by manufacturers as being effective treatments for a wide range of disorders and illnesses in children that were then associated with teething.

The effectiveness of many of these early medicines is debatable because due to the lack of regulation, before the early part of the 20th century, manufacturers could make medicinal claims without providing any scientific proof or having to disclose the ingredients.

Many of these medicines contained ingredients to relieve pain, procure sleep and regulate the bowels that would now be considered unacceptable to give to infants. These included opium, morphine, and mercury-based compounds such as calomel.



Atkinson And Barker's Royal Infants' Preservative, around 1872-1941 Robert Barker, and Robert Barker & Sons Ltd.

Atkinson and Barker's Royal Infants' Preservative is an example of a medicine from the 1800s claiming to be "For all disorders incident to infants", many of which people believed were caused by teething. The packaging claims it treats convulsions, gripes, tooth fever, rickets, measles and whooping cough.

In 1912 the ingredients were potassium bicarbonate, magnesium carbonate, caraway oil, dill oil, anise oil, almond oil, alcohol & sugar.

Mrs Winslow's Soothing Syrup

The history of Mrs Winslow's Soothing Syrup is one marred by controversy and court cases, because initially it contained morphine.

Prior to the 20th century, manufacturers did not have to reveal the ingredients on medicine bottles. As a result mothers were unaware that the syrup contained morphine. From the late 1860s up until the early 20th century, there were numerous cases of American babies falling into a coma or becoming addicted to and, on occasions, dying from use of the syrup.

Morphine was not completely removed from the syrup's formula until 1909 in the UK and 1915 in the US.

Mrs Winslow's Soothing Syrup, around 1935-1938 Curtis and Perkins

This bottle is a later example of Mrs Winslow's Soothing Syrup. The label states the preparation "Does not contain morphine, opium, or alcohol, positively not narcotic".

Woodward's Gripe Water, around 1851-1903 Woodward, Chemist

Woodward's Gripe Water was a preparation formulated in the 1850s to relieve wind pains, gripes (gastric or intestinal pain), and minor stomach upsets in babies and young children, particularly when they are teething.

Like many infant formulas manufactured from 1850 to 1940 it also initially claimed to treat a wide range of other infant disorders including convulsions, whooping-cough, and other "distressing complaints incidental to infants at the period of cutting teeth".

The ingredients in 1912 were sodium bicarbonate, caraway oil, dill oil, anise oil, alcohol, and sugar. Sodium bicarbonate neutralises an acidic stomach, while dill settles an upset stomach.

The inclusion of alcohol in a preparation for infants was the most controversial ingredient.

Woodward's Gripe Water, around 1989 W. Woodward Ltd.

This bottle is a more recent example of Woodward's Gripe Water. The ingredients are concentrated dill water, sodium bicarbonate, ginger tincture, syrup, and alcohol.



Carmex, 1916-1941 **The Semprolin Company Ltd.**

Carmex was a carminative formulated to treat “the digestive disturbances common during teething”, such as constipation, flatulence, acid indigestion, and colic.

At this time health professionals were obsessed with keeping the bowels regular as a way of treating a range of ailments traditionally associated with teething.

Treatments for children: Soothing, teething & cooling powders

Soothing, Teething, and Cooling Powders were formulated to regulate the bowels of teething children.

Secret Remedies, first published by the British Medical Association in 1909, revealed that many of these powders contained calomel, a mercury-based compound, which was included as a laxative.

Many powders also contained sugar, presumably to disguise the unpleasant taste of the calomel and other ingredients. Giving babies anything containing sugar is now discouraged by dentists and medical professionals since it exposes the newly formed tooth to harmful acids, contributing to the risk of tooth decay.



Steedman's Soothing Powders, around 1882- 1938

John Steedman and Co.

The packaging of Steedman's Soothing Powders claimed they relieved the symptoms of teething in children such as inflammation of the gums, fevers, convulsions, debility, stomach upsets and diarrhoea.

The formula remained a mystery until 1909, when scientists discovered they contained calomel (mercurous chloride). At an inquiry into proprietary medicines

before a Parliamentary Select Committee in 1913, the manufacturer revealed the only change to the original formula had been the removal of opium. The Select Committee criticized Steedman's for failing to warn parents of the dangers of giving their child a mercury-based medicine over a long time period.

The powders contained mercury until the 1940s. By 1955, the mercury had been replaced with phenolphthalein, a purgative.

George's Infants' Powders, 1915-1937
Harry Atwood George (M.P.S.)

George's Infants' Powders were also called Europa Infants' Life Preservers, reflecting the still prevalent attitude that teething caused many fatal childhood diseases. The ingredients are not known.

Doctor Stedman's Teething Powders, 1908
Stedman's

Like the similarly-named Steedman's Soothing Powders, Stedman's Teething Powders also contained the ingredients calomel and sugar.

Dr Foster's Cooling Powders, 1908-1941
United Chemists Association Ltd.

Dr Foster's Cooling Powders are labelled as "A harmless aperient for children". An aperient is a laxative. The ingredients are not known.

Bablets (Baby's Own Tablets), 1929-1939
G.T. Fulford Company Ltd.

Bablets were tablets specially formulated for babies, to "relieve all stomach and bowel troubles". They were also for "teething troubles". The ingredients, heavy magnesium oxide, ginger, and peppermint oil, all treat digestive disorders.

Treatments for children: Paracetamol-based preparations
(1970s – present)

By the mid 20th century it was well understood by the medical profession that the teething process did not cause as many childhood diseases and disorders as previously believed. As a result teething preparations were increasingly formulated to provide relief for specific symptoms in teething infants.

Many medicines now contain paracetamol, an analgesic, used to relieve pain and an antipyretic, used to prevent and reduce fever. Paracetamol is an effective treatment for infants since any side-effects are rare and usually mild.

Fennings' Children's Cooling Powders, 1967-1977
Alfred Fennings

Fennings' Children's Cooling Powders are a teething preparation that has been in existence since 1851. The changes in formulation chart the changing ingredients in teething preparations and the various symptoms associated with teething over the last 150 years.



In contrast with many teething preparations available in the second half of the 1800s, the packaging stated that the powders “Do not contain calomel, opium, morphia, nor anything injurious to a tender babe”.

By 1955 Fennings’ Children’s Cooling Powders contained phenacetin, used for its analgesic (pain-relieving) and antipyretic (fever-reducing) properties. Phenacetin was replaced by paracetamol in the late 1960s after phenacetin was linked to blood disorders, kidney toxicity, possibly leading to cancer of the kidney.

Calpol Sugar Free Infant Suspension, 2007
Pfizer PGM

Calpol Night, 2007
Pfizer PGM

Calpol is now arguably the brand leader in paracetamol-based preparations for children. Calpol provides “effective relief of pain including teething pain, headache, sore throat, and the symptoms of flu and feverish colds”.



Treatments for children: Lignocaine-based teething preparations (1970s – present)

Teething gels are formulated to mainly just relieve pain in the area they are rubbed, although some do also contain antiseptics to treat minor mouth infections.

Manufacturers have used lignocaine hydrochloride, a local anaesthetic with a rapid onset of action, in teething gels since the 1970s.

Lignocaine hydrochloride works by preventing or impairing nerve impulses near to the application site, so numbing teething pain within a few minutes of application to the gums.

Mrs Johnson’s American Teething Syrup, around 1972
Eucryl Ltd.

Woodward’s Teething Balm, 1972-1979
W. Woodward Ltd.



Woodward's Teething Balm and Mrs Johnson's American Teething Syrup are two early examples of teething preparations containing the anaesthetic lignocaine hydrochloride. The gels were rubbed on to babies' gums to relieve teething pain.

Bonjela Teething Gel, 2007
Reckitt Benckiser Healthcare (UK) Ltd.

Rinstead Teething Gel, 2001
Schering-Plough Ltd.

Bonjela Teething Gel and Rinstead Teething Gel are both current examples of lignocaine hydrochloride-based teething gels.

In addition to lignocaine hydrochloride, both of these products also contain antiseptics to treat and prevent minor infections of the mouth and throat.

Treatments for children: Homeopathic remedies

Homeopathic remedies are used as an alternative to conventional medicine for treating a range of medical conditions and their symptoms, including teething pain.

The idea behind homeopathic medicine is that remedies can be created by ingesting diluted amounts of substances that produce, in a healthy person, symptoms similar to those of the medical condition it aims to treat.

Nelson's Teetha, 2005
A Nelson and Company Ltd.

Boots Alternatives Teething Pain Relief, 2007
A Nelson and Company Ltd.

Nelson's Teetha and Boots Alternatives Teething Pain Relief are both teething granules containing a homeopathic potency of chamomilla (camomile), designed for the soothing and calming relief of symptoms of teething.



Treatments for children: Teething rings and necklaces

Babies naturally want to chew objects to gain relief from teething pain. The chewing process is also believed to help the teeth cut through.

Teething rings are given to infants to chew on to soothe their sore gums. Liquid filled teething rings can be chilled in the fridge to offer extra relief to sore gums.



**Butler's Electro-Medical Teething Necklace,
around 1903
H.W. Butler**

Butler's Electro-Medical Teething Necklace was to be worn day and night, from first signs of teething. The manufacturer claimed the necklace would exert an influence upon the growing tooth and that it would also have a beneficial effect upon the baby's system generally.