

# The Truth About 'Teething'

by Dr. Angela Gilhespie author of "The ABC's of Children's Teeth".

Why, in the 21<sup>st</sup> century, are we still perpetuating the myth of 'teething'? Teething, the eruption of teeth into the baby's mouth, is a painless, localized event, a normal part of child development. In contrast to the way it's described in the popular press, there's no 'cutting of the gum', no 'bleeding' nor 'pain'. Is it because of the interest by pharmaceutical companies in the lucrative sale of proprietary teething preparations, homeopathic remedies, analgesics and anti-pyretic medicines that this myth is being promulgated? All of these medicaments are taken not without risk; some can cause serious harm. 'First do no harm' (extract from the Hippocratic Oath) is a key principle of the ethical code that governs our medical profession. As health care professionals, we should inform parents of evidence-based scientific studies rather than perpetuate out-dated myths.<sup>1</sup>



My daughter at age 6 months. A beautiful, teething baby

## What do we know about 'teething'?

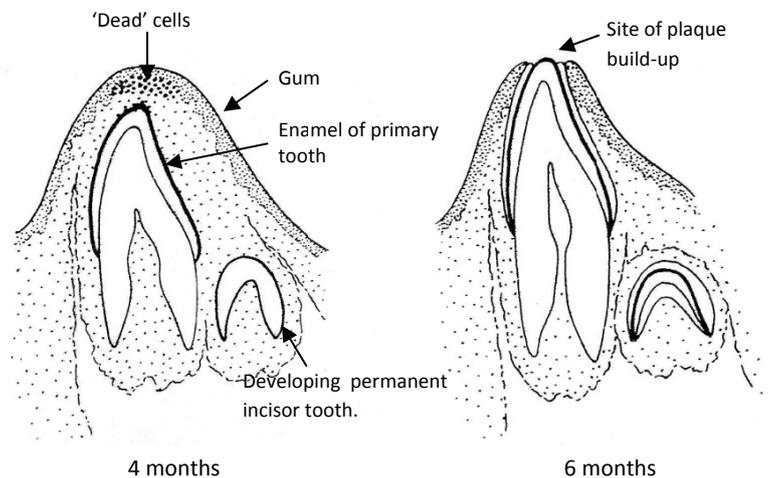
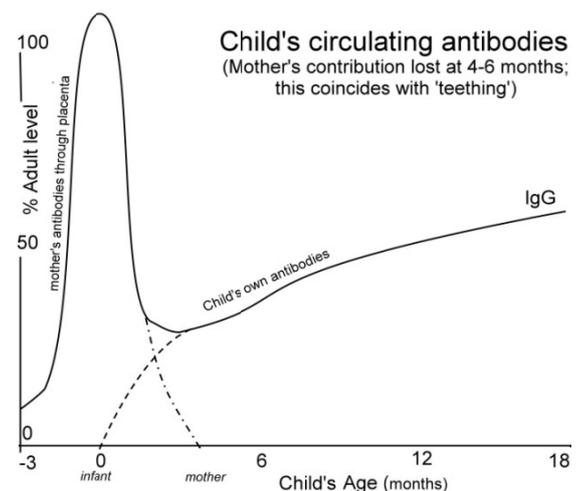
1. It's part of the child's normal development.
2. It's not painful.
3. It doesn't cause fever, or other systemic effects.
4. It does lead to excessive salivation (drooling), the result of chewing.
5. Once started, 'teething' lasts a period of  $\pm 2$  years (for primary teeth).

## Where did these myths originate?

The problem is, as in all human studies, is it 'correlation or causation'? That is, does one process *cause* the other, or do the events merely *occur* at the same time? Teeth start to appear in the baby's mouth usually between 4-8 months. That time *coincides* with the precipitous drop in the baby's circulating antibodies (in the baby's blood stream) passed from the mother to the baby *in utero*. (See graph opposite). The baby is now totally dependent on its own immature immune system. It is a time the baby is at high-risk for infections: bacterial, viral and fungal.

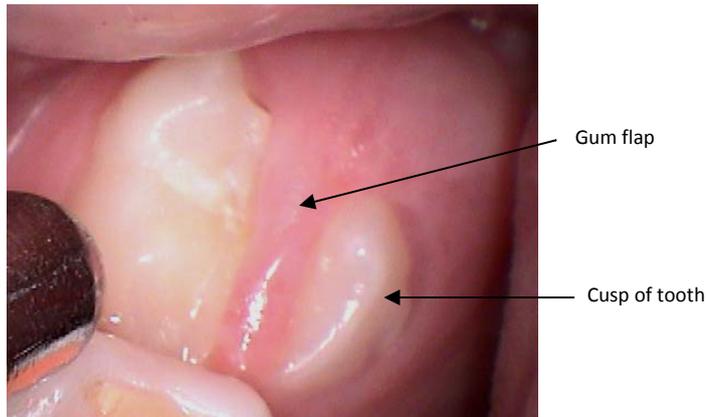
The myth arose in antiquity that teeth 'cutting' through the gum could account for a whole series of systemic effects: fever, diarrhoea, convulsions, sleeping and behavioural disturbances, etc. It was even seen in the 18<sup>th</sup> century as a cause of infant mortality.<sup>2</sup> Firstly, teeth don't 'cut' through the gum; there's no bleeding or pain. The diagrams below show what happens.

As the tooth erupts, the tissue around the tooth (enamel epithelium) merely fuses with the gum surface tissue (gingival epithelium). The overlying tissue as it breaks down lacks a nerve supply which explains why it's not painful. At no time are mouth bacteria introduced into the tissues to cause infection or inflammation. However, plaque derived from mouth bacteria (biofilm) can accumulate at the junction of the newly-erupted tooth and the gum. This plaque must be removed daily, starting with Xgel sponges. A good adjunct to this is to use Xgel, 3-5 times daily.



Section of lower jaw showing developing primary and permanent lower incisor teeth.

To dispel the suggestion that ‘teething’ could be painful, one should consider the eruption of the first permanent molars. These usually appear at the back of the mouth between 4-8 years of age. The mechanism of eruption is identical to the first baby incisors but the gum flap is larger. Again there’s no pain reported by the child who can now verbalize unlike the teething baby who can’t! The gum flap has no sensation; there is no pain.



**Erupting 6-year molar.**

### **Pharmacological Strategies.**

The question is: if teething is not painful nor causes fever, why do parents need to medicate?

All teething preparations and medicines are not without risk e.g. aspirin can cause Reye’s syndrome, paracetamol in high doses is hepatotoxic, benzocaine can cause hypersensitivity reactions and alcohol has been linked to oral cancer, etc.

If the child has fever, diarrhoea or other systemic upsets, a medical cause should be sought. Assuming these to be symptoms of ‘teething’, or using teething preparations or pain-relieving medicines, often delays treatment. If the cause is serious e.g. meningitis or gastro-enteritis, precious time has been lost.

### **Why the drooling and chewing ‘everything in sight’?**

The child in normal development is moving from sucking for feeding to chewing food. The main salivary gland, the parotid, is in the cheeks. The main muscle of chewing, the masseter muscle, ‘milks’ the parotid gland to pour saliva into the mouth to begin the process of digestion. Babies learning to chew produce copious amounts of saliva by this mechanism. This results in drooling as they learn to control, by swallowing, the excessive saliva. This is the time our babies are moving away from a dependency on milk for food to a mixed diet they must chew. The fact that teeth are appearing in the mouth at the same time just shows the incredible orchestration of the different functions of the body!

### **References.**

- <sup>1</sup>. Tsang, A.K.L “Teething, teething pain & teething remedies”. International Dentistry S.A. 2010. Vol. 12 no5.
- <sup>2</sup>. Arbuthnot (1732): “Above one-tenth part of all children die in teething (some of them from gangrene).”

Corresponding author: Dr A. Gilhespie, e-mail: [agilhespie@teethforlife.co.za](mailto:agilhespie@teethforlife.co.za).