

TOOTHACHE or JAW PAIN

Human beings normally have 20 deciduous (temporary) "baby" teeth, which are eventually replaced by 32 permanent teeth (there are no premolars). The teeth are equally distributed between the upper and lower jaws, each with 16 teeth, and arranged to relate to one another (upper versus lower) to provide the functions of chewing (cutting, tearing, and grinding). From front to back, they include the central incisor, lateral incisor, canine, first premolar, second premolar, first molar, second molar, and third molar (wisdom tooth).

The bulk of the tooth consists of ivory or dentum, the solid portion of the tooth. The exposed crown is covered by enamel, and a thin layer of bone called the cement or crista petrosa covers its roots. The dentum surrounds a pulp chamber containing the vascular and nerve rich dental pulp. The blood vessels and nerves are supplied to it through an aperture at the point of each root called the foramen apicis dentis. This foramen communicates between the anchoring alveolar bone and the passage to the pulp chamber called the pulp canal.

If the protective layers of the tooth (the enamel or cement) are worn or eaten away, the substances beneath them are rendered vulnerable to bacterial attack and consequent decay, and *toothache* may occur. The pain produced may be localized in the affected tooth or may also refer into jaw structures.

Toothache (pain arising from the tooth itself) most commonly shows itself as contact sensitivity to heat, cold, or sugar. Typically, discomfort is quickly relieved when contact with the offending substance is broken. The source of contact sensitivity in a perfect looking tooth is a sensitive layer just under the superficial enamel generally caused by a small cavity. Such sensitivity may also occur around the edge

of existing dental work or at points of friction between the tooth and a dental plate or brace.

Another common source of *toothache* is an infection or abscess within the tooth's pulp or nerve cavity. The pain is generated from increased pressure caused by swelling forming within the pulp chamber. Patients generally complain of a dull or throbbing pain, which may radiate along the jaw. Blunt tapping or direct pressure on the tooth itself will increase pain in the affected tooth. The sufferer of this condition should quickly seek the help of a dentist, although it may be already too late to save the tooth once this type of pain syndrome has become persistent. The early detection and treatment of this condition provide the best chance of saving the affected tooth. A pulp infection that runs its full course may produce a root abscess or gumboil. The abscess will ultimately destroy the nerve to the tooth, leaving a dead tooth.

A common source of toothache-like pain is the *TMJ (temporomandibular joint) pain syndrome*. In this syndrome, pain is referred along the jaw line and into the teeth when abnormally high pressures develop in the TMJ from osteoarthritic conditions, joint degeneration, or musculature imbalance. This pain may have much the same intensity as a genuine *toothache*. Referred pain into the jaw or teeth may also come from trigger point formations housed in the jaw and neck musculature.

Treatment

Joint pathologies, muscle imbalances, or trigger point formations should be suspected of producing the "toothache pain", if concrete evidence of a real *toothache* is lacking. Resolution of the problem always depends on correctly identifying the cause of the pain. It should be noted that more than one source may

be responsible for the *toothache or jaw pain*, and all of them must be identified and treated for complete relief to occur.

Trigger Points

The following trigger point formations may, singly or in combination, refer pain into the jaw and may be mistaken for *toothache*: Masseter

(deep), Masseter (superficial A), Masseter (superficial B), Masseter (superficial C), Temporalis (anterior), Temporalis (middle A), Temporalis (middle B), Medial pterygoid, Lateral pterygoid, Anterior digastric, Posterior digastric, Orbicularis oculi, Zygomaticus major, Upper trapezius [A], Sternocleidomastoideus (superficial fibers), and Platysma.