

Episode 133 – Dental Fear and Anxiety May 23, 2025

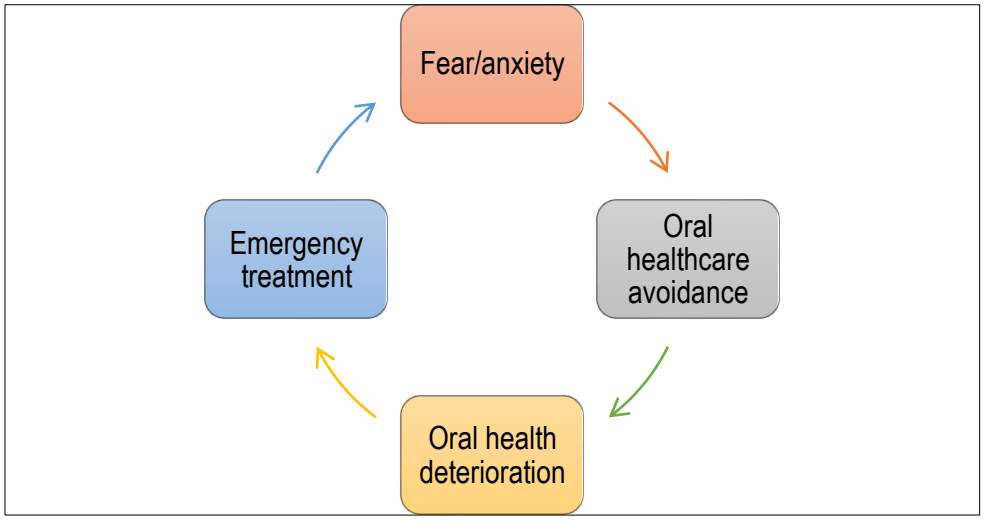
Introduction

Dental fear is the normal unpleasant emotional response to specific threatening stimuli in oral healthcare. Dental anxiety is a heightened state of apprehension that something dreadful will happen during oral care, coupled with a sense of losing control. Dental phobia is a severe form of dental anxiety characterized by marked and persistent anxiety toward specific dental situations or objects (e.g., drilling, injections) or dental situations in general that is out of proportion to actual danger. Dental phobia may coexist with panic disorder or other phobias.

Dental fear and anxiety are related to the fight-or-flight response. Avoidance is a natural response to any discomfort or pain. Dental fear and anxiety can result in prolonged avoidance and delayed treatment, leading to deteriorated oral health, more extensive dental problems and treatment, and exacerbating existing dental fear and anxiety. Studies show people with dental anxiety are more likely to have poor oral health.

More than 20% people who are dentally anxious do not see an oral health professional regularly, and 9-15% avoid care altogether. A person's perceptions may influence their level of anxiety. For example, if a person expects pain during a scaling procedure, they are more likely to report higher anxiety levels. Additionally, there is an association between frequent gagging and higher anxiety. [1] [2] [3] [4] [5] [6] [7] [8] [9]

Vicious cycle of dental fear and anxiety [4]



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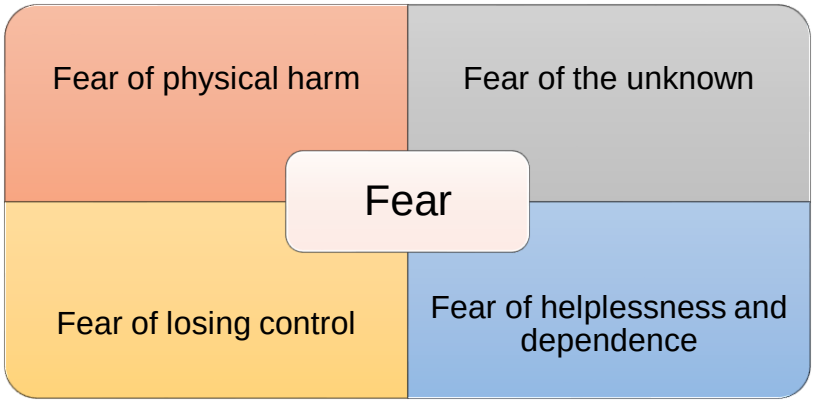
Individuals with high levels of dental fear and anxiety are more prone to having high levels of comorbid phobias, depression, mood disorders, and other mental health conditions and symptoms. [10]

Adults and children with high dental fear may be challenging to treat, require more time, and present with behavioural problems, which can lead to stressful and unpleasant experiences for both the client and the oral health practitioner. Treating clients with high levels of anxiety may trigger personal anxiety. Studies of dental hygienists who treat clients with dental anxiety found 57% experienced personal anxiety, and 38% did not feel experienced enough to treat these clients. Dentists have reported personal anxiety and stress while treating clients with dental anxiety and required further training on dental anxiety. Another survey noted 70% of oral health clinicians treating clients with dental anxiety found it challenging and stressful. [3] [11] [12] [13] [14]

Distinguishing between dental fear and dental anxiety can be problematic, with both conditions having the potential to impact oral care. Accordingly, the term dental fear and anxiety (DFA) is frequently used to describe intense negative emotions toward oral health procedures. DFA is prevalent across the lifespan and is primarily associated with previous negative dental experiences. DFA most often develops in childhood, with more than half of adults reporting experiencing traumatic experiences as children. [1] [15]

Three-quarters of all medical emergencies in oral healthcare develop either because of pain (e.g., from inadequate local anesthesia), the clinician's failure to recognize and treat a client's DFA, or both. These emergencies may include syncope, hyperventilation, angina, seizures, and asthma attacks. [16]

Elements common to all fears [6]



Understanding the causes and elements of fear allows more effective treatment planning for clients with DFA. [6]

Prevalence

Globally, 15% of adults report experiencing DFA. Pediatric prevalence estimates range from 10-29%, with approximately 30% in children 2 to 6 years. [1] [2] [17] [18]

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Older adults are generally less fearful of receiving dental treatment than younger adults. A higher prevalence of DFA is reported in females. Some studies suggest males may be less likely to express their anxieties due to social stigma, leading to an underestimate of dental anxiety in males. [18] [19]

Types of dental anxiety [12] [20] [21]

Anxious of a specific dental stimulus	These clients may be triggered by the sight of needles, sound of drills, smell of the dental environment, or sensation of vibrations within the oral cavity.
Anxious about the possibility of a dental catastrophe	These clients may be worried about an allergic reaction to dental materials or local anesthetic epinephrine, mercury poisoning, radiation exposure, claustrophobia especially during rubber dam use, choking or gagging.
Generalized dental anxiety	These clients typically experience the greatest upset before their appointments, worrying about procedures and being judged for their behaviour and poor oral health.
Distrust of oral health personnel	These clients may be argumentative or suspicious of oral health professionals' motives, feeling the dentist focuses on financial production and over-diagnoses to maximize profits and worrying the oral health team views them negatively. They may use sarcasm or small insults to mask their insecurity.

Manifestations

Manifestations of DFA in children include reduced cooperation, lessened compliance, and resistance to treatment, resulting in treatment management difficulties. [3] [22]

Adults with high levels of dental fear may:

- Avoid oral healthcare or have irregular attendance records.
- Only seek treatment when symptomatic (e.g., pain).
- Fail to show or regularly cancel their appointments. [23]

Types of reactions to fear and anxiety [6] [20]

• Irritation with delays • Being in a hurry • Sitting on edge of chair • Rapidly thumbing through magazines • Pacing • Dilated pupils • Pallor • Sweating	• Anxious facial expression • Agitation and nervousness • Sitting stiffly in dental chair, with their body or head slightly turned away from the clinician • Avoiding eye contact	• Nervous movements of arms and legs • Squeezing the chair or fists • Talking a lot, talking rapidly • Stops treatment frequently • Frequent urination

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• Accelerated breathing rate • Increased heart rate • Changes in blood pressure • Hyperventilation	• Mouth not opened enough • Closing their eyes • Following clinician's movements • Trembling, cold hands	• Standing up • Crying • Aggressive, hostile behaviour • Fainting • Panic attack

Hyperventilation

Hyperventilation, also called hyperventilation syndrome, is one of the most common medical emergencies reported in oral healthcare and is often caused by stress and anxiety rather than a physical problem. Hyperventilating causes excessive loss of carbon dioxide from abnormal rapid breathing, which can lead to unpleasant symptoms that exacerbate the situation. Hyperventilation can cause dizziness, accelerated heart rate, trembling, sweating, hypertension, apprehension, chest pain, shortness of breath, numbness and tingling (i.e., paresthesia) in the arms, legs, and around the mouth, which can give the person the sensation that something is seriously wrong (e.g., feeling they are having a heart attack).

Hyperventilation may cause fainting. However, as soon as the person faints, their respiratory rate immediately returns to normal. Hyperventilation is the only emergency when oxygen is not administered. The previous treatment, which involved using a paper bag, should be avoided, as it may increase carbon dioxide to dangerously high levels in clients with a metabolic cause for their hyperventilation, such as diabetic ketoacidosis. Instead, make the client aware of how fast they are breathing and assure them their symptoms are from their rapid breathing. Coach them to take slow, regular breaths on a breath-by-breath basis (i.e., diaphragmatic breathing). If necessary, use a detached oxygen mask with holes to release excessive carbon dioxide to help reassure and calm the client.

Treatment of chronic hyperventilation syndrome may include treating the underlying mood or anxiety disorder with cognitive therapy, stress reduction techniques, medication (e.g., anxiolytics, antidepressants, lithium), or a combination of these therapies. [16] [24] [25] [26]

Fainting

Fainting, also called vasovagal syncope, is the most common medical emergency in oral healthcare settings and is often caused by anxiety. Triggers may be the sight of blood or extreme emotional stress. The trigger causes the heart rate and blood pressure to suddenly drop, which reduces blood flow to the brain, resulting in a brief loss of consciousness. Treatment includes placing the client in the supine position. Pregnant clients near term should be turned on their right side, with a pillow under the left side of their back to help maintain that position.

Clients who faint typically respond to positional changes within 30 to 60 seconds. If they do not respond in this time frame, they did not simply faint, and differential diagnosis for the loss of consciousness must be considered, such as low blood glucose levels,

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cardiac arrest, or stroke. Clients who fall when fainting should be assessed for physical trauma and referred for medical evaluation as required. [27] [28] [29]

Panic attack

A panic attack is a brief period of extreme distress, anxiety, or fear that begins suddenly, accompanied by physical and emotional symptoms. Panic disorder involves recurrent panic attacks that lead to excessive worry about future attacks and behaviour changes intended to avoid situations that might trigger another attack. Isolated panic attacks may not require ongoing treatment. Panic disorder treatment includes pharmacotherapy (e.g., antidepressants, anxiolytics), psychotherapy (e.g., exposure therapy, cognitive behavioural therapy), or both. Signs and symptoms of panic attacks develop suddenly, reach their peak in about 10-12 minutes, and disappear within minutes. [6] [30]

Signs and symptoms of panic attacks [6] [30] [31]

• Hyperventilation • Feeling of suffocation • Sensation of choking • Palpitations or accelerated heart rate • Chest pain or discomfort • Trembling, shaking	• Flushes or chills • Sweating • Dizziness, vertigo, unsteady feelings, faintness • Numbness or tingling sensations • Nausea, abdominal discomfort, diarrhea	• Fear of losing control, going crazy, or dying • Feelings of unreality, strangeness (derealization), or detachment from the environment (depersonalization)

Panic attacks are common. Some panic attacks occur in response to a specific situation or trigger (e.g., a person who is afraid of needles may panic when seeing a needle). However, some attacks occur without any apparent trigger. Panic attacks can occur without warning and when a person is calm or anxious.

The frequency of attacks can vary from a single occurrence to weekly or even daily attacks for months. Some people may experience several daily attacks followed by weeks or months without attacks. Most people recover without treatment. Sometimes, recurrent panic attacks are triggered by a specific situation in which the person felt in danger before. Panic attacks may occur as part of any anxiety disorder (e.g., panic disorder, social anxiety disorder, separation anxiety disorder, agoraphobia[1]). For example, children with separation anxiety may have a panic attack when a parent leaves. Children who fear being trapped in places with no way to escape easily (agoraphobia) may have a panic attack when reclined in a dental chair. Symptoms in children may be more dramatic (e.g., screaming, weeping, hyperventilating).

Panic attacks may also occur in people with other mental health conditions (e.g., depression). Physical disorders, such as asthma, can also trigger panic attacks, and panic attacks can trigger asthma. [30] [32] [33]

[1] Agoraphobia is fear or anxiety about being in situations or places (e.g., crowds, shopping malls) with no way to escape easily or in which help may not be available if intense anxiety develops. These situations are often avoided or endured with much distress. [98]

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A panic attack can be triggered before the start of an oral health procedure, during treatment, or after its completion. The symptoms of a panic attack can make people think they are having a heart attack or a stroke. [32]

Panic attacks may be confused with medical emergencies. A panic attack in the dental office needs a quick and correct diagnosis. Although a panic attack does not endanger the client's life and, in most cases, will resolve spontaneously, an incorrect diagnosis of a panic attack could be life-threatening. Differential diagnosis of a panic attack may include a heart attack. [32]

In most cases, the client will know it is a panic attack and will inform the clinician. However, if it is the client's first experience or their condition deteriorates, emergency medical services (EMS) may need to be activated. [32]

Treating a panic attack may include having the client:
- Focus on deep breathing.
- Close their eyes to block out extra stimuli and make it easier to focus on breathing.
- Focus on an object.
- Use muscle relaxation techniques. [32]

Panic attack prevention includes a thorough medical history to identify clients who may experience panic attacks. Discuss with the client factors that may trigger a panic attack and adapt the treatment approach accordingly. [32]

DFA triggers [6] [20] [32] [34]

• Pain or fear of pain from injections or drilling • Invasion of the intimate space	• Keywords such as needle, injection, blood • Sight of instruments or blood	• High-frequency vibrations • Dental office sounds (e.g., drilling), smells (e.g., eugenol, cut dentin), and lights

Factors contributing to DFA

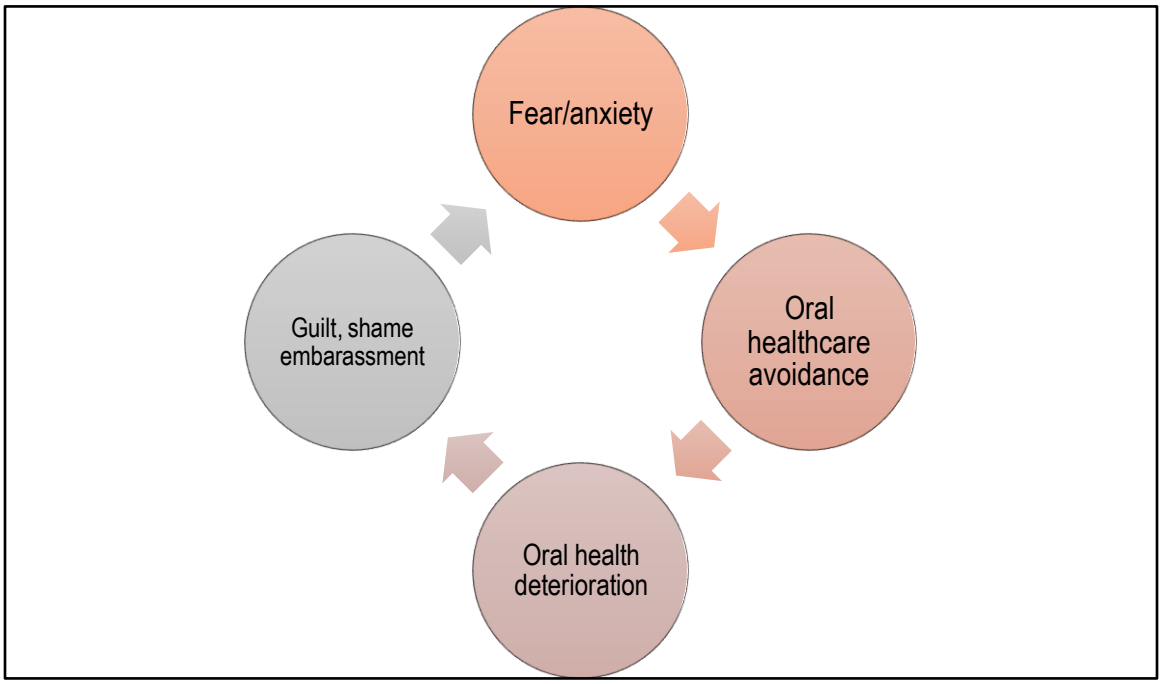
The etiology of DFA is complex and multifactorial involving individual, environmental, and genetic factors. [9]

Factors contributing to DFA may include:
- Previous traumatic or negative dental experiences, such as pain, poor communication from dental staff, and feeling humiliated (e.g., being told off about the state of their oral health or oral hygiene). Associating a previous dental visit with adverse consequences is an example of classical conditioning. Classical (associative) conditioning is an unconscious process where an automatic, conditioned response becomes associated with a specific stimulus. For example, a negative dental experience equates to all dental experiences being negative. DFA most often develops in childhood. However, many highly anxious people cannot remember an event that may explain the cause of their dental anxiety. [4] [5] [6]
- Hearing other people's negative dental experiences and viewing frightening portrayals of dentistry in the media. [6] [20]

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- Low socioeconomic status, which may create dental anxiety due to the unaffordable cost of dental treatment. [19]
- Low education levels, which may decrease understanding of treatment, resulting in the fear of the unknown. However, some studies show the opposite. People with higher education levels can be significantly more anxious about dental treatment, possibly attributed to greater awareness of the procedure, instilling more fear rather than alleviating their concerns. [19]
- Low oral health literacy, meaning they have difficulty understanding and using oral health information, may heighten dental anxiety due to fear of the unknown. Misconceptions (e.g., about pain and discomfort during dental procedures) and lack of knowledge about preventive measures may lead to dental issues, escalating dental anxiety. [35] [36]
- Embarrassment, guilt, or shame over poor oral health and oral hygiene, leading to treatment avoidance out of fear of being admonished, which creates a vicious cycle of fear and anxiety. [37]

Vicious cycle of embarrassment, fear, and anxiety [37]



Trauma history

A history of trauma, such as physical, emotional, or sexual abuse, especially in childhood can contribute to DFA. Dental treatment can be particularly uncomfortable for survivors of abuse due to feelings of loss of control. Childhood sexual abuse is strongly associated with DFA, with survivors reporting:

- Discomfort with instruments in the mouth.
- Increased gagging reflex.
- Difficulty remaining silent and relaxed.
- Aversion to being touched.
- Feelings of lack of control.

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Aspects of oral care that may trigger traumatic memories and emotions and retraumatize clients include:

- Reclining the client in the dental chair.
- Placing the dental bib around their neck.
- Hovering over the client while providing treatment.
- Impeding the client's ability to speak or communicate effectively while providing care.

Clients with a trauma history may experience significant anxiety and distress in oral healthcare settings, even for noninvasive care (e.g., a brief exam, radiographs). Oral care may trigger memories and emotions related to the original trauma and retraumatize clients. [6] [38] [39] [40]

Childhood DFA

Various factors increase the risk of developing DFA in childhood, including:

- Previous dental treatment.
- Painful, traumatic dental injury during early childhood. For example, falling and breaking a tooth. [41]
- Parental dental anxiety and consequently negative modelling on children. The child observes the fear response of the parent and learns vicariously that the situation poses a threat. [23]
- Low parental oral health literacy (e.g., unaware of the importance of brushing, fluoridated toothpaste, regular preventive appointments) leading to oral problems, pain, and discomfort in their children, which may aggravate children's fear of clinical treatment. [22]
- Presence of siblings. Children with siblings are significantly more likely to experience DFA than those without. Siblings' past dental experience and their positive or negative modelling may shape children's perception of oral healthcare. [42]
- Hearing stories from others about traumatic or painful dental experiences may lead to a learned fear of dental procedures. [23]
- Adverse childhood events (ACEs) are associated with increased DFA. ACEs are traumatic events occurring in childhood or adolescence and include physical, sexual, and verbal abuse, physical and emotional neglect, household dysfunction (e.g., intimate partner violence), bullying, and parental separation. [40]
- Maternal education level, oral health status, and post-dental treatment complications. [1] [43] [44]

Children's individual characteristics can significantly influence the occurrence of DFA, including their:

- Temperament (e.g., shyness) [45]
- Age. Very young children may have difficulty receiving oral care. After four years of age, many children present sufficient cognitive maturity to control their anxiety and cooperate with treatment. [46]
- History of toothache. [1] [46]

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Assessing for DFA
Some oral health clinicians may hesitate to discuss dental anxiety with clients due to concerns it may make matters worse. However, it is better to determine if clients are anxious than to ignore their fear. To successfully work with clients with DFA, the clinician must identify if the person is scared or nervous and then adopt an appropriate treatment approach tailored to their concerns. Observing clients' behaviour in the waiting room can provide early indicators of DFA. [11]

Potential DFA indicators in the waiting room [11]

• Fidgeting with their hands • Rapidly flicking through magazines • Sitting on edge of the chair • Changing sitting positions often	• Sweating • Sighing deeply • Breathing rapidly • Talking loudly • Making negative comments about dentists and dentistry	• Pacing or walking around the waiting room • Rapid head motions • Startled reactions to office noises

Similar anxious behaviours may also be observed in the treatment room. However, some people who appeared jittery or loud in the waiting room may become quiet and still when in the dental chair. They may also state they are in a hurry. Observing client behaviour can provide indications of possible DFA. [11]

Identifying dental anxiety
For clients who do not openly state their nervousness, the simplest way to identify DFA in a client is to ask them. Other reliable methods include using self-reported dental anxiety scales. These can be distributed to clients before arrival to the clinic and returned at their visit or distributed and completed upon arrival for their appointment.

Questionnaires are efficient and can be repeated to determine client progress in overcoming their fears. There are several structured, psychometrically valid self-reported scales to assess dental anxiety. Various scales are available to measure dental anxiety in adults and children. [11]

The Modified Dental Anxiety Scale[2] is the most commonly used scale to measure dental anxiety in adults. The scale has been translated and validated in several languages. It considers five parameters:
- Receiving treatment the next day,
- Sitting in the waiting room,
- Having a tooth drilled,
- Receiving scaling and polishing, and
- Receiving an anesthetic via injection. [19] [47]

Each parameter is scored as follows:
1 = not anxious
2 = slightly anxious

[2] Modified Dental Anxiety Scale is available to download in 30 different languages (e.g., French, Arabic, German, Hindi, Urdu, etc.) free of charge: https://dentalanxiety.wp.st-andrews.ac.uk/scale-translations/

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3 = fairly anxious
4 = very anxious
5 = extremely anxious

The total score is a sum of all five items, ranging from 5 to 25.
<10 = no or low anxiety
11-18 = moderate dental anxiety
>19 = severe dental anxiety/dental phobia [19] [47]

Modified Dental Anxiety Scale [47]

CAN YOU TELL US HOW ANXIOUS YOU GET, IF AT ALL, WITH YOUR DENTAL VISIT?

PLEASE INDICATE BY INSERTING 'X' IN THE APPROPRIATE BOX

1. If you went for TREATMENT TOMORROW, how would you feel?

Not Anxious ☐	*Slightly Anxious* ☐	*Fairly Anxious* ☐	*Very Anxious* ☐	*Extremely Anxious* ☐

2. If you were sitting in the WAITING ROOM (waiting for treatment), how would you feel?

Not Anxious ☐	*Slightly Anxious* ☐	*Fairly Anxious* ☐	*Very Anxious* ☐	*Extremely Anxious* ☐

3. If you were about to have a TOOTH DRILLED, how would you feel?

Not Anxious ☐	*Slightly Anxious* ☐	*Fairly Anxious* ☐	*Very Anxious* ☐	*Extremely Anxious* ☐

4. If you were about to have your TEETH SCALED AND POLISHED, how would you feel?

Not Anxious ☐	*Slightly Anxious* ☐	*Fairly Anxious* ☐	*Very Anxious* ☐	*Extremely Anxious* ☐

5. If you were about to have a LOCAL ANESTHETIC INJECTION in your gum, above an upper back tooth, how would you feel?

Not Anxious ☐	*Slightly Anxious* ☐	*Fairly Anxious* ☐	*Very Anxious* ☐	*Extremely Anxious* ☐

There are several scales available to assess dental anxiety in children. The Modified Child Dental Anxiety Scale (face version) includes smiley faces on the rating scale. The scale consists of eight questions and five pictorial facial expressions from very happy to very sad. The total score ranges from 5 (no dental anxiety) to 40 (extreme dental anxiety). This scale is used to determine dental anxiety in children 8-15 years old. [48]

The Shortened Modified Child Dental Anxiety Scale (face version) consists of six questions. The last two questions in the original Modified Child Anxiety Scale (face version), which involved anxiety related to dental general anesthesia and sedation, were

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removed because children may be unaware of sedation and general anesthesia experience and find it difficult to score these questions. Each question of the shortened version has five faces ranging from a very happy face to a very sad face and a score range of one to five. The total score range is 6-30. Children with a score ≥19 are considered to have dental anxiety. [49]

Shortened Modified Child Dental Anxiety Scale (face version) [49]

For the next six questions I would like you to show me how relaxed or worried you get about the dentist and what happens at the dentist. To show me how relaxed or worried you feel, please use the simple scale below. The scale is just like a ruler going from 1, which would show that you are relaxed, to 5, which would show that you are very worried. Please circle the appropriate number on the scale.

😀 1 would mean: relaxed /not worried
🙂 2 would mean: slightly worried
😐 3 would mean: fairly worried
☹️ 4 would mean: worried a lot
😢 5 would mean: very worried

How do you feel about…	😀	🙂	😐	☹️	😢
… going to the dentist?	1	2	3	4	5
… having your teeth looked at?	1	2	3	4	5
… having your teeth cleaned and polished?	1	2	3	4	5
… have an injection in your gum?	1	2	3	4	5
… having a filling?	1	2	3	4	5
… having a tooth taken out?	1	2	3	4	5

Impact on oral health

Research indicates children with high DFA have notably higher decayed, filled, missing teeth (DMFT) index scores than those with low DFA. Additionally, higher DFA is significantly associated with more severe dental caries. [41]

Panda et al. (2021) found children with dental fear were almost two times more likely to have at least one untreated carious tooth than those who did not express fear during oral examinations and dental procedures. [50]

Parental fear and anxiety also prevent children from accessing regular oral healthcare. However, children whose parents receive regular oral care do so as well. Research has shown parents with higher anxiety levels may start brushing their children's teeth at an earlier age. Additionally, children's oral health status is higher when parents are positive toward dentistry. [51]

Parental DFA can also positively or negatively impact adolescents receiving dental treatment and maintaining their oral health. [51]

Adults with DFA frequently avoid oral healthcare. Research has found individuals with high dental fear visited less often and had more decayed and missing teeth. Avoiding dental visits not only leads to the progression of dental caries and periodontal disease

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but also prevents people from alleviating their anxious or fearful state by having nontraumatic dental experiences. [4]

Burning mouth syndrome[3] is associated with higher anxiety levels. Bruxism[4] can result from anxiety or stress. Edentulism may occur at elevated rates in people with dental phobia. [52]

Survivors of sexual abuse may find oral health appointments very stressful. Leading to the avoidance of preventive measures and early interventions. Survivors of sexual abuse are reported to have higher rates of missing teeth, dental caries, periodontal disease, and apical periodontitis. [39]

Medications used to treat anxiety (e.g., anxiolytics, antidepressants, sometimes beta-blockers to control physical symptoms) or other comorbid conditions may cause dry mouth.[5]

Dry mouth can result in several oral issues, such as:

- Increased risk of dental caries, periodontal diseases, candida infections, and traumatic ulcerations.
- Increased difficulty in speech, eating, swallowing, and retaining dentures due to lack of lubrication, which can result in decreased food intake and poor nutrition.
- Increased discomfort with brushing, leading to increased plaque accumulation and heightened dental caries, periodontal and peri-implant disease risk. [53] [54] [55]

Managing DFA in oral healthcare

DFA etiology is multifactorial. Thus, there is no single therapy for its management. Proper evaluation of the client and identifying their source and level of fear and anxiety can help with treatment planning. [20]

Stress is the main factor causing medical emergencies in oral healthcare settings. Syncope, hyperventilation, seizures, asthma attacks, and angina are some of the more common emergencies that can be precipitated by stress and anxiety. [24]

Office environment

The atmosphere in oral health settings can play a significant role in initiating DFA. Creating a calm and caring environment is crucial to reducing anxiety and stress. Strategies include:

- Playing soft music and avoiding bright lighting
- Slightly cooler temperature in the office is often preferred
- Early appointments and seeing clients on time
- Aromatherapy [20]

[3] Refer to Episode 106 for discussion on burning mouth syndrome.
[4] Refer to Episode 82 for additional information on bruxism.
[5] Refer to Episode 88 for information on oral health and mental health conditions.

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Appointment scheduling
Clients who are apprehensive are better able to tolerate stress when rested. Thus, for most of these clients, including children, the ideal time to schedule oral health treatment is early in the day. Early appointments also mean clients do not think about their upcoming dental appointments all day. [16]

Minimize wait time
Once in the oral health office, ensure the client does not have to wait in the reception area or dental chair for extended periods before treatment begins. Anticipation of a procedure can induce more stress and fear than the actual procedure, allowing time to recall threatening stimuli. [16] [20]

Aromatherapy
Aromatherapy, using essential oils of aromatic plants, can help to mask dental odours and has a potential anxiolytic effect. Research has shown lavender essential oil therapy may reduce dental anxiety and pain levels in children. Furthermore, covering up the medicinal with the aroma of essential oils may also reduce fear. [20] [22] [56]

Communication
A good client-clinician relationship is crucial for managing DFA. Communication is key to making clients feel welcome and heard. Sit facing the client, with the client sitting upright to make eye contact. Gather information from the client about their dental problems and concerns, including their fears. Give all the necessary information regarding treatment options and preventive procedures in understandable language. Encourage clients to ask questions about the treatment and keep them informed before starting and during the procedure. Ask how they are doing during treatment while also giving support and reassurance. Normalizing anxious feelings and avoiding negative phrasing can be beneficial. Nonverbal communication is also essential. [20]

Psychotherapeutic management
Behaviour management techniques include relaxation therapies, guided imagery, hypnosis, acupuncture, distraction, positive reinforcement, signalling, rest breaks, tell-show-do, modelling, cognitive behavioural therapy, animal-assisted therapy, and sensory-adapted environments. [20]

Relaxation therapies
Anxiety-provoking stimuli create physical tension, which increases the person's perception of anxiety. Relaxation therapies elicit a relaxation response, including reducing overall physical arousal symptoms. Relaxation techniques, when practiced regularly, can lower stress and anxiety levels and help clients cope with symptoms of anxiety. Techniques include diaphragmatic breathing and muscle relaxation.[6] Once a person is physically relaxed, they will also be psychologically calm. [20] [23]

[6] Scroll down to client resources for hyperlinks on to how to perform diaphragmatic breathing and progressive muscle relaxation.

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Diaphragmatic breathing
A fundamental way to help clients relax physically is to teach them proper breathing techniques. Relaxed breathing should originate primarily from the diaphragm, with little movement of the chest and shoulders. Chest breathing activates accessory respiratory muscles that tighten the neck, chest, and vocal cords and can trigger a fight-or-flight stress reflex.

A chest-breathing pattern is helpful in short bursts when running from danger. However, prolonged chest breathing can contribute to coughing, hoarseness, tension headaches, chest tightness, shortness of breath, and anxiety.

To determine if you tend to chest breathe, try the following:
- Stand up straight, sit comfortably, or lie flat on a bed or the floor.
- Put one hand flat on your chest and the other hand flat on your abdomen.
- Watch your hands when you inhale and exhale.

If you are chest breathing, the hand on your chest will go up and down. If you are belly breathing, that hand will go up and down. Other signs of chest breathing include frequent sighing and yawning, which indicate insufficient air entering the lungs. [57] [58]

Diaphragmatic breathing, also called belly, deep, or abdominal breathing, is a relaxed form of breathing using the diaphragm to reduce tension in the chest while providing more oxygen for the body per breath. [20] [57]

Ma et al. 2017 found diaphragmatic breathing reduces levels of the stress hormone cortisol in the body, helping to alleviate symptoms of stress and anxiety. [59]

Focusing on breathing effectively encourages the body to relax. When practising diaphragmatic breathing, the stomach, rather than the chest, moves with each breath, expanding while inhaling and contracting while exhaling. Deliberately paying attention to each breath serves to distract and quiet the mind. [60]

Advantages of diaphragmatic breathing include:
- Lowered heart rate and blood pressure
- Decreased muscle tension
- Increased blood oxygenation
- Increased warmth to the hands and feet
- Reduced stress hormones
- Activated relaxation response, reversing the stress response
- Implemented easily, requiring no medication or cost [60]

Diaphragmatic breathing is easily taught at the oral health clinic and practised at home by the client before an appointment.

Practising diaphragmatic breathing
There are many variations of diaphragmatic breathing. One example is as follows:
1. Sit or lie in a comfortable place. Close your eyes.

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2. Place one hand on your chest and one on your abdomen. The bottom hand should do the moving. The top hand should remain still or only move as the bottom hand moves.
3. Inhale through your nose for about four seconds, feeling your abdomen expand. (You may feel slight tension the first few times you inhale.)
4. Hold your breath for two seconds.
5. Exhale slowly and steadily through your mouth for about six seconds. The mouth should be relaxed.
6. Repeat for 5-15 minutes. [60]

When first learning diaphragmatic breathing, it is common to feel uneasiness or lightheadedness. Quicken your breath if you feel lightheaded. After a session of diaphragmatic breathing, allow yourself time to adjust and do not stand up too quickly.

Diaphragmatic breathing is an excellent tool for relaxation, but it is a skill requiring practise. With practise it becomes easier over time, and eventually can be done with eyes open, while sitting, standing, walking, or driving. Diaphragmatic breathing can be done by the client while travelling to and waiting for their appointment, and during breaks while sitting in the dental chair. [60]

Progressive muscle relaxation

Progressive muscle relaxation is a technique where a person tenses and relaxes different muscles to relieve tension and induce a relaxation response. The relaxation response is a physiological state that slows breathing, reduces blood pressure, and lowers heart rate and cortisol levels. It is the opposite of the stress response.

A small trial by Park et al. 2018 found participants who practised progressive muscle relaxation had significantly lower dental anxiety than the control group. They also had significantly higher reductions in depression symptoms, blood pressure, pulse rate, and salivary cortisol levels. [61]

Ferendiuk et al. (2019) found the calming effect of progressive muscle relaxation may help reduce temporomandibular disorder symptoms. The study's participants experienced less intense pain and tension after practising the technique. [62]

Progressive muscle relaxation is relatively simple but will require time to teach the client and then for the client to practise at home (once or twice per day for 1-2 weeks) to master the technique. Several specific muscle sequences are used to practise progressive muscle relaxation, for example, starting with the feet and moving systematically up the body or starting with the forehead down to the feet.

Regardless of the sequence, each muscle is tensed to approximately 75% of full tension, held for between 5 to 10 seconds, and then relaxed for about 10 to 20 seconds, focusing attention on the feeling of tension and then the specific sensations of muscle relaxation. [11]

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Guided imagery
Guided imagery is a directed, deliberate daydream that uses all the senses to create a focused state of relaxation and a sense of physical and emotional well-being. It is a mind-body exercise where clients learn to develop a mental image of a pleasant, tranquil experience that consciously guides their attention to achieve relaxation and reduce anxiety.

Imagery can be a pleasant place such as a beach, mountains, lake, or a safe place. Clients choose their mental image and are guided by the clinician to create a scene with specific details, including sound, smell, and colours. This technique produces relaxation throughout the body and can be used with other relaxation techniques and cognitive behavioural therapy. Studies have shown the effectiveness of guided imagery in treating distress, mood, and anxiety symptoms associated with chronic pain, social anxiety disorder, attention deficit hyperactivity disorder, and cancer pain. Guided imagery is relatively easy to learn, teach, and use in clinical practice. It can be clinician-led or through audio recordings and can be performed daily or as needed by the client. [20]

Hypnotherapy
Clinical hypnosis has been successfully used in medicine and dentistry. Hypnotherapy can be used to induce relaxation, as an adjunct to inhalation sedation, to alleviate pain, anxiety, and stress, and to reduce problems with excessive gag reflex. It may also be a part of CBT. Hypnotherapy has pre- and post-suggestion components. The pre-suggestion component involves attentional focusing through imagery, distraction, or relaxation and is similar to other relaxation techniques. Clients focus on relaxation and passively disregard intrusive thoughts. The post-suggestion component involves the continued use of the new behaviour following the termination of hypnosis. Individuals widely vary in hypnotic susceptibility and suggestibility, although the reasons for these differences are not completely understood. It is inexpensive and has a very low risk of side effects. Clinicians require special training before they can practice hypnotherapy.

Meta-analytic reviews have demonstrated pain and anxiety reduction following hypnosis. Studies demonstrate effectiveness in anxiety reduction, allowing people to handle stressful dental treatments. More studies are required to validate the practicality and efficacy of hypnosis on a routine basis in oral healthcare. [20] [63] [64] [65] [66] [67]

Acupuncture
Acupuncture has been reported to be effective in treating dental anxiety and pain. It is a simple, inexpensive treatment modality requiring special training before incorporating into practice. Although studies have suggested acupuncture as a promising therapy for the management of anxiety disorders in oral health settings, larger randomized clinical trials are needed to validate the findings. [20] [68] [69] [70]

Distraction
Distraction diverts attention from what clients perceive as an unpleasant procedure. Options available for visual and auditory distraction include background music, headphones for listening to music or an audiobook, television sets in the waiting and treatment room, computer games, and 2-D and 3-D video glasses for watching movies.

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Suitable music can influence human brain waves, leading to deep relaxation and alleviating pain and anxiety. Music distraction is a noninvasive technique in which the client listens to pleasant music during a stressful procedure. Music interventions have been successful in pediatric and adult clients. Music produces positive physiological effects in relieving children's fear and improving their cooperation. [20] [22] [71]

Other strategies include holding comfort items, such as small stuffed animals or a blanket, squeezing a stress ball or playing with a small hand-held object (e.g., fidget spinner) and visualizing a happy place, such as a beach or garden. [72]

Positive reinforcement
Positive reinforcement is an effective technique to reward desired behaviours and will strengthen the recurrence of those behaviours. Reinforcers include positive voice modulation, facial expression, and verbal praise. These should be individualized, frequently provided, and varied over time. [20]

Signalling
Signalling allows the client to communicate with the clinician during a procedure. It gives the client a sense of control during a procedure and builds trust between the client and clinician. Signals are decided before the treatment commences and can be as simple as raising a hand to notify the clinician to stop the procedure. The clinician should stop the procedure as agreed. Failure to do so breaches the trust relationship. Other signals can be determined, such as pointing or a raised index finger to signal suction is required. Alternately, the client holds and controls the saliva ejector suction. [11] [20] [21]

Rest breaks
Many individuals with DFA feel the need to continue with a procedure until they cannot bear it any longer. At this point, it may be more difficult for them to calm themselves down enough to continue the procedure. When the client initiates a rest break, pausing the procedure can increase the client's sense of control over treatment. [11]

Tell-show-do
Tell-show-do is a behaviour-shaping technique that reduces uncertainty and increases predictability for clients in the clinical setting. This technique uses verbal and nonverbal communication skills and positive reinforcement with pediatric and adult clients. Children's uncooperative behaviours mainly result from the fear of the unknown. The tell-so-do method can significantly improve their compliance and relieve their anxiety when receiving oral care.

Tell-show-do involves verbally explaining procedures in phrases appropriate for the development level of the client (tell); demonstrating for the client the visual, auditory, olfactory, and tactile aspects of the procedure (show); and then completing the procedure without deviating from the explanation and demonstration (do). Some clients may wish to watch the procedures using a hand mirror to lessen anxiety, although not all will want to do so. [20] [21] [22]

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Modelling
Individuals learn much about their environment from observing others' behaviour. Modelling is a technique used to alleviate anxiety by viewing a videotaped model demonstrating appropriate cooperative behaviour in the oral health setting or observing a successful dental procedure (e.g., a child watches the parent or a sibling receive treatment). This technique can help reduce anxiety due to fear of the unknown and show clients who are anxious what is considered appropriate behaviour and what is involved in their upcoming treatment session. [20] [73]

Cognitive behavioural therapy
Cognitive behavioural therapy (CBT) is the collective name for psychotherapies addressing mental health conditions by helping people learn new and more functional behaviours and cognitions. CBT has a solid and wide base for efficacy and effectiveness. CBT includes several different interventions, selected depending on the psychological problem of the individual.

CBT is a helpful tool in treating many mental health conditions, such as anxiety, depression, phobias, and post-traumatic stress disorder. CBT may be provided solely or combined with other therapies or medications, depending on the person's needs. CBT treatments are structured and performed in collaboration between the therapist and the client. CBT has been shown to decrease dental anxiety in both children and adults. [5] [74] [75] [76]

Animal-assisted therapy
Animal-assisted therapy, especially utilizing dogs, has been demonstrated to be beneficial in reducing anxiety. A randomized controlled clinical study by Thakker et al. (2020) evaluated the use of pet therapy in 108 children aged 5 to 10 years who required simple oral health treatment. The participants were randomly divided into the pet therapy or control group. Children in the pet therapy group received oral health treatment in the presence of a therapy dog, while those in the control group received standard treatment without the dog. Before treatment, both groups exhibited similar levels of anxiety. However, after the treatment, the control group showed increased anxiety levels. Incorporating therapy dogs into oral healthcare procedures was associated with positive benefits and outcomes for clients. A systematic review by Brandão et al. (2025) found animal-assisted therapy can generally help reduce anxiety levels in children and adolescents. [77] [78]

Sensory-adapted environment
A sensory-adapted dental environment may reduce anxiety and induce relaxation. The Snoezelen environment concept stimulates the primary senses of sight, touch, feel, and smell to help regulate sensory fight-or-flight responses to reduce associated maladaptive behaviours. A “Snoezelen” dental environment for pediatric clients consists of dimmed lighting, soothing music, and deep pressure consisting of a weighted blanket or a special Velcro butterfly vest that hugs the child, providing a calming, deep-pressure sensation. A sensory-adapted dental environment is shown to be effective in managing dental anxiety in children, especially children with intellectual and developmental disabilities. [20] [79] [80] [81]

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Trauma-informed care

Trauma-informed care is clinical care that considers clients' trauma histories, recognizes the prevalence and impact of trauma on clients, and emphasizes supportive and compassionate oral care to avoid retraumatizing clients. Failing to provide trauma-informed care risks invalidating client experiences, negatively impacting client rapport, and inadvertently retraumatizing clients. [40]

Trauma-informed care recognizes how past trauma interferes with the ability to receive oral care and then tailoring care to avoid retraumatization. Clients should be active participants in deciding what works best for them. Client interviewing should occur with the oral health provider facing the client with the client's chair slightly elevated to give the client a sense of control and reduce the power differential. Asking questions in a nonconfrontational and nonjudgmental manner encourages better communication and helps establish trust between the client and clinician. Clients who trust their clinicians are more likely to engage with their care, follow through with recommended treatment, and better control their chronic conditions, leading to better health outcomes. [40]

Adopting a client-centred approach, empowering clients to cope during treatment, and avoiding inducing further trauma is critical. Oral health providers must be alert to signs of discomfort and client needs to achieve successful treatment outcomes. Trauma-informed care includes making services as sensitive as possible and encouraging clients to participate in treatment decisions.[7] [82]

Pharmacologic strategies

The three types of sedation are:

- Inhalation sedation using a combination of nitrous oxide and oxygen.
- Oral sedation, primarily through the use of benzodiazepines (e.g., Valium, Xanax, Ativan), which act as sedatives and/or anti-anxiety drugs.
- Intravenous (IV) sedation, which involves administering a drug to produce a deep sedation. [11]

Consultation with the client's medical provider may be required before prescribing or administering medications to reduce fear and anxiety during treatment. [6]

Note: Dental hygienists are not authorized to administer nitrous oxide and oxygen or monitor clients receiving nitrous oxide and oxygen for conscious sedation. Dental hygienists may perform dental hygiene interventions on clients receiving nitrous oxide and oxygen if the following conditions are met:

- Informed consent is received before the client is sedated.

[7] ODHA partnered with the Woman Abuse Council of Toronto (WomanACT) to develop a virtual course: Detecting and Responding to Gender-Based Violence for the Oral Health Professional. This self-guided course provides dental hygienists with the knowledge to identify behavioural and physical signs of gender-based violence and respond effectively by incorporating trauma-informed care. This learning opportunity is at a special rate of $29.00 for ODHA members. All proceeds from purchasing this course go to WomanACT, a nonprofit organization working to end gender-based violence.

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- Nitrous oxide and oxygen are administered and monitored by an appropriately trained dentist or a registered nurse or respiratory therapist under the order of that dentist.
- If a registered nurse or respiratory therapist is administering or monitoring the nitrous oxide and oxygen delivery, the dentist must be present in the office suite and immediately available for an emergency.
- Clients must be monitored by the appropriate professional via direct and continuous clinical observation for the level of conscious sedation and to assess vital signs.
- The healthcare professional monitoring the client must always be present in the treatment room, and the dental hygienist is never left alone with a client receiving nitrous oxide and oxygen. [83]

Dental hygienists should contact the College of Dental Hygienists of Ontario (CDHO) for further information on providing dental hygiene treatment for clients requiring sedation.

Minimally invasive dental treatment

Early childhood caries (ECC) is one of the most prevalent and preventable noncommunicable chronic diseases, with a global estimate of 48%. Preserving the primary dentition is essential to a child's well-being and development. ECC management can be challenging due to the limitations of client cooperation. Other factors include the confidence of the dental practitioners, primary carer preferences, and the need for multiple visits. For these reasons, dental general anesthesia (DGA) has been a traditional management option to provide comprehensive dental caries treatment, particularly when many carious teeth need treatment in one visit.

However, the DGA may not necessarily reduce dental anxiety and can result in children receiving less regular preventive oral healthcare. Research has shown children who undergo DGA are at high risk for poor oral health and dental anxiety as they get older. Receiving DGA predicts the burden of treated dental caries ten or more years after the DGA procedure, independent of past caries experience. DGA status is associated with greater increased odds of dental anxiety in adolescence.

Alternative interventions include anxiolysis, conscious sedation, and minimally invasive dentistry (MID) techniques for managing moderate and severe stages of dental caries. The MID approach includes atraumatic restorative treatments (ART), with or without a stainless-steel Hall crown and/or silver diamine fluoride (SDF) application.

SDF is a successful noninvasive tool to arrest caries and a practical option when treatment under DGA is not feasible. Clinical studies have demonstrated SDF is an alternative to managing dental caries without causing psychological distress to children. The advantages of SDF over DGA are its ease of application, client acceptability, shorter treatment time, and lower costs. SDF is also a cost-effective dental caries management option for young children when DGA is considered. [84] [85] [86] [87]

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Self-medication
Oral health procedures may be affected if a client has self-medicated with alcohol or other substances (e.g., cannabis, regulated or unregulated drugs) before the appointment as a coping mechanism for DFA. [88] [89]

If the client has self-medicated before an appointment, the care plan may need to be modified or cancelled to avoid:

- Substance-associated behavioural problems (e.g., extreme restlessness, aggression, psychosis).
- Drug interactions (e.g., with local anesthetics or nitrous oxide).
- Other safety issues, such as the client being medically unstable or unwilling or unable to comply with treatment. [89]

Recognizing signs and symptoms of intoxication is essential because it may preclude clients from giving valid informed consent and the safe delivery of oral health services. Oral health services should be postponed until informed consent and safe treatment are ensured.[8] [88]

Individuals may also self-medicate to avoid going to the dentist. Commonly, they may self-administer antibiotics and/or over-the-counter analgesics. Indiscriminate use of antibiotics can result in resistance, hypersensitivity, and even anaphylaxis. Inappropriate topical administration of aspirin can cause oral ulceration, and taking too much acetaminophen can result in a fatal overdose. Thus, avoiding oral healthcare could have far-reaching consequences. [90] [91]

Cannabidiol
Cannabis plants contain over 100 different chemical compounds known as cannabinoids. The two main cannabinoids in cannabis are:

- Delta-9-tetrahydrocannabinol (THC) is the primary psychoactive component responsible for the euphoric effect.
- Cannabidiol (CBD) is the second-most common cannabinoid, with anti-inflammatory and analgesic properties, but does not produce psychoactive effects. [92] [93] [94]

The therapeutic potential of CBD for the treatment of dental anxiety has been investigated due to its anxiolytic properties. However, studies are limited and results conflict. Additional research is needed to determine if CBD would be an effective treatment modality for DFA.[9] [95] [96] [97]

Helping clients cope with DFA
Strategies to help clients ease their fear and anxiety include:

- Encouraging clients to share their concerns and anxieties, including any previous negative experiences.
- Discussing coping skills that have worked in the past for them.
- Starting with simple and shorter appointments, if possible.

[8] Listen to Episodes 104 and 105 for discussion on substance use and oral health.
[9] For additional information on cannabis, listen to Episode 58.

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- Agreeing on a signal to let the oral health clinician know when a break is needed.
- Providing adequate pain control during oral health procedures (e.g., topical anesthetic, local anesthetic) and post-operatively (e.g., saline rinses, over-the-counter analgesics).
- Providing coping strategies such as self-distraction (e.g., listening to music, holding a comfort item, squeezing a stress ball, visualizing their happy place).
- Positioning the dental chair more vertically if the client finds the horizontal position intimidating.
- Encouraging strategies to relax the mind and body, such as diaphragmatic breathing and progressive muscle relaxation. Practising in advance is needed to experience the benefits.
- Recognizing some clients may require pharmacologic interventions to address their DFA during appointments and refer accordingly.
- Reinforcing good oral self-care at home to reduce the need for invasive dental treatments. Good oral habits include brushing twice daily with fluoride toothpaste, cleaning between teeth daily, and staying consistent with preventive appointments to help reduce oral diseases and diagnose issues early.
- Provide strategies to combat dry mouth from pharmacological treatment of anxiety and other comorbid conditions. [27] [72]

Take home messages

- Dental fear and anxiety are the most common reasons for many people to delay or avoid oral healthcare, which can lead to poorer oral health and quality of life.
- Assess all clients for dental anxiety early to identify specific concerns. Early identification of dental anxiety, monitoring individual's nonverbal communication, and establishing a good relationship with clients are fundamental to preventing and managing dental fear and anxiety.
- Techniques to manage dental fear and anxiety include good communication and listening skills, establishing a trusting relationship, psychotherapeutic interventions, and trauma-informed care.
- Trauma experience can significantly impact individuals' oral health and perceptions of oral healthcare. Essential components of trauma-informed care include active, nonjudgmental listening, awareness of potential trauma history signs, creating a physically and psychologically safe space, and tailoring treatment to accommodate clients' fears and anxieties. Understanding trauma backgrounds and offering appropriate trauma-informed care can support clients in achieving and maintaining good oral health.
- Pharmacological management may be necessary to help clients undergo oral health procedures, including appropriate referral as indicated

References

[1] I. Sun, C. Chu, E. Lo and D. Duangthip, "Global prevalence of early childhood dental fear and anxiety: A systematic review and meta-analysis," *Journal of Dentistry,* vol. 142, pp. 1-10, March 2024.

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[2] S. Cianetti, G. Lombardo, E. Lupatelli, et al., "Dental fear/anxiety among children and adolescents. A systematic review," *European Journal of Paediatric Dentistry,* vol. 18, no. 2, pp. 121-130, 2017.

[3] Y. Shim, A. Kim, E. Jeon and S. An, "Dental fear & anxiety and dental pain in children and adolescents; A systemic review," *Journal of Dental Anesthesia and Pain Medicine,* vol. 15, no. 2, pp. 53-61, 30 June 2015.

[4] J. Armfield, J. Stewart and A. Spencer, "The vicious cycle of dental fear: Exploring the interplay between oral health, service utilization and dental fear," *BMC Oral Health,* vol. 7, article 1, pp. 1-15, 14 January 2007.

[5] U. Wide and M. Hakeberg, "Treatment of dental anxiety and phobia—Diagnostic criteria and conceptual model of behavioural treatment," *Dentistry Journal,* vol. 9, no. 12, pp. 1-11, 27 October 2021.

[6] N. Avramova, "Dental fear, anxiety, and phobia; causes, diagnostic criteria and the medical and social impact," *Journal of Mind and Medical Sciences,* vol. 9, no. 2, pp. 202-208, 2022.

[7] E. Facco and G. Zanette, "The odyssey of dental anxiety: From prehistory to the present. A narrative review," *Frontiers in Psychology,* vol. 8, pp. 1-15, 10 July 2017.

[8] A. White, L. Giblin and L. Boyd, "The prevalence of dental anxiety in dental practice settings," *Journal of Dental Hygiene,* vol. 91, no. 1, pp. 30-34, February 2017.

[9] T. Yildirim, "Evaluating the relationship of dental fear with dental health status and awareness," *Journal of Clinical & Diagnostic Research,* vol. 10, no. 7, p. ZC105–ZC109, July 2016.

[10] H. Halonen, J. Nissinen, H. Lehtiniemi, et al, "The association between dental anxiety and psychiatric disorders and symptoms: A systematic review August 31, 2018, p," *Clinical Practice & Epidemiology in Mental Health,* vol. 14, pp. 207-222, 31 August 2018.

[11] J. Armfield, "Dental fear and anxiety: Information for Dental Practitioners," Australian Research Centre for Population Oral Health, University of Adelaide, March 2016. [Online]. Available: https://health.adelaide.edu.au/arcpoh/dperu/ua/media/120/practice-sheet-dental-fear-and-anxiety.pdf. [Accessed 12 May 2025].

[12] S. Hoerler and S. Hunter, "Managing dental anxiety," *Dimensions of Dental Hygiene,* 23 June 2021.

[13] D. Drown, L. Giblin-Scanlon, J. Vineyard, et al., "Dental hygienists' knowledge, attitudes and practice for patients with dental anxiety, Volume 92, Issue 4, August 2018, p," *Journal of Dental Hygiene,* vol. 92, no. 4, pp. 35-42, August 2018.

[14] L. Kanzigg, C. Phillips, M. Stein, et al., "Dental hygienists' knowledge, attitudes, and comfort level in treating patients with dental anxiety," *Journal of Dental Hygiene,* vol. 92, no. 5, pp. 30-37, October 2018.

[15] L. Duker, M. Grager, W. Giffin, et al., "The relationship between dental fear and anxiety, general anxiety/fear, sensory over-responsivity, and oral health behaviors

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and outcomes: A conceptual model," *International Journal of Environmental Research and Public Health,* vol. 19, no. 4, pp. 1-19, 18 February 2022.

[16] S. Malamed, "Knowing your patients," *Journal of the American Dental Association,* vol. 141, pp. S3-S7, May 2000.

[17] J. Clow, K. Northstone, C. Hardwick, et al., "Are childhood oral health behaviours and experiences associated with dental anxiety in adolescence?," *International Journal of Paediatric Dentistry,* vol. 33, no. 4, pp. 372-381, 9 February 2023.

[18] E. Silveira, M. Cademartori, H. Schuch, et al., "Estimated prevalence of dental fear in adults: A systematic review and meta-analysis," *Journal of Dentistry,* vol. 108, May 2021.

[19] M. Muneer, F. Ismail, N. Munir, et al., "Dental anxiety and influencing factors in adults," *Healthcare (Basel),* vol. 10, no. 12, pp. 1-7, 23 November 2022.

[20] D. Appukuttan, "Strategies to manage patients with dental anxiety and dental phobia: Literature review," *Clinical, Cosmetic and Investigational Dentistry,* vol. 8, pp. 35-50, 10 March 2016.

[21] J. Armfield and L. Heaton, "Management of fear and anxiety in the dental clinic: A review," *Australian Dental Journal,* vol. 58, no. 4, pp. 390-407, 3 December 2013.

[22] J. Ying, H. Tao, Q. He, et al., "Children's dental fear: Occurrence mechanism and prevention guidance," *Journal of Multidisciplinary Healthcare,* vol. 16, pp. 2013-2021, 18 July 2023.

[23] A. Carter, G. Carter, M. Boschen, et al., "Pathways of fear and anxiety in dentistry: A review," *World Journal of Clinical Cases,* vol. 2, no. 11, pp. 642-653, 16 November 2014.

[24] S. Protzman, J. Clark and W. Leeuw, "Management of Medical Emergencies in the Dental Office," CDE World, June 2016. [Online]. Available: https://cdeworld.com/courses/20481-management-of-medical-emergencies-in-the-dental-office. [Accessed 16 May 2025].

[25] R. Dezube, "Hyperventilation Syndrome," Merck Manual Professional Version, November 2023. [Online]. Available: https://www.merckmanuals.com/en-ca/professional/pulmonary-disorders/symptoms-of-pulmonary-disorders/hyperventilation-syndrome. [Accessed 13 May 2025].

[26] R. Dezube, "Shortness of Breath," Merck Manual Consumer Version, Novembe 2023. [Online]. Available: https://www.merckmanuals.com/en-ca/home/lung-and-airway-disorders/symptoms-of-lung-disorders/shortness-of-breath. [Accessed 13 May 2025].

[27] K. Reed, "Basic management of medical emergencies: Recognizing a patient's distress," *Journal of the American Dental Association,* vol. 141, pp. 20S-25S, May 2010.

[28] Mayo Clinic, "Vasovagal syncope," 15 February 2025. [Online]. Available: https://www.mayoclinic.org/diseases-conditions/vasovagal-syncope/symptoms-causes/syc-20350527. [Accessed 13 May 2025].

[29] J. Zingade, G. Kumar and P. Gujjar, "Medical emergencies in dentistry: A review," *Journal of Health Sciences & Research,* vol. 12, no. 1, pp. 11-16, January-June 2021.

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[30] J. Barnhill, "Panic Attacks and Panic Disorder," Merck Manual Consumer Version, August 2023. [Online]. Available: https://www.merckmanuals.com/en-ca/home/mental-health-disorders/anxiety-and-stressor-related-disorders/panic-attacks-and-panic-disorder. [Accessed 13 May 2025].

[31] J. Barnhill, "Panic Attacks and Panic Disorder," Merck Manual Professional Version, August 2023 . [Online]. Available: https://www.merckmanuals.com/en-ca/professional/psychiatric-disorders/anxiety-and-stressor-related-disorders/panic-attacks-and-panic-disorder. [Accessed 13 May 2025].

[32] C. Ratiu, A. Porumb, R. Sava-Rosianu, et al., "Anxiety and panic attacks in the dental office," *Medicine in Evolution,* vol. 26, no. 3, pp. 350-356, 30 September 2020.

[33] Elia, "Panic Disorder in Children and Adolescents," Merck Manual Consumer Version, September 2023. [Online]. Available: https://www.merckmanuals.com/en-ca/home/children-s-health-issues/mental-health-disorders-in-children-and-adolescents/panic-disorder-in-children-and-adolescents. [Accessed 13 May 2025].

[34] A. Alenezi and H. Aldokhayel, "The impact of dental fear on the dental attendance behaviors: A retrospective study," *Journal of Family Medicine and Primary Care,* vol. 11, no. 10, pp. 6444-6450, 31 October 2022.

[35] G. Novac, "The power of oral health literacy in reducing dental anxiety and improving," *Journal of Ondontology,* vol. 7, no. 6, pp. 1-2, 27 November 2023.

[36] R. Dhole, P. Shete, B. Barewad and A. Patil, "Oral health literacy levels and dental anxiety in general dental patients," *Journal of Dentistry and Bio-Allied Health Sciences,* vol. 1, no. 1, pp. 15-17, January-June 2024.

[37] R. Moore, I. Brødsgaard and N. Rosenberg, "The contribution of embarrassment to phobic dental anxiety: a qualitative research study," *BMC Psychiatry,* vol. 4, article 10, pp. 1-11, 19 April 2004.

[38] T. Hendler and S. Sutherland, "Domestic violence and its relation to dentistry: A call for change in Canadian dental practice," *Journal of the Canadian Dental Association,* vol. 73, no. 7, pp. 617a-617f, September 2007.

[39] E. Wolf, E. McCarthy and G. Priebe, "Dental care – An emotional and physical challenge for the sexually abused," *European Journal of Oral Sciences,* vol. 128, no. 4, pp. 317-324, 16 August 2020.

[40] L. Heaton and H. Cheung, "Trauma-informed care in oral health care: The role of dental hygienists," *Journal of Dental Hygiene,* vol. 98, no. 4, pp. 50-55, August 2024.

[41] A. Kvesić, M. Hrelja, Ž. Lovrić, et al., "Possible risk factors for dental fear and anxiety in children who suffered traumatic dental injury," *Dentistry Journal,* vol. 11, no. 8, pp. 1-13, 9 August 2023.

[42] L. Wu and X. Gao, "Children's dental fear and anxiety: Exploring family related factors," *BMC Oral Health,* vol. 18, no. 100, pp. 1-10, 4 June 2018.

[43] N. Uziel, J. Meyerson, M. Kuskasy, et al., "The Influence of family milieu on dental anxiety in adolescents—A cross-sectional study," *Journal of Clinical Medicine,* vol. 12, no. 6, pp. 1-11, 23 March 2023.

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[44] E. Besiroglu-Turgut, S. Kayaalti-Yuksek and B. Bulut, "Evaluation of the relationship between dental anxiety and oral health status of mothers and their children," *BMC Oral Health,* vol. 24, article 749, pp. 1-8, 28 June 2024.

[45] G. Klingberg and A. Broberg, "Temperament and child dental fear," *Pediatric Dentistry,* vol. 20, no. 4, pp. 237-243, July-August 1998.

[46] M. Ramos-Jorge, L. Marques, S. Pavia, et al., "Predictive factors for child behaviour in the dental environment," *European Archives of Paediatric Dentistry,* vol. 7, pp. 253-257, 30 December 2012.

[47] University of St Andrews, "Modified Dental Anxiety Scale, Scale translations," 2025. [Online]. Available: https://dentalanxiety.wp.st-andrews.ac.uk/scale-translations/. [Accessed 14 May 2025].

[48] S. Kar, P. Samir and A. Pattanaik, "Anxiety rating scales in pediatric dentistry," *International Journal of Science and Research,* vol. 11, no. 12, pp. 602-608, December 2022.

[49] H. Patel, C. Reid, K. Wilson and N. Girdler, "Inter-rater agreement between children's self-reported and parents' proxy-reported dental anxiety," *British Dental Journal,* vol. 218, pp. 1-5, 27 February 2015.

[50] S. Panda, M. Quadri, I. Hadi, et al., "Does dental fear in children predict untreated dental caries? An analytical cross-sectional study," *Children,* vol. 8, no. 5, pp. 1-10, 21 May 2021.

[51] T. Hegde, P. Bhavyashri, R. Vasthare, et al., "Evaluation of parental dental fear and anxiety (DFA) on adolescent dental treatment: A narrative review," *Journal of International Society of Preventive & Community Dentistry,* vol. 12, no. 1, pp. 12-19, January-February 2022.

[52] College of Dental Hygienists of Ontario, "Fact Sheet: Anxiety and Anxiety Disorders," 18 January 2025. [Online]. Available: https://cdho.org/factsheets/anxiety-and-anxiety-disorders/. [Accessed 14 May 2025].

[53] J. Hudson, "How mental health affects oral health," *BDJ Student,* vol. 28, pp. 21-23, 31 August 2021.

[54] Rosengard, D. Messadi and G. Mirowski, "Oral Manifestations of Systemic Diseases," Medscape, 29 June 2018. [Online]. Available: https://emedicine.medscape.com/article/1081029-overview. [Accessed 1 June 2023].

[55] American Dental Association , "Xerostomia (Dry Mouth)," 24 April 2023. [Online]. Available: https://www.ada.org/resources/research/science-and-research-institute/oral-health-topics/xerostomia. [Accessed 30 June 2023].

[56] I. Arslan, A. S and N. Karan, "Can lavender oil inhalation help to overcome dental anxiety and pain in children? A randomized clinical trial," *European Journal of Pediatrics,* vol. 179, pp. 985-992, 6 February 2020.

[57] Mayo Clinic, "How belly breathing benefits your body, mind," 4 March 2024. [Online]. Available: https://www.mayoclinichealthsystem.org/hometown-health/speaking-of-health/belly-breathing-benefits. [Accessed 14 May 2025].

Disclaimer: This document is educational and not intended to provide clinical advice nor should it be used as a replacement for professional dental or medical advice. Dental hygienists are encouraged to consult with CDHO practice advisors and refer to CDHO guidelines. Dental hygienists are responsible for the decisions they make and for the consequences associated with those decisions. © ODHA

[58] eMentalHealth.ca, "Deep Breathing," 26 April 2020. [Online]. Available: https://www.ementalhealth.ca/Canada/Deep-Breathing/index.php?m=article&ID=62559. [Accessed 14 May 2025].

[59] X. Ma, Z. Yue, Z. Gong, et al., "The effect of diaphragmatic breathing on attention, negative affect and stress in healthy adults," *Frontiers in Psychology,* vol. 8, article 874, pp. 1-12, 5 June 2017.

[60] University of Michigan, "Diaphragmatic Breathing for GI Patients," 2023. [Online]. Available: https://www.uofmhealth.org/conditions-treatments/digestive-and-liver-health/diaphragmatic-breathing-gi-patients. [Accessed 15 May 2025].

[61] E. Park, H. Yim and K. Lee, "Progressive muscle relaxation therapy to relieve dental anxiety: a randomized controlled trial," *European Journal of Oral Sciences,* vol. 127, no. 1, pp. 45-51, 14 November 2018.

[62] E. Ferendiuk, J. Biegańska, P. Kazana and M. Pihut, "Progressive muscle relaxation according to Jacobson in treatment of the patients with temporomandibular joint disorders,," *Folia Medica Cracoviensia,* vol. 59, no. 3, pp. 113-122, 2019.

[63] J. Rosendahl, C. Alldredge and A. Haddenhorst, "Meta-analytic evidence on the efficacy of hypnosis for mental and somatic health issues: a 20-year perspective," *Frontiers in Psychology,* vol. 14, pp. 1-20, 7 January 2024.

[64] L. Milling, K. Valentine, L. LoStimolo, et al., "Hypnosis and the alleviation of clinical pain: A comprehensive meta-analysis," *International Journal of Clinical and Experimental Hypnosis,* vol. 69, no. 3, pp. 297-322, 26 May 2021.

[65] K. Valentine, L. Milling, L. Clark and C. Moriarty, "The efficacy of hypnosis as a treatment for anxiety: A meta-analysis," *International Journal of Clinical and Experimental Hypnosis,* vol. 67, pp. 336-363, 2019.

[66] T. Thompson, D. Terhune, C. Oram, et al., "The effectiveness of hypnosis for pain relief: A systematic review and meta-analysis of 85 controlled experimental trials," *Neuroscience & Biobehavioral Reviews,* vol. 99, pp. 298-310, April 2019.

[67] H. Glaesmer, H. Geupel and R. Haak, "A controlled trial on the effect of hypnosis on dental anxiety in tooth removal patients," *Patient Education and Counseling,* vol. 98, no. 9, pp. 1112-1115, Septembe 2015.

[68] F. Allan, E. Peckham, J. Liu, et al., "Acupuncture for anxiety in dental patients: Systematic review and meta-analysis," *European Journal of Integrative Medicine,* vol. 20, pp. 22-35, June 2018.

[69] P. Naik, R. Kiran, S. Yalamanchal, et al., "Acupuncture: An alternative therapy in dentistry and its possible applications," *Medical Acupuncture,* vol. 26, no. 6, pp. 308-314, 1 December 2014.

[70] P. Rosted, M. Bundgaard, S. Gordon, et al., "Acupuncture in the management of anxiety related to dental treatment: A case series," *Acupuncture in Medicine,* vol. 28, no. 1, pp. 3-5, March 2010.

[71] S. Moola, A. Pearson and C. Hagger, "Effectiveness of music interventions on dental anxiety in paediatric and adult patients: A systematic review," *JBI Evidence Synthesis,* vol. 9, no. 18, pp. 588-630, 2011.

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[72] A. Mark, "Coping skills for facing dental fears," *Journal of the American Dental Association,* vol. 148, no. 2, p. 130, February 2017.

[73] N. Farhat-McHayleh, A. Harfouche and P. Souaid, "Techniques for managing behaviour in pediatric dentistry: Comparative study of live modelling and tell–show–do based on children's heart rates during treatment," *Journal of the Canadian Dental Association,* vol. 75, no. 4, pp. 283-283f, May 2009.

[74] T. Newton, K. Asimakopoulou, B. Daly, et al., "The management of dental anxiety: Time for a sense of proportion?," *British Dental Journal,* vol. 213, p. 271–274, 21 September 2012.

[75] Mayo Clinic, "Cognitive behavioral therapy," 26 February 2025. [Online]. Available: https://www.mayoclinic.org/tests-procedures/cognitive-behavioral-therapy/about/pac-20384610. [Accessed 15 May 2025].

[76] M. Shokravi, M. Maaboudi, A. Amiri, et al., "The effectiveness of cognitive-behavioral intervention on dental anxiety during pulpotomy in 7-10 year-old children: A clinical trial," *Frontiers in Dentistry,* vol. 20, pp. 1-10, 26 August 2023.

[77] T. Thakkar, S. Naik and U. Dixit, "Assessment of dental anxiety in children between 5 and 10 years of age in the presence of a therapy dog: A randomized controlled clinical study," *European Archives of Paediatric Dentistry,* vol. 22, pp. 459-467, 27 November 2020.

[78] C. Brandão, M. Sampaio, V. Sousa-Gomes, et al., "Effects of animal-assisted therapy for anxiety reduction in children and adolescents: A systematic review, , Volume 14, Issue 1, January 6, 2025, p 1-10," *Journal of Clinical Medicine,* vol. 14, no. 1, pp. 1-10, 6 June 2025.

[79] K. Reynolds, N. Chandio, R. Chimoriya and A. Arora, "The effectiveness of sensory adaptive dental environments to reduce corresponding negative behaviours and psychophysiology responses in children and young people with intellectual and developmental disabilities: A protocol of a systematic review and meta-analysis," *International Journal of Environmental Research and Public Health,* vol. 19, no. 21, pp. 1-9, 22 October 2022.

[80] A. Ismail, T. Tengku, W. Malek, et al., "The effect of multisensory-adapted dental environment on children's behavior toward dental treatment: A systematic review," *Journal of Indian Society of Pedodontics and Preventive Dentistry,* vol. 39, no. 1, pp. 2-8, January-March 2021.

[81] S. Kittur, N. Basappa, O. Ruju, et al., "Enhancing special care dentistry with sensory-adapted dental environment: A comparative study," *Journal of Indian Society of Pedodontics and Preventive Dentistry,* vol. 40, no. 3, pp. 245-252, July-September 2022.

[82] E. Wolf, D. Grinneby, P. Nilsson and G. Priebe, "Dental care of patients exposed to sexual abuse: Need for alliance between staff and patients," *European Journal of Oral Sciences,* vol. 129, no. 3, pp. 1-12, 24 March 2021.

[83] College of Dental Hygienists of Ontario, "Use of Nitrous Oxide and Oxygen Conscious Sedation," January 2019. [Online]. Available: https://cdho.org/wp-content/uploads/2023/06/GUI-SA-Use-Nitrous-Oxide.pdf. [Accessed 16 May 2025].

Disclaimer: This document is educational and not intended to provide clinical advice nor should it be used as a replacement for professional dental or medical advice. Dental hygienists are encouraged to consult with CDHO practice advisors and refer to CDHO guidelines. Dental hygienists are responsible for the decisions they make and for the consequences associated with those decisions. © ODHA

[84] T. Nguyen, U. Tonmukayakul, M. Hall and H. Calache, "Cost-effectiveness analysis of silver diamine fluoride to divert dental general anaesthesia compared to standard care," *Australian Dental Journal,* vol. 67, no. 4, pp. 352-361, 9 September 2022.

[85] S. Harworth, T. Dudding, A. Waylen, et al., "Ten years on: Is dental general anaesthesia in childhood a risk factor for caries and anxiety?," *British Dental Journal,,* vol. 222, pp. 299-304, 24 February 2017.

[86] S. Ladparkdy, Y. Asvanund, W. Prapansilp, et al., "The parental concern and acceptance of silver diamine fluoride treatment in preschool children: A cross sectional study,," *Journal of International Society of Preventive & Community Dentistry,* vol. 14, no. 5, pp. 413-420, 29 October 2024.

[87] H. AlKhodier, G. Molla, N. AlAjaji. et al., "A wider scope of analysis on 38% silver diamine fluoride," *Cureus,* vol. 15, no. 8, pp. 1-7, 23 August 2023.

[88] College of Dental Hygienists of Ontario, "Fact Sheet: Cannabis," 2 10 2020. [Online]. Available: https://cdho.org/factsheets/cannabis/. [Accessed 13 March 2024].

[89] College of Dental Hygienists on Ontario, "Fact Sheet: Substance Use Disorder," 5 April 2023. [Online]. Available: https://cdho.org/factsheets/substance-use-disorder/. [Accessed 16 May 2025].

[90] S. Cohen, J. Fiske and J. Newton, "The impact of dental anxiety on daily living," *British Dental Journal,* vol. 189, pp. 385-390, 14 October 2000.

[91] Government of Canada, "Acetaminophen," 15 September 2016. [Online]. Available: https://www.canada.ca/en/health-canada/services/drugs-medical-devices/acetaminophen.html. [Accessed 16 May 2025].

[92] J. Brown, K. Rivera, L. Hernandez, et al, "Natural and Synthetic Cannabinoids: Pharmacology, Uses, Adverse Drug Events, and Drug Interactions," *Journal of Clinical Pharmacology,* vol. 61, no. S2, pp. S37-S52, 15 August 2021.

[93] Canadian Centre on Substance Use and Addiction, "Cannabis," 2022. [Online]. Available: https://www.ccsa.ca/cannabis. [Accessed 30 March 2022].

[94] Canadian Pharmacists Association, "Medical Cannabis Q&A," 2017.

[95] H. Lowe, N. Toyang, B. Steele, et al., "The current and potential application of medicinal cannabis products in dentistry," *Dentistry Journal (Basel),* vol. 9, no. 9, pp. 1-20, 10 September 2021.

[96] S. Silva, C. Velozo, L. Montenegro, et al., "Effect of preoperative oral cannabidiol-rich cannabis extract on anxiety and postoperative pain after endodontic treatment: A double-blind randomized clinical trial," *Journal of Endodontics,* vol. 50, no. 12, pp. 1698-1704, December 2024.

[97] D. Cooper, R. Stephan and C. Maygar, "Dental anxiety management by full spectrum CBD formulations: Dual dosing (AM/PM) protocol in a real-world setting," *Clinics in Medicine,* vol. 3, article 1038, pp. 34-38, 2021.

[98] J. Barnhill, "Agoraphobia," Merck Manual Consumer Version, Aug 2023. [Online]. Available: https://www.merckmanuals.com/en-ca/home/mental-health-disorders/anxiety-and-stressor-related-disorders/agoraphobia. [Accessed 13 May 2025].

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Client resources

Helpful "How To" Documents for Parents

- How to Teach Your Child Calm Breathing https://www.anxietycanada.com/sites/default/files/calm_breathing.pdf
- Applied Tension Technique For Children or Teens Who Faint at the Sight of Blood or Needles https://www.anxietycanada.com/sites/default/files/blood_and_needles.pdf
- Helping children with needle/vaccine-related anxiety – eight strategies https://www.anxietycanada.com/wp-content/uploads/2021/08/Evergreen-8-Parenting-Strategies-to-Help-Aug-10-1.pdf
- Panic Attacks in Children and Youth: Information for Parents and Caregivers https://www.ementalhealth.ca/Canada/Panic-Attacks-in-Children-Youth/index.php?m=article&ID=52721

Self-help resources

- Calm Breathing (Diaphragmatic Breathing) https://www.anxietycanada.com/sites/default/files/CalmBreathing.pdf
- Deep Breathing https://www.ementalhealth.ca/Canada/Deep-Breathing/index.php?m=article&ID=62559
- How to do progressive muscle relaxation https://www.anxietycanada.com/sites/default/files/MuscleRelaxation.pdf
- What is anxiety? https://www.anxietycanada.com/sites/default/files/What_is_Anxiety.pdf
- 7 Strategies for dealing with needle fear and anxiety https://www.anxietycanada.com/wp-content/uploads/2021/08/7-Strategies-for-Dealing-with-Needle-Fear-and-Anxiety.pdf
- Applied Tension Technique - For People Who Faint At The Sight Of Blood Or Needles https://www.anxietycanada.com/sites/default/files/AppliedTension.pdf
- How to prevent a relapse https://www.anxietycanada.com/sites/default/files/RelapsePrevention.pdf
- Panic Attacks in Adults https://www.ementalhealth.ca/Canada/Panic-Attacks-in-Adults/index.php?m=article&ID=8899
- Progressive muscle relaxation https://www.cci.health.wa.gov.au/-/media/CCI/Mental-Health-Professionals/Panic/Panic---Information-Sheets/Panic-Information-Sheet---05---Progressive-Muscle-Relaxation.pdf
- How to do progressive muscle relaxation for anxiety https://www.anxietycanada.com/articles/how-to-do-progressive-muscle-relaxation/

Additional Resources

Modified Dental Anxiety Scale

The scale is available to download in 30 different languages (e.g., French, Arabic, German, Hindi, Urdu, etc.) free of charge: https://dentalanxiety.wp.st-andrews.ac.uk/scale-translations/

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Progressive muscle relaxation script
https://www.therapistaid.com/worksheets/progressive-muscle-relaxation-script

Detecting and Responding to Gender-Based Violence for the Oral Health Professional
This self-guided course provides knowledge to identify behavioural and physical signs of gender-based violence and respond effectively by incorporating trauma-informed care. Proceeds from purchasing this course ($29.00 for ODHA members) go to WomanACT, a nonprofit organization working to end gender-based violence.
https://odha.on.ca/prof-development/free-online-course-detecting-and-responding-to-gender-based-violence-for-the-oral-health-professional/

Global prevalence of early childhood dental fear and anxiety: A systematic review and meta-analysis, Sun, I; Chu, Ch; Lo, E; Duangthip, D. *Journal of Dentistry*, Volume 142, March 2024, p 1-10
https://www.sciencedirect.com/science/article/pii/S0300571224000113

Estimated prevalence of dental fear in adults: A systematic review and meta-analysis, Silveira, E; Cademartori, M; Schuch, H; et al. *Journal of Dentistry*, Volume 108, May 2021 https://www.sciencedirect.com/science/article/abs/pii/S0300571221000531

Dental fear/anxiety among children and adolescents. A systematic review, Cianetti, S; Lombardo, G; Lupatelli, E; et al. *European Journal of Paediatric Dentistry*, Volume 18, Issue 2, 2017, p 121-130 https://www.ejpd.eu/wp-content/pdf/EJPD_2017_2_6.pdf

Dental fear & anxiety and dental pain in children and adolescents; A systemic review, Shim, Y; Kim, A; Jeon, E; An, S. *Journal of Dental Anesthesia and Pain Medicine*, Volume 15, Issue 2, June 30, 2015, p 53-61
https://pmc.ncbi.nlm.nih.gov/articles/PMC5564099/

The vicious cycle of dental fear: Exploring the interplay between oral health, service utilization and dental fear, Armfield, J; Stewart, J; Spencer, A. *BMC Oral Health*, Volume 7, Article 1, January 14, 2007, p 1-15
https://bmcoralhealth.biomedcentral.com/articles/10.1186/1472-6831-7-1

Treatment of dental anxiety and phobia—Diagnostic criteria and conceptual model of behavioural treatment, Wide, U; Hakeberg, M. *Dentistry Journal*, Volume 9, Issue 12, October 27, 2021, p 1-11 https://www.mdpi.com/2304-6767/9/12/153

Dental fear, anxiety, and phobia; causes, diagnostic criteria and the medical and social impact, Avramova, N. *Journal of Mind and Medical Sciences*, Volume 9, Issue 2, 2022, p 202-208 https://scholar.valpo.edu/cgi/viewcontent.cgi?article=1348&context=jmms

The odyssey of dental anxiety: From prehistory to the present. A narrative review, Facco, E; Zanette, G. *Frontiers in Psychology*, Volume 8, July 10, 2017, p 1-15
https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2017.01155/full

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The prevalence of dental anxiety in dental practice settings, White, A; Giblin, L; Boyd, L. *Journal of Dental Hygiene*, Volume 91, Issue 1, February 2017, p 30-34 https://jdh.adha.org/content/91/1/30

Evaluating the relationship of dental fear with dental health status and awareness, Yildirim, T. *Journal of Clinical & Diagnostic Research*, Volume 10, Issue 7, July 2016, p ZC105–ZC109 https://pmc.ncbi.nlm.nih.gov/articles/PMC5020232/

The association between dental anxiety and psychiatric disorders and symptoms: A systematic review, Halonen, H; Nissinen, J; Lehtiniemi, H; et al. *Clinical Practice & Epidemiology in Mental Health*, Volume 14, August 31, 2018, p 207-222 https://pmc.ncbi.nlm.nih.gov/articles/PMC6142663/

Managing dental anxiety, Hoerler, S; Hunter, S. *Dimensions of Dental Hygiene*, June 23, 2021 https://dimensionsofdentalhygiene.com/article/manage-dental-anxiety/

Dental hygienists' knowledge, attitudes and practice for patients with dental anxiety, Drown, D; Giblin-Scanlon, L; Vineyard, J; et al. *Journal of Dental Hygiene*, Volume 92, Issue 4, August 2018, p 35-42 https://jdh.adha.org/content/92/4/35

Dental hygienists' knowledge, attitudes, and comfort level in treating patients with dental anxiety, Kanzigg, L; Phillips, C; Stein, M; et al. *Journal of Dental Hygiene*, Volume 92, Issue 5, October 2018, p 30-37 https://jdh.adha.org/content/92/5/30

The relationship between dental fear and anxiety, general anxiety/fear, sensory over-responsivity, and oral health behaviors and outcomes: A conceptual model, Duker, L; Grager, M; Giffin, W; et al. *International Journal of Environmental Research and Public Health*, Volume 19, Issue 4, February 18, 2022, p 1-19 https://www.mdpi.com/1660-4601/19/4/2380

Knowing your patients, Malamed, S. *Journal of the American Dental Association*, Volume 141, May 2000, p S3-S7 https://jada.ada.org/article/S0002-8177(14)63472-3/pdf

Are childhood oral health behaviours and experiences associated with dental anxiety in adolescence? Clow, J; Northstone, K; Hardwick, C; et al. *International Journal of Paediatric Dentistry*, Volume 33, Issue 4, February 9, 2023, p 372-381 https://onlinelibrary.wiley.com/doi/10.1111/ipd.13058

Dental anxiety and influencing factors in adults, Muneer, M; Ismail, F; Munir, N; et al. *Healthcare (Basel)*, Volume 10, Issue 12, November 23, 2022, p 1-7 https://www.mdpi.com/2227-9032/10/12/2352

Strategies to manage patients with dental anxiety and dental phobia: Literature review, Appukuttan, D. *Clinical, Cosmetic and Investigational Dentistry*, Volume 8, March 10, 2016, p 35-50 https://pmc.ncbi.nlm.nih.gov/articles/PMC4790493/

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Management of fear and anxiety in the dental clinic: A review, Armfield, J; Heaton, L. *Australian Dental Journal*, Volume 58, Issue 4, December 3, 2013, p 390-407 https://onlinelibrary.wiley.com/doi/10.1111/adj.12118

Children's dental fear: Occurrence mechanism and prevention guidance, Ying, J; Tao, H; He, Q; et al. *Journal of Multidisciplinary Healthcare*, Volume 16, July 18, 2023, p 2013-2021 https://pmc.ncbi.nlm.nih.gov/articles/PMC10362871/

Basic management of medical emergencies: Recognizing a patient's distress, Reed, K. *Journal of the American Dental Association*, Volume 141, May 2010, p 20S-25S https://jada.ada.org/article/S0002-8177(14)63475-9/pdf

Medical emergencies in dentistry: A review, Zingade, J; Kumar, G; Gujjar, P. *Journal of Health Sciences & Research*, Volume 12, Issue 1, January-June 2021, p 11-16 https://www.johsr.com/doi/JOHSR/pdf/10.5005/jp-journals-10042-1103

Hyperventilation Syndrome, Dezube, R. *Merck Manual Professional Version*, November 2023 https://www.merckmanuals.com/en-ca/professional/pulmonary-disorders/symptoms-of-pulmonary-disorders/hyperventilation-syndrome

Panic Attacks and Panic Disorder, Barnhill, J. *Merck Manual Professional Version*, August 2023 https://www.merckmanuals.com/en-ca/professional/psychiatric-disorders/anxiety-and-stressor-related-disorders/panic-attacks-and-panic-disorder

Anxiety and panic attacks in the dental office, Ratiu, C; Porumb, A; Sava-Rosianu, R, Tanase, A; Ciavoi, G. *Medicine in Evolution*, Volume 26, Issue 3, September 30, 2020, p 350-356 https://medicineinevolution.ro/index.php/medev/article/view/1190

The impact of dental fear on the dental attendance behaviors: A retrospective study, Alenezi, A; Aldokhayel, H. *Journal of Family Medicine and Primary Care*, Volume 11, Issue 10, October 31, 2022, p 6444-6450 https://journals.lww.com/jfmpc/fulltext/2022/10000/the_impact_of_dental_fear_on_the_dental_attendance.90.aspx

Dental care – An emotional and physical challenge for the sexually abused, Wolf, E; McCarthy, E; Priebe, G. *European Journal of Oral Sciences*, Volume 128, Issue 4, August 16, 2020, p 317-324 https://onlinelibrary.wiley.com/doi/10.1111/eos.12720

Trauma-informed care in oral health care: The role of dental hygienists, Heaton, L; Cheung, H. *Journal of Dental Hygiene*, Volume 98, Issue 4, August 2024, p 50-55 https://jdh.adha.org/content/98/4/50

The power of oral health literacy in reducing dental anxiety and improving oral health, Novac, G. *Journal of Odontology*, Volume 7, Issue 6, November 27, 2023, p 1-2 https://www.longdom.org/open-access-pdfs/the-power-of-oral-health-literacy-in-reducing-dental-anxiety-and-improving--oral-health.pdf

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Oral health literacy levels and dental anxiety in general dental patients, Dhole, R; Shete, P; Barewad, B; Patil, A. *Journal of Dentistry and Bio-Allied Health Sciences*, Volume 1 Issue 1, January-June 2024, p 15-17 https://www.dentbiohealth.com/doi/pdf/10.5005/jdbahs-11017-0006

The contribution of embarrassment to phobic dental anxiety: a qualitative research study, Moore, R; Brødsgaard, I; Rosenberg, N. *BMC Psychiatry*, Volume 4, Article 10, April 19, 2004, p 1-11 https://bmcpsychiatry.biomedcentral.com/articles/10.1186/1471-244X-4-10

Possible risk factors for dental fear and anxiety in children who suffered traumatic dental injury, Kvesić, A; Hrelja, M; Lovrić, Ž; et al. *Dentistry Journal*, Volume 11, Issue 8, August 9, 2023, p 1-13 https://www.mdpi.com/2304-6767/11/8/190

Pathways of fear and anxiety in dentistry: A review, Carter, A; Carter, G. Boschen, M; et al. *World Journal of Clinical Cases*, Volume 2, Issue 11, November 16, 2014, p 642-653 https://pmc.ncbi.nlm.nih.gov/articles/PMC4233415/

Children's dental fear and anxiety: Exploring family related factors, Wu, L; Gao, X. *BMC Oral Health*, Volume 18, Article 100, June 4, 2018, p 1-10 https://bmcoralhealth.biomedcentral.com/articles/10.1186/s12903-018-0553-z

The Influence of family milieu on dental anxiety in adolescents—A cross-sectional study, Uziel, N; Meyerson, J; Kuskasy, M; et al. *Journal of Clinical Medicine*, Volume 12, Issue 6, March 23, 2023, p 1-11 https://www.mdpi.com/2077-0383/12/6/2174

Evaluation of the relationship between dental anxiety and oral health status of mothers and their children, Besiroglu-Turgut, E; Kayaalti-Yuksek, S; Bulut, B. *BMC Oral Health*, Volume 24, Article 749, June 28, 2024, p 1-8 https://bmcoralhealth.biomedcentral.com/articles/10.1186/s12903-024-04530-0

Temperament and child dental fear, Klingberg, G; Broberg, A. *Pediatric Dentistry*, Volume 20, Issue 4, July-August 1998, p 237-243 https://www.aapd.org/globalassets/media/publications/archives/klingberg-20-04.pdf

Predictive factors for child behaviour in the dental environment, Ramos-Jorge, M; Marques, L; Pavia, S; et al. *European Archives of Paediatric Dentistry*, Volume 7, December 30, 2012, p 253-257 https://link.springer.com/article/10.1007/BF03262561

Anxiety rating scales in pediatric dentistry, Kar, S; Samir, P; Pattanaik, A. *International Journal of Science and Research*, Volume 11, Issue 12, December 2022, p 602-608 https://www.ijsr.net/archive/v11i12/SR221209105547.pdf

Inter-rater agreement between children's self-reported and parents' proxy-reported dental anxiety, Patel, H; Reid, C; Wilson, K; Girdler, N. *British Dental Journal*, Volume 218, February 27, 2015, p 1-5 https://www.nature.com/articles/sj.bdj.2015.98

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Does dental fear in children predict untreated dental caries? An analytical cross-sectional study, Panda, S; Quadri, M; Hadi, I; et al. *Children*, Volume 8, Issue 5, May 21, 2021, p 1-10 https://www.mdpi.com/2227-9067/8/5/382

Evaluation of parental dental fear and anxiety (DFA) on adolescent dental treatment: A narrative review, Hegde, T; Bhavyashri, P; Vasthare, R; et al. *Journal of International Society of Preventive & Community Dentistry,* Volume 12, Issue 1, January-February 2022, p 12-19 https://journals.lww.com/jpcd/fulltext/2022/12010/evaluation_of_parental_dental_fear_and_anxiety.2.aspx

Fact Sheet: Anxiety and Anxiety Disorders, College of Dental Hygienists of Ontario, January 18, 2025 https://cdho.org/factsheets/anxiety-and-anxiety-disorders/

The impact of dental anxiety on daily living, Cohen, S; Fiske, J; Newton, J. *British Dental Journal*, Volume 189, October 14, 2000, p 385-390 https://www.nature.com/articles/4800777

Can lavender oil inhalation help to overcome dental anxiety and pain in children? A randomized clinical trial, Arslan, I; Aydinoglu S; Karan, N. *European Journal of Pediatrics*, Volume 179, February 6, 2020, p 985-992 https://link.springer.com/article/10.1007/s00431-020-03595-7

The effect of diaphragmatic breathing on attention, negative affect and stress in healthy adults, Ma, X; Yue, Z; Gong, Z; et al. *Frontiers in Psychology*, Volume 8, June 5, 2017, Article 874, p 1-12 https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2017.00874/full

Progressive muscle relaxation therapy to relieve dental anxiety: a randomized controlled trial, Park, E; Yim, H; Lee, K. *European Journal of Oral Sciences*, Volume 127, Issue 1, November 14, 2018, p 45-51 https://onlinelibrary.wiley.com/doi/10.1111/eos.12585

Progressive muscle relaxation according to Jacobson in treatment of the patients with temporomandibular joint disorders, Ferendiuk, E; Biegańska, J; Kazana, P; Pihut, M. *Folia Medica Cracoviensia*, Volume 59, Issue 3, 2019, p 113-122 http://www.fmc.cm-uj.krakow.pl/pdf/59_3_113.pdf

Meta-analytic evidence on the efficacy of hypnosis for mental and somatic health issues: a 20-year perspective, Rosendahl, J; Alldredge, C; Haddenhorst, A. *Frontiers in Psychology,* Volume 14, January 7, 2024, p 1-20 https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2023.1330238/full

The effectiveness of hypnosis for pain relief: A systematic review and meta-analysis of 85 controlled experimental trials, Thompson, T; Terhune, D; Oram, C; et al. *Neuroscience & Biobehavioral Reviews*, Volume 99, April 2019, p 298-310 https://www.sciencedirect.com/science/article/abs/pii/S0149763418304913

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A controlled trial on the effect of hypnosis on dental anxiety in tooth removal patients, Glaesmer, H; Geupel, H; Haak, R. *Patient Education and Counseling*, Volume 98, Issue 9, September 2015, p 1112-1115 https://www.sciencedirect.com/science/article/abs/pii/S0738399115002281

Acupuncture for anxiety in dental patients: Systematic review and meta-analysis, Allan, F; Peckham, E; Liu, J; et al. *European Journal of Integrative Medicine*, Volume 20, June 2018, p 22-35 https://www.sciencedirect.com/science/article/abs/pii/S1876382018300544

Acupuncture: An alternative therapy in dentistry and its possible applications, Naik, P; Kiran, R; Yalamanchal, S; et al. *Medical Acupuncture*, Volume 26, Issue 6, December 1, 2014, p 308-314 https://pmc.ncbi.nlm.nih.gov/articles/PMC4270142/

Acupuncture in the management of anxiety related to dental treatment: A case series, Rosted, P; Bundgaard, M; Gordon, S; et al. *Acupuncture in Medicine*, Volume 28, Issue 1, March 2010, p 3-5 https://journals.sagepub.com/doi/10.1136/aim.2009.001933

Effectiveness of music interventions on dental anxiety in paediatric and adult patients: A systematic review, Moola, S; Pearson, A; Hagger, C. *JBI Evidence Synthesis*, Volume 9, Issue 18, 2011, p 588-630 https://journals.lww.com/jbisrir/abstract/2011/09180/effectiveness_of_music_interventions_on_dental.1.aspx

Techniques for managing behaviour in pediatric dentistry: Comparative study of live modelling and tell–show–do based on children's heart rates during treatment, Farhat-McHayleh, N; Harfouche, A; Souaid, P. *Journal of the Canadian Dental Association*, Volume 75, Issue 4, May 2009, p 283-283f https://www.cda-adc.ca/jcda/vol-75/issue-4/283.pdf

The management of dental anxiety: Time for a sense of proportion? Newton, T; Asimakopoulou, K; Daly, B; et al. *British Dental Journal*, Volume 213, September 21, 2012, p 271–274 https://www.nature.com/articles/sj.bdj.2012.830

The effectiveness of cognitive-behavioral intervention on dental anxiety during pulpotomy in 7-10 year-old children: A clinical trial, Shokravi, M; Maaboudi, M; Amiri, A; et al. *Frontiers in Dentistry*, Volume 20, August 26, 2023, p 1-10 https://pmc.ncbi.nlm.nih.gov/articles/PMC10505444/

Assessment of dental anxiety in children between 5 and 10 years of age in the presence of a therapy dog: A randomized controlled clinical study, Thakkar, T; Naik, S; Dixit, U. *European Archives of Paediatric Dentistry*, Volume 22, November 27 2020, p 459-467 https://link.springer.com/article/10.1007/s40368-020-00583-1

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Effects of animal-assisted therapy for anxiety reduction in children and adolescents: A systematic review, Brandão, C; Sampaio, M; Sousa-Gomes, V; et al. *Journal of Clinical Medicine*, Volume 14, Issue 1, January 6, 2025, p 1-10 https://www.mdpi.com/2077-0383/14/1/287

The effectiveness of sensory adaptive dental environments to reduce corresponding negative behaviours and psychophysiology responses in children and young people with intellectual and developmental disabilities: A protocol of a systematic review and meta-analysis, Reynolds, K; Chandio, N; Chimoriya, R; Arora, A. *International Journal of Environmental Research and Public Health*, Volume 19, Issue 21, October 22, 2022, p 1-9 https://www.mdpi.com/1660-4601/19/21/13758

The effect of multisensory-adapted dental environment on children's behavior toward dental treatment: A systematic review, Ismail, A; Tengku, T; Malek, W; et al. *Journal of Indian Society of Pedodontics and Preventive Dentistry*, Volume 39, Issue 1, January-March 2021, p 2-8 https://journals.lww.com/jped/fulltext/2021/39010/the_effect_of_multisensory_adapted_dental.2.aspx

Enhancing special care dentistry with sensory-adapted dental environment: A comparative study, Kittur, S; Basappa, N; Ruju, O; et al. *Journal of Indian Society of Pedodontics and Preventive Dentistry*, Volume 40, Issue 3, July-September 2022, p 245-252 https://journals.lww.com/jped/fulltext/2022/40030/enhancing_special_care_dentistry_with.5.aspx

Dental care of patients exposed to sexual abuse: Need for alliance between staff and patients, Wolf, E; Grinneby, D; Nilsson, P; Priebe, G. *European Journal of Oral Sciences*, Volume 129, Issue 3, March 24, 2021, p 1-12 https://onlinelibrary.wiley.com/doi/10.1111/eos.12782

Cost-effectiveness analysis of silver diamine fluoride to divert dental general anaesthesia compared to standard care, Nguyen, T; Tonmukayakul, U; Hall, M; Calache, H. *Australian Dental Journal*, Volume 67, Issue 4, September 9, 2022, p 352-361 https://onlinelibrary.wiley.com/doi/10.1111/adj.12936

Ten years on: Is dental general anaesthesia in childhood a risk factor for caries and anxiety? Harworth, S; Dudding, T; Waylen, A; et al. *British Dental Journal*, Volume 222, February 24, 2017, p 299-304 https://www.nature.com/articles/sj.bdj.2017.175

The parental concern and acceptance of silver diamine fluoride treatment in preschool children: A cross sectional study, Ladparkdy, S; Asvanund, Y; Prapansilp, W; et al. *Journal of International Society of Preventive & Community Dentistry*, Volume 14, Issue 5, October 29, 2024, p 413-420 https://journals.lww.com/jpcd/fulltext/2024/14050/the_parental_concern_and_acceptance_of_silver.9.aspx

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A wider scope of analysis on 38% silver diamine fluoride, AlKhodier, H; Molla, G; AlAjaji, N; et al. *Cureus*, Volume 15, Issue 8, August 2023, p 1-7 https://www.cureus.com/articles/173359-a-wider-scope-of-analysis-on-38-silver-diamine-fluoride#!/

The current and potential application of medicinal cannabis products in dentistry, Lowe, H; Toyang, N; Steele, B; et al. *Dentistry Journal (Basel)*, Volume 9, Issue 9, September 10, 2021, p 1-20 https://www.mdpi.com/2304-6767/9/9/106

Effect of preoperative oral cannabidiol-rich cannabis extract on anxiety and postoperative pain after endodontic treatment: A double-blind randomized clinical trial, Silva, S; Velozo, C; Montenegro, L; et al. *Journal of Endodontics*, Volume 50, Issue 12, December 2024, p1698-1704 https://www.jendodon.com/article/S0099-2399(24)00560-0/abstract

Dental anxiety management by full spectrum CBD formulations: Dual dosing (AM/PM) protocol in a real-world setting, Cooper, D; Stephan, R; Maygar, C. *Clinics in Medicine*, Volume 3, Article 1038, 2021, p 34-38 https://www.medtextpublications.com/open-access/dental-anxiety-management-by-full-spectrum-cbd-formulations-dual-dosing--959.pdf

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