

No More Needle Fear: The Nurse's Guide to  
**Reducing Needle Anxiety in  
Children and Teens**



# Nobody enjoys undergoing a needle procedure.

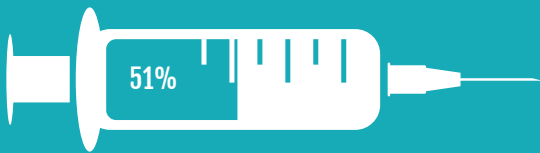
## Self-Reported Fear of Needles



6-8 y/o



9-12 y/o



13-17 y/o

For many adult patients, being stuck with a needle is an inconvenient but necessary annoyance they begrudgingly endure as part of routine vaccinations, lab work or IV starts. But for those with needle phobia and anxiety, it's much more distressing. And often, these adverse reactions develop in early childhood.

For many young patients, blood draws and injections evoke feelings of dread and fear. When preparing for a needle stick, pediatric patients may exhibit symptoms of a panic attack, such as shortness of breath, increased heart rate, trembling, nausea and even hysteria. That's because young children often perceive venipuncture as a bodily threat.

If these traumatic experiences aren't addressed early, they can have significant and long-lasting neurobiological consequences, according to a [study published in the Frontiers in Psychiatry](#). Additionally, a [study published in Sage Open Nursing journal](#) states that, "in a large sample of children having immunizations, the self-reported fear of needles was scored as strong in 68% of children aged 6 to 8 years, in 65% of children aged 9 to 12 years and in 51% of children aged 13 to 17 years."



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How's your pain?

# In other words, one scary experience with a needle can potentially lead to a life-long aversion.



As you've likely experienced when treating young patients, these reactions make completing needle procedures especially challenging, if not impossible. In some cases, needle procedures elicit a sympathetic nervous system response that reduces intravenous line success rates, according to a study published in [the Journal of Emergency Nursing](#). Multiple attempts can only serve to exacerbate a child's stress, which can reduce patients' and their parents' likelihood to seek healthcare or undergo future needle procedures.

**For many young patients blood draws and injections evoke feelings of dread and fear.**

Unfortunately, the medical community is rife with misconceptions regarding needle phobia and anxiety and, in particular, who is affected. Because practitioners often discuss needle procedure pain management in regard to younger pediatric patients, patients' loved ones (and some healthcare providers) wrongly assume older pediatric patients (adolescents and teens up to age 19) have less need for nonpharmacologic pain management. And if needle phobia and anxiety hasn't been addressed by the time a patient reaches adulthood, it's unlikely it ever will be.

Luckily, pediatric medical professionals — particularly nurses — have the power to help bust these myths, shift perceptions and begin taking action to reduce the trauma associated with needle procedures.

In this guide, we're going to share exactly how you can help address and prevent needle phobia and anxiety in your patients.



**Trypanophobia**: an extreme fear of medical procedures involving injections or hypodermic needles.

## Symptoms Include:

- Dizziness
- Fainting
- Anxiety
- Insomnia
- Panic attacks
- High blood pressure
- Racing heart rate
- Feeling emotionally or physically violent
- Avoiding or running away from medical care



# Dispelling Myths

## Shifting Perceptions About Needle Phobia and Anxiety

There are plenty of myths and misinformation about needle phobia and anxiety, specifically when it comes to adolescents and teens.

Many of these fallacies are rooted in societal expectations of how older children should behave when facing pain, especially as they approach adulthood.

**Here are a few common misconceptions held by medical professionals and parents:**

**Myth:** At a certain age, pediatric patients are old enough not to need distractions or interventions. Eventually, children will “grow out of” their fear of needles once they recognize their healthcare provider is not attempting to harm them. Adolescents and teens should be able to handle needle procedures without any form of pain management.

**Truth:** Needle phobia and anxiety affects patients of all ages, from small children to adults. Regardless of age and the type of procedure involved, patients can benefit from distractions and other forms of intervention. In fact, according to a 2012 [study published in the Journal of Pediatric Nursing](#), active distraction can actually help increase pain threshold and tolerance in procedures besides needle phobia.



**Myth:** With enough coaching, pediatric patients can learn to “be brave” and get through needle procedures without distractions or interventions. In many cases, patients just have to face their fears and learn how to cope on their own.

**Truth:** While discussing procedures with patients beforehand can help ease their fears, it’s always best to use distractions and other forms of intervention when available — especially for patients who show symptoms of anxiety. Forcing children to undergo procedures without distraction, especially while they’re exhibiting signs of stress, can intensify the trauma, make it more difficult for healthcare professionals to complete the procedure and increase the risk of the child developing a phobia.



**Myth:** One method of intervention or distraction is enough.

**Truth:** Every patient is different, and some will respond to certain stimuli better than others. Because techniques that work well for small children may not be practical or appropriate for adolescents and teens, it's always best to have a variety of options.

Additionally, it's more effective to use multiple methods together. For example, applying a topical anesthetic as well as providing an interactive game for the patient to play during the procedure can maximize the efficacy of pain management.

**Myth:** Toddlers are too young to understand needles and thus don't need to be distracted. Small children likely won't remember their first needle procedures anyway.

**Truth:** The earlier you introduce distraction and pain management methods, the more comfortable pediatric patients will be with needle procedures as they grow older. A 2015 [article from The Clinical Journal of Pain](#) found that consistent pain management with children for vaccinations can reduce acute pain and suffering during the procedure, but may also reduce fear, anxiety and development the of a needle phobia.

By taking the time to recognize these myths and educating yourself on the truth, you'll be well-prepared to set the record straight for others. Having this information on-hand can help change the perception of your peers and your patients' loved ones and reduce the risk of patients developing needle phobia and anxiety.

# Nonpharmacological Options for Pediatric Patients of All Ages

Part of your role in advocating for better pain management during needle procedures will be educating your peers on different methodologies and helping your facility develop the right processes. Since no two patients are the same, there are plenty of nonpharmacologic pain management solutions to choose from.

Because pediatric facilities often treat patients across a wide age range from infancy through their late teen years, it's important to consider several different options.

Here are the three types of nonpharmacologic pain management methods for pediatric patients:

## 1. Supportive Methods

### Education

Medical staff often take time to explain procedures to their adult patients in great detail, including the anticipated level of pain a patient might expect during and after the procedure. But many providers avoid sharing these same details with younger children and adolescents for fear it will upset them or make their anxiety worse.

However, [a study published in Indian Pediatrics](#) found face-to-face education reduced anxiety and pain in children undergoing suturing in the emergency department.

Providing a simple, age-appropriate explanation can help prepare patients by easing their anxiety before a procedure. But, as previously mentioned, it's still a good idea to use this method in conjunction with another solution.

### 1. Supportive Methods

### 2. Physical Methods

### 3. Cognitive/Behavioral Methods



## Videos

Providing children with a handheld device (such as a tablet) to watch captivating, age-appropriate videos before and during the procedure can help divert their attention. A 2016 [study conducted at the Hospital General Universitario Gregorio Marañón](#) in Spain found children who watched short cartoons experienced lower levels of anxiety before and during their procedures than children who did not.

For younger children, it may be constructive to play videos relevant to the procedure, such as a character going to the doctor for their first vaccination.

## Books

Much like videos, highly engaging, age-appropriate books can help take a child's mind off the procedure and keep them distracted while medical staff prepare for the procedure.

If a child is able, they may prefer to read aloud to the room. Younger children will need a loved one or staff member to read to them. Whatever the case, it's beneficial to ask questions about the story to help keep the patient focused and fully engaged.

## Family/Loved One's Presence

Having loved ones in the room, such as parents and siblings, can help pediatric patients feel safer and less apprehensive of the procedure.

However, it's important those in the room remain calm and positive throughout the procedure. In some cases, an obviously anxious parent can make a child feel more stressed rather than comforted.



## 2. Physical Methods



### Holding/Hugging

For small children, being held by a parent or another adult loved one in a comfortable position can help reduce stress responses and improve the child's experience.

However, it's critical the person holding the child doesn't restrain or immobilize them as this can escalate anxiety and lead to mistrust of medical procedures. In some cases, an obviously anxious parent can make a child feel more stressed rather than comforted.



### Massage

There is plenty of research extolling the virtues of massage therapy in reducing anxiety, and it can also be highly effective in relaxing patients before and during a needle procedure.

Giving patients a simple hand or neck massage can help calm their nervous system response by easing both physical and emotional tension.



### Skin Refrigerant

Topical anesthetics can be a highly effective method of pain management before needle procedures. However, many anesthetic gels (such as EMLA) require a significant waiting period, which isn't always feasible.

Luckily, topical anesthetic skin refrigerants (vapocoolants) like Pain Ease® can temporarily control the pain associated with needle procedures. And because it's fast-acting, there's little preparation involved.



*Meet Chilly!*



Gebauer's  
**PainEase®**  
The INSTANT topical anesthetic

Gebauer's Pain Ease® instant topical anesthetic skin refrigerant helps temporarily control the pain associated with immunizations, suturing and other needle procedures. In addition, our Chilly penguin may help lighten the mood and make Pain Ease® application a little more fun.

[Learn more about Chilly here.](#)

**IMPORTANT RISK AND SAFETY INFORMATION:** Consult your pediatrician when using on children 4 years old and younger. Do not use on large areas of damaged skin, puncture wounds, animal bites or serious wounds. Do not spray in eyes. Over spraying may cause frostbite. Freezing may alter skin pigmentation. Use caution when using product on persons with poor circulation. Apply only to intact oral mucous membranes. Do not use on genital mucous membranes. The thawing process may be painful and freezing may lower resistance to infection and delay healing. If skin irritation develops, discontinue use. CAUTION: Federal law restricts this device to sale by or on the order of a licensed healthcare practitioner.



### 3. Cognitive/behavioral methods

#### Multimodal Distraction (MMD)/Interactive Games

Children today are digital natives — they’re comfortable using electronic devices and can maneuver touchscreens with ease. Multimodal distraction (MMD) is a method that uses handheld interactive devices to distract patients before and during procedures.

MMD devices offer customizable programming so you can tailor the experience to the patient’s age. They’re also specially designed to hold the patient’s attention throughout the procedure. Because interactive programs and games provide multisensory stimuli, they’re highly effective in reducing children’s stress levels.



#### Virtual Reality Technology

Virtual reality (VR) is an especially effective method for older children who aren’t as easily distracted by books or videos. Patients wear VR headsets and enjoy an entertaining, immersive experience that can make them feel transported to another space entirely.

According to [a study published by Future Medicine](#), “Investigators hypothesize that VR acts as a nonpharmacologic form of analgesia by exerting an array of emotional affective, emotion-based cognitive and attentional processes on the body’s intricate pain modulation system.”

Because VR integrates visual, auditory, tactile and even olfactory sensory distractions, patients have fewer “sensory resources” to dedicate to the sensation of pain and may not feel it as intensely (if at all).



## Controlled Breathing

Most healthcare professionals are already well aware of the benefits of deep, controlled breathing. Diaphragmatic breathing — also called abdominal or belly breathing — helps strengthen the diaphragm and encourages full oxygen exchange. This exercise has been proven to slow the heartbeat, stabilize blood pressure and help children relax during a variety of procedures, according to a [study published by Biofeedback](#).

Breathing exercises not only help ease a patient's natural stress response, but focusing on their breath will help draw attention away from the procedure. It's also helpful to ask children to breathe out during the needle stick.



## Bubble Blowing/Balloon Inflation

Blowing soap bubbles or brightly colored balloons help diffuse children's stress levels, and can be an excellent choice for younger patients.

A [study published in the Journal of Child Health Care](#) compared multiple methods of distraction for children aged 6 – 12, including blowing balloons, playing with distraction cards and listening to music. The study found the children who inflated balloons during their procedure had significantly lower levels of anxiety when compared to children who used the other two methods of distraction.

Not only do bubbles and balloons keep children distracted and occupied, but they also help relieve stress in their loved ones, too.



# Shifting Perceptions

Given their influence on decision-makers, their direct relationship with patients and the experience performing needle procedures, nurses have significant power when it comes to increasing patient comfort.

As a nurse, you can strengthen awareness of needle phobia and anxiety in pediatric patients of all ages, and shift perceptions and behaviors for good.

Here are three ways you can help improve the pediatric patient experience and reduce the risk of children developing needle phobia and anxiety in the future.

## 1. Educate Others on Needle Phobia

While most medical professionals are aware of needle phobia, many may not recognize this condition often stems from traumatic experiences with needle procedures in early childhood. They also may not know how to identify symptoms of needle phobia and anxiety — particularly in adolescent and teen patients, who may be embarrassed about their fear of needles. Educating your peers and patients' parents about needle phobia and dispelling popular misconceptions can help end the stigma. It can also help ensure medical professionals consistently take proper precautions to prevent the development of needle phobia and anxiety.

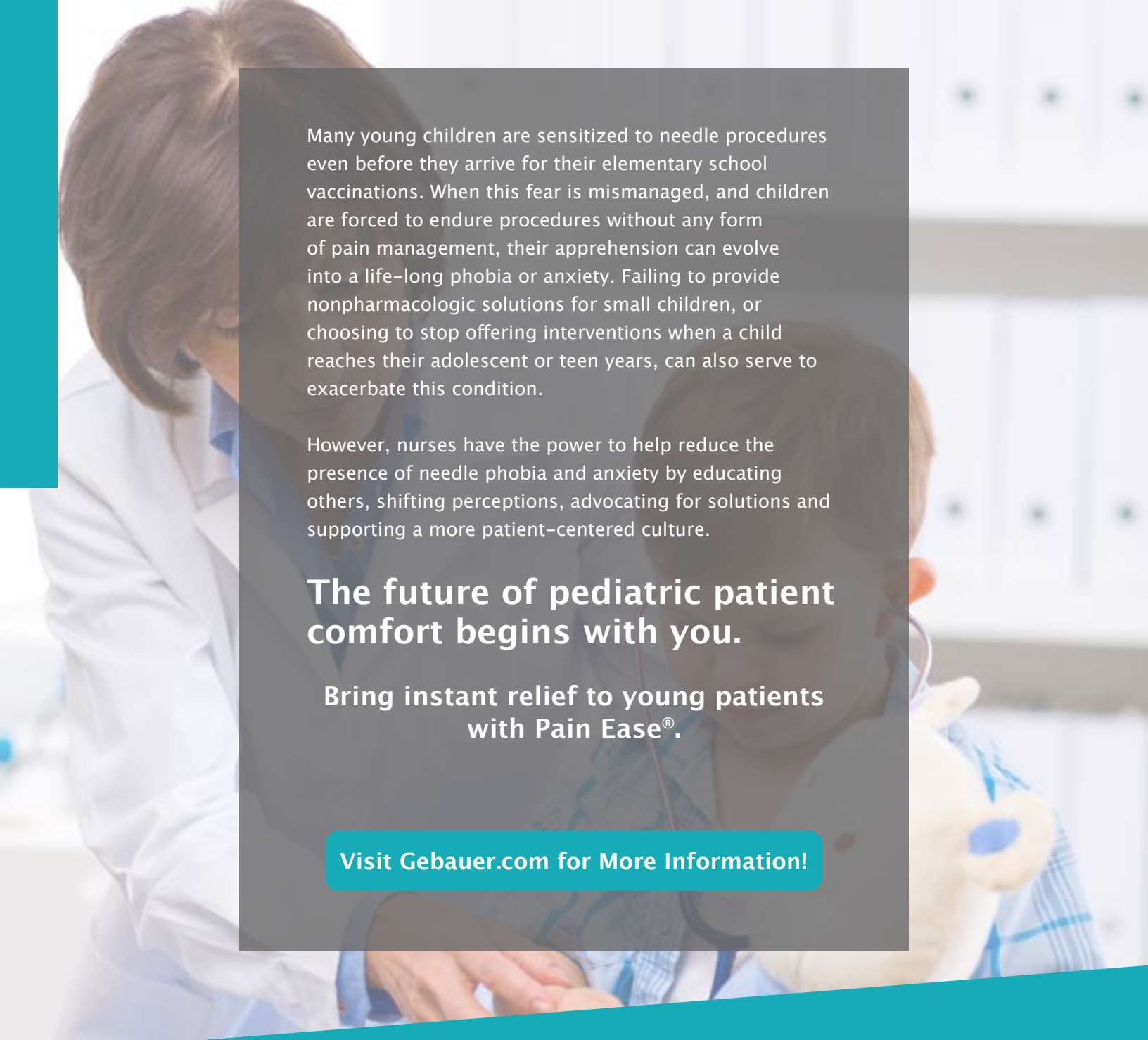
## 2. Advocate for Multiple Methods of Nonpharmacologic Pain Management

Take time to teach your peers about the various types of proven pain management and distraction techniques available for pediatric patients. Be sure purchasing decision-makers are aware of the benefits of each method and committed to introducing a variety of solutions for each age group.

## 3. Support a Culture of Patient Advocacy

For nonpharmacologic pain management to be effective, it must be habitual. Help create processes that include providing distraction and other forms of intervention consistently for all patients, rather than just for younger or upset children. By making these pain management methods part of the needle procedure routine, beginning in infancy, children could be less likely to experience the trauma that leads to needle phobia and anxiety.

Set an example by keeping a canister of topical anesthetic skin refrigerants with you at all times, and always ask patients and their parents whether they'd like a book, MMD device, VR headset, balloons or another entertaining form of distraction you have on-hand.



Many young children are sensitized to needle procedures even before they arrive for their elementary school vaccinations. When this fear is mismanaged, and children are forced to endure procedures without any form of pain management, their apprehension can evolve into a life-long phobia or anxiety. Failing to provide nonpharmacologic solutions for small children, or choosing to stop offering interventions when a child reaches their adolescent or teen years, can also serve to exacerbate this condition.

However, nurses have the power to help reduce the presence of needle phobia and anxiety by educating others, shifting perceptions, advocating for solutions and supporting a more patient-centered culture.

## The future of pediatric patient comfort begins with you.

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