Drawing blood specimens demands the blended wisdoms of many sciences. It requires a working knowledge of anatomy (to avoid injuring patients during venipunctures), physiology (to understand the effects of hemo-concentration, fasting, posture and exercise on analytes), cryptology (to decipher physicians’ handwritten orders), and many fundamentals of physics (vacuum pressure, trajectory, velocity, resistance, turbulence, shear forces, centrifugal force, molecular decay and the effects of time, temperature and light on analytes).

The approach to preparing the pediatric patient for a venipuncture is age-specific. Because it is beyond the scope of this article to discuss all age groups, we will focus on the difficult age group of 4 years old and up.
One of the most important sciences that must be mastered—especially for pediatric patients—is child psychology. Although it may seem easier to move a river than to calm a terrified child, those who understand how fear affects children know what is required to turn the Tasmanian Devil into Prince Valiant.

The phlebotomist performing a child’s first venipuncture is in a powerful position to affect how the child views every subsequent venipuncture for life. Make the first experience uneventful and the next experience will be considerably easier for both patient and the collector; but a traumatic first experience can guarantee the next needle event is just as traumatic. Worse, the child could become needle phobic for life.

Most of us have an innate fear of the unknown; for children, this fear is especially acute. Because capillary punctures are far less invasive and can be less traumatic for pediatrics, they should be considered before venipunctures for extremely apprehensive patients. However, when venipunctures are necessary, the importance of addressing and defusing a child’s apprehension is critical to success.

Not all parents are skilled at preparing their children for the event. They may have detailed the phlebotomy procedure in unpleasant terms, or not at all. Your pediatric patient may have heard of traumatic blood collection experiences from their parents, siblings, friends or classmates, and have come to expect her own blood test to be similarly torturous. Of course, many young patients are well prepared, but those who are apprehensive deserve an extra measure of patience.
Preparing the pediatric patient begins the moment your eyes meet. Children can detect compassion or indifference in your face and body language just as you can read anxiety or complacency in theirs. How well you interpret and react to the patient’s state of mind plays an important role in being able to successfully manage the child’s experience.

**Here’s how:**
The effect of a towering, uniformed authority is intimidating. Establish a rapport with the child by getting down to her eye level and introduce yourself. Ask her if this is her first blood test and engage in kind small-talk with a tone of voice that reflects compassion and caring. The most critical step to defusing apprehension is to walk the child through the procedure step-by-step without showing any supplies or equipment except the tourniquet.
In simple terms appropriate to the child’s age, explain how the tourniquet will be applied.

Approximate the sensation by squeezing the child’s upper arm with your hand where the tourniquet might be applied and to the degree it will be tightened.

Ask the child to make a fist.

Giving the child ownership in the process turns her from the subject of the procedure to a participant in it, and has a powerful calming effect.

Point to the antecubital area, explaining that that’s where you will look for a vein, then explain that you will cleanse the site with something “cold and smelly.”

Give her the first of two jobs: to look the other way when you say so.

Since witnessing a needle coming toward the arm can unravel all composure, make sure the child agrees.

Positioning a poster board with bandages and stickers from which she can make her selection will help provide a distraction.

Step 1:
Step 2:
Step 3:

Explain that, after looking away, she will then feel a little “pinch” or “mosquito bite.”

Give the child an approximation of the sensation by gently pinching the antecubital area.

Then assign her second job in the process: to start counting when she feels the pinch.

Explain that you will probably be done by the time she gets to 10 and that you will then put pressure on the site for a few minutes and eventually bandage it.

This is an important selling point; kids love bandages!

By explaining this procedure, you turn the unknown into the known and the fear melts away. It only takes one minute or so, but when the child knows what to expect, the venipuncture has a much greater chance of proceeding without incident. Of course it remains essential to immobilize the arm during the puncture to prevent unanticipated reactions. Remember, an explosive reaction can lurk just beneath the surface of composure.
Despite your best efforts to calm an anxious child, some cannot be calmed. Should anxiety escalate to a tantrum-like refusal, all hope for an uneventful venipuncture experience is lost. If a parent is available and willing, assistance may be necessary so that the procedure can be done quickly and without injury. If not, seek coworkers to assist.
What is Buzzy®?

Buzzy® is simply a small vibrating bee with a unique ice pack.

Put it near any sharp, itching or burning pain, and presto! Using natural pain relief, Buzzy desensitizes your body's own nerves, thereby dulling or eliminating sharp injection pain.

In the same way that rubbing a bumped elbow helps, or cool running water soothes a burn, Buzzy® crowds out pain by sending stronger motion and temperature sensations down the nerves instead.

Independently verified Research shows it really works.

Nurses and doctors can get too busy to wait for numbing creams. In addition, the medical community expects patients newly diagnosed with diabetes, arthritis, or leukemia to just get used to procedures -- even those with a fear of needles. For shots, for bee stings, for boo-boos, for injected medicines,… for people afraid of needles or just annoyed by stinging injections, we developed Buzzy® to put instant pain management in YOUR hands.

The research is now overwhelming. Our first trial in adults for IV starts found that Buzzy® significantly decreased phlebotomy pain, and was followed by two successful randomized controlled studies in children. Not only did Buzzy significantly decrease pain by child and parent report, IV success was INCREASED 3 times on the first try! Buzzy® has been used for dentistry, travel immunizations, fertility shots, finger testing, splinter removal, flu injections and more!
Under no circumstances should a puncture be attempted on an uncooperative child without the assistance necessary to immobilize the intended puncture site and to protect the patient and collector from injury.

But avoid applying restraint forcefully unless it is necessary to protect yourself and the patient from injury. Kids don’t like to be restrained any more than adults do.

A firm, forceful grip often precipitates increased anxiety and the loss of cooperation. It is best, therefore, to use only as much assistance as is necessary to assure the success of the procedure, and no more.

If the patient cannot be restrained without risking injury to the patient or collector, the physician should be notified of the difficulty in performing phlebotomy safely.

**What is EMLA® Cream?**

This is a cream that contains the two local anaesthetics called lidocaine and prilocaine.

**What is EMLA® Cream used for?**

- EMLA Cream is used before procedures such as injections, skin grafts or other minor procedures to reduce the pain experienced (see anaesthesia and pain control.)
- EMLA Cream is suitable for adults and children over 1 year and is also available for babies in some markets.

**How does EMLA® Cream work?**

EMLA Cream is applied to your skin prior to the procedure and the two local anaesthetics, lidocaine and prilocaine, produce skin numbness. One disadvantage is it must be applied approximately one hour prior to the procedure.
I am 37 years old and like 10–20% of the population have a needle phobia. I tried it out yesterday while having my blood drawn. Let me tell you that she had even stuck me yet and by the time I was done talking with blood and we were finished. I usually pass out and the nurses can not in life for me. I will continue to use and tell everyone I know about this about having this phobia so I will continue to spread the good word about 110% to put it on your Facebook page and you can use my name. This have the needle phobia. Good luck with everything and thanks again for

I had the delightful experience of trying out Buzzy for the first time this morning. We tried him out in our outpatient clinic, for immunizations during well-child visits. I used Buzzy along with usual child life distractions for 17 injections, on ages 18 months to 11 years old. Out of those 17 shots, 1 was rated as “worse”, 3 as “the same” and 13 as “better” than the patient’s usual experience with shots. The nurses loved it! I even had an 8 year old tell me “I didn’t even feel it!”

**Buzzy® Blocks Pain!**

"I am a 59 year old grandmother, and am terrified of needles. I got Buzzy and had my first flu vaccine ever. I felt nothing. Buzzy is one of the greatest inventions ever!"  
Dianne L.

Bring a Buzzy to the doctor. No Fear! BEE empowered!

I loved it for IV's because it doesn't constrict the veins down like cold spray but it gives the analgesic effect kids need. I don't have 30 minutes to wait for Elamax. My daughter's pediatrician, Dr. Livingood, in Norfolk, VA told me about Buzzy Bee and my 15–year old daughter was excited to find out that it worked for her yesterday. We all avoid getting needed tests because of fear of intravenous needles. Thank you for inventing such a great product. – Laura
Here is a list of tested and recommended distraction iPad and iPhone apps to use for distraction on the go.

**Repeating Apps:** Talking Tomcat (repeats what he hears) - Dr. Amy enjoys using this ones to tell children their job is to be still while she sews their boo-boo; Talking Roby (repeats and will also say what you type); Perry Penguin

**Sound-Maker Apps:** Baby Piano Lite, Virtuoso (a full piano), BeBot (singing robot when you drag your finger), sounds drop, juke box, Fluidity

**Visual Creation Apps:** Elmo's Monster Maker, 3D Spin Art, Glow Draw, Cupcakes! XL (preschool - adolescent), Art of Glow, Crazy Simon, doodle buddy, Chalkboard, 123 Color HD, Draw Something

**Finding Apps:** Search 60, Little Things

**Game Apps:** Angry Birds Lite, 10Pin Lite, The Impossible Test, Cut the Rope, Paper Toss, BubbleFREE (popping bubble wrap), Giraffe's Matching Zoo, MASH Lite (the old Mansion, Apartment, Shack, House game), MadLibs, Skee Ball, Plants vs. Zombies (school age - adolescent)

**Meditation:** Fluidity, Simply Being, Fluid, sand garden, Sleep Maker Rain, Magic Window, Pocket Pond, and Anemona are nice apps for relaxation. Sound Drop and Beatwave are fun music apps that can be utilized as either distraction or relaxation.
OTHER TRICKS FOR DISTRACTION

(my own personal tactics)

I LIKE TO SING THE ABCs or the Barney I Love You song while I draw, sometimes I have a co-worker or a parent blow bubbles, or I play a Disney Song CD, and sing along with it while I draw.

I also keep a collection of small toys that children can either hold or look at, some of them are musical and make noise…and some (such as the rainbow slinky) that I allow the child to keep after the procedure is done. This tends to calm the child just by piquing their curiosity…Anything that will take a child’s mind off of what I am doing.