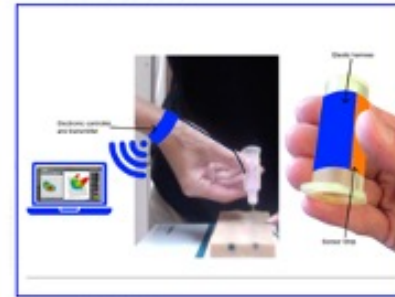


# Vein Access Technologies



The latest MEDICAL advancement!

VAT GPA: *Grip Pressure Assessor*



- What's your GPA score?
- What should the score be?
- Why is this score important?
- What "score" are we talking about?
- What does this score have to do with venipuncture?

How YOU 'hold' the needle affects...

the insertion of  
the needle

and the patient's  
perception of  
that needle  
insertion





# VAT: STEM21cVA

Vein Access Technologies (VAT) is **the only** medical company in the World to teach the STEM-venipuncture technique for ALL venipuncture procedures.

STEM: Science, Technology, Engineering, & Math

VAT applied STEM to the venipuncture procedure - and it changed everything- for the better!

# VAT has a new method for

- Locating
- Dilating
- Grading &
- Accessing Veins

Using

- ✓ NEW gentle Touch PALPATION TECHNIQUE
- ✓ 70% Isopropyl Alcohol as a palpating tool
- ✓ A veniCUFF to support the vein and venous system
- ✓ GPA to assess and teach the grip pressure applied to a needle
- ✓ Needle angle of entry change
- ✓ The 'frictionless-give' to determine when you are in.
- ✓ Positional Ergonomics: Patient and Medical Personnel

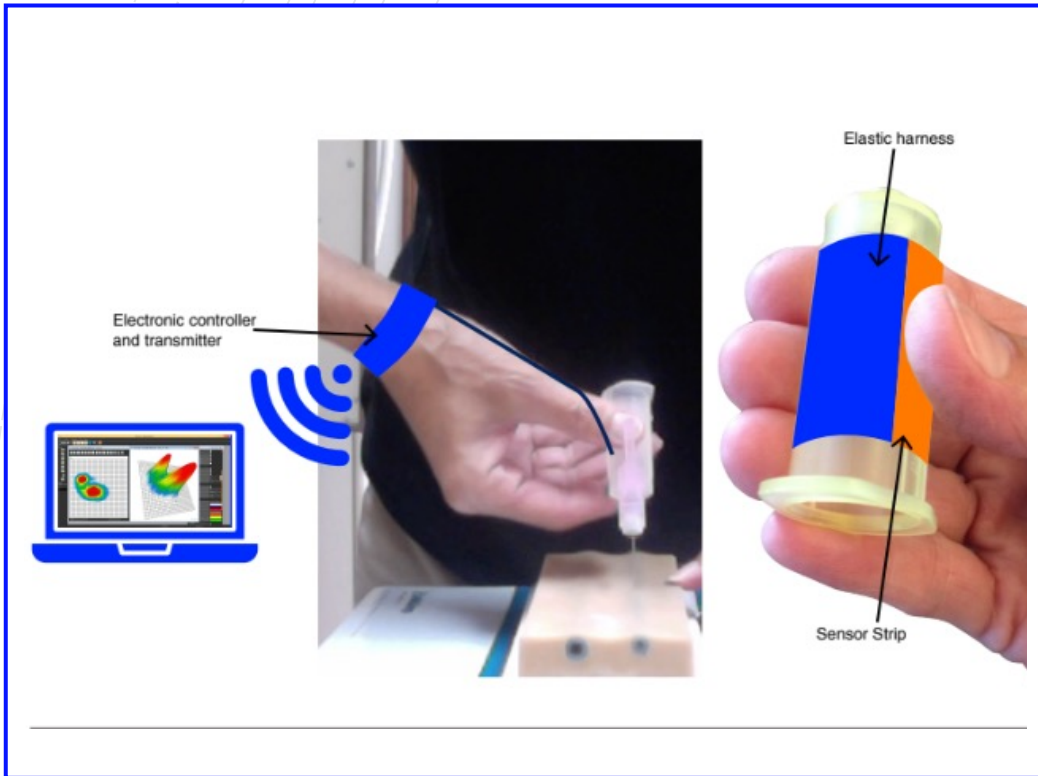
And here is just **one** application.

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*Introducing VAT's  
Grip Pressure Assessor*

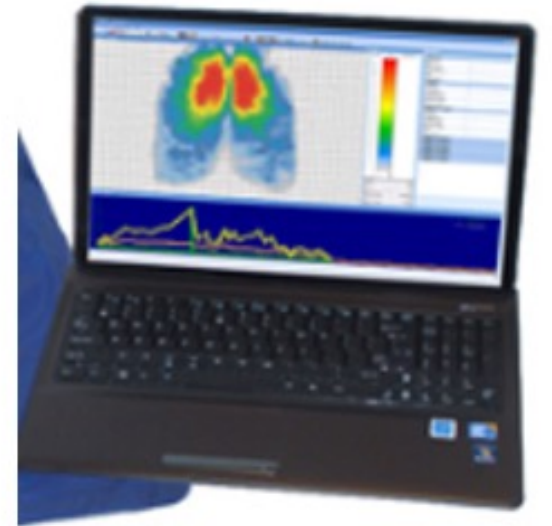
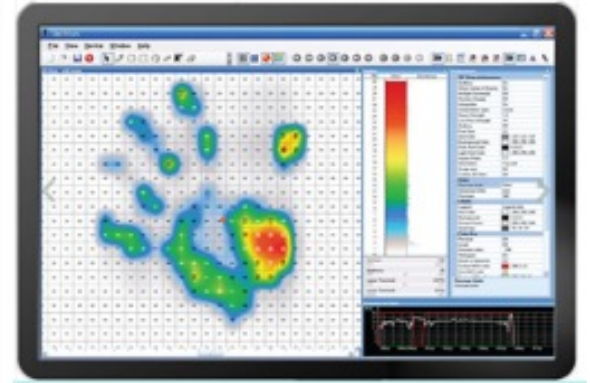
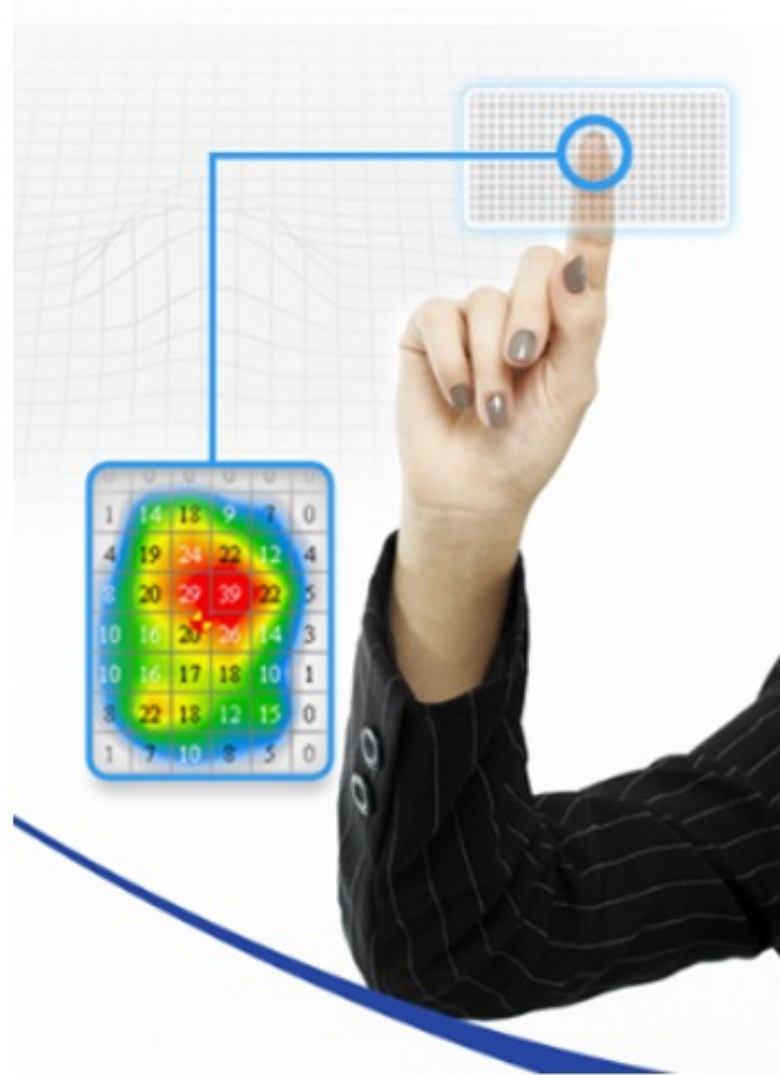


# VAT GPA: *Grip Pressure Assessor*



- What's your GPA score?
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GPA

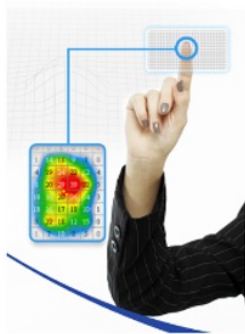




It's **ALL** about

---

*... just the right touch!*



*New*  
Needle Insertion

*Technique*



*The 21cVA Technique*

How YOU *'hold'* the needle affects...



Have you ever had a shot or venipuncture where you didn't even feel the 'stick'?

---

And you ask that person,  
"What is it that you do *differently than all the rest?*"

And they answer,  
"I don't know. I just stick."

How YOU 'hold' the needle affects...

the insertion of  
the needle

and the patient's  
perception of  
that needle  
insertion

# *Grip Pressure*

It's ALL in how **YOU hold**  
the barrel of the blood draw adapter,  
or the barrel of the syringe,  
or the stem of the IV needle.

The *lighter* you hold the needle system –  
the patient won't feel the stick.



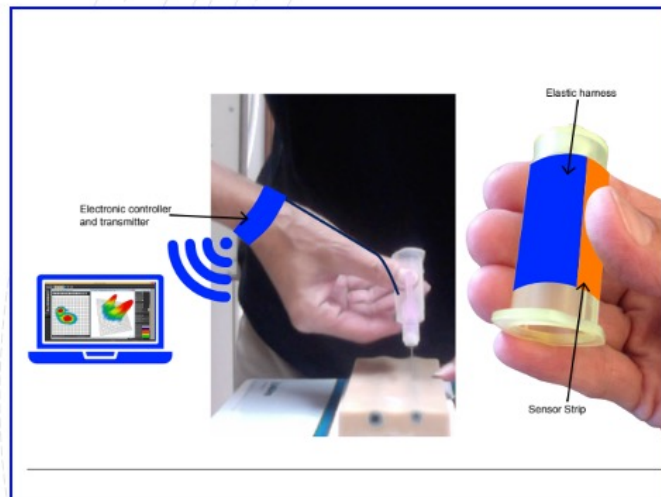
The **tighter** you hold the needle system –  
the patient will feel every ounce of that insertion.



*... just the right touch!*

How can  
YOU figure  
out YOUR  
Grip  
Pressure?

## VAT GPA: Grip Pressure Assessor



- The latest *touch-sensor technology* that
- Assesses your 'natural' grip pressure on the needle system
- And with this same tool your technique can be tweaked – to perfection.

# Happy Patients!

*Happy Medical Professionals, too!*



Needle device finger  
placement matters...

---

The lightest  
grip possible  
requires...

## Pads vs. Tips

Thumb over the middle finger  
vs.

Thumb over the index finger

And all 4 fingers sit together  
whether they touch the barrel  
or not

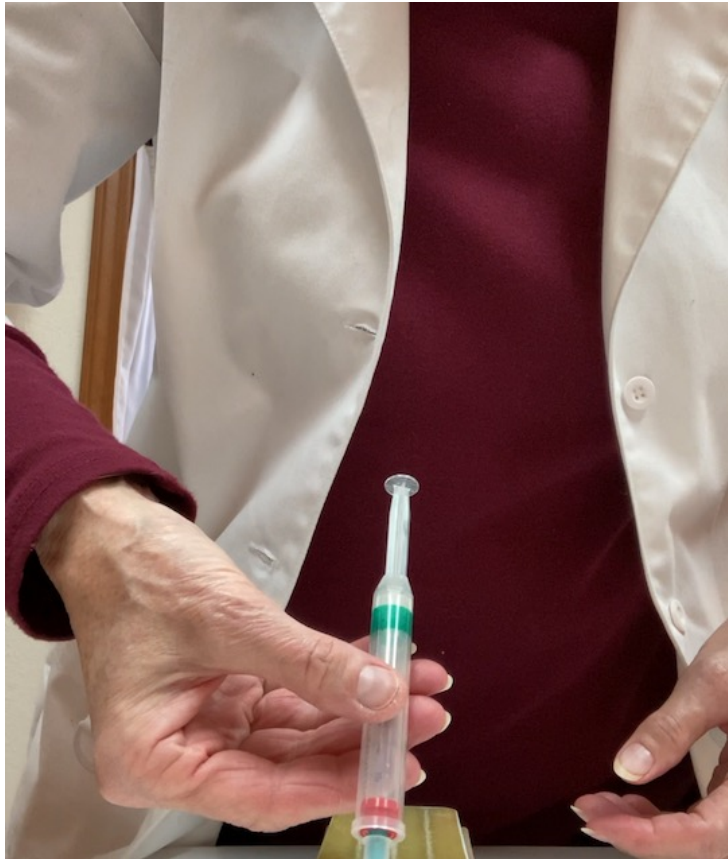


Position of  
the pads of  
the fingers  
and thumb

- Blood Draw Adapter



# Position of the pads of the fingers and thumb



- Syringe



# Position of the pads of the fingers and thumb

- IV needle

Position of  
the pads of  
the fingers  
and thumb



- Butterfly Needle

*Again*

It's ALL in how **YOU hold** the barrel of the blood draw adapter, or the barrel of the syringe, or the stem of the IV needle.

## ***Grip Pressure & Finger Pad Placement***

The *lighter* you hold the needle system – the patient won't feel the stick.



The **tighter** you hold the needle system – the patient will feel every ounce of that insertion.



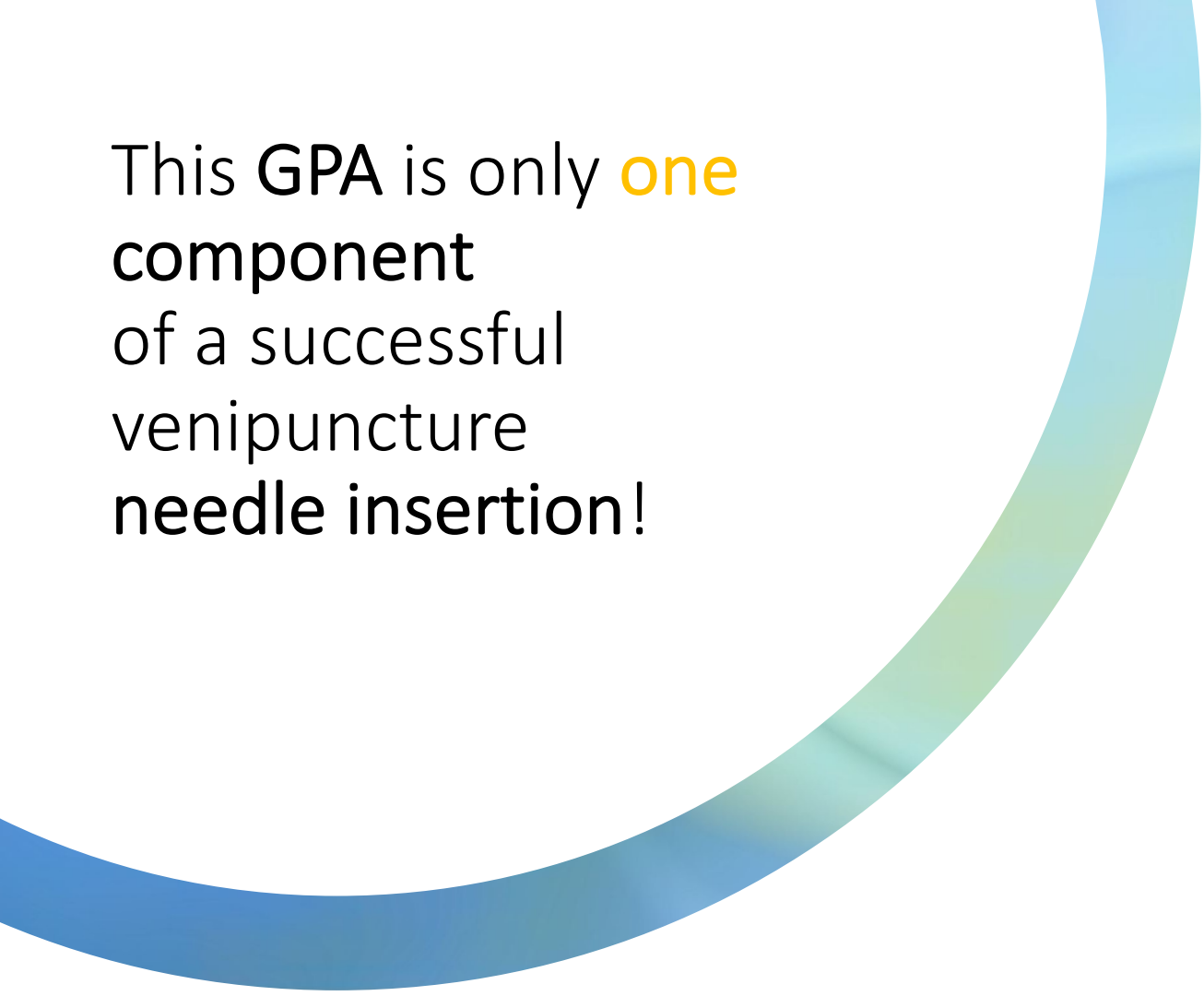
*... just the right touch!*

If your fingers are curled at all, the GPA will be HIGH.



Fingers are curled & TIPS are pinching the barrel.

You can feel the 'tension' in your wrist and note the pressure at your fingertips



This **GPA** is only **one**  
**component**  
of a successful  
venipuncture  
**needle insertion!**




How do we know this  
GPA really works?

---

Just ask the Golfing World.





Professional  
**golfers** have been  
using this  
assessment  
for years.

The tighter you hold  
the club, the more  
askew your ball goes.

Or let's put it this way  
– *your ball doesn't go  
where you want it to.*



[Exp Brain Res.](#) Author manuscript; available in PMC 2014 Jun 1.

Published in final edited form as:

[Exp Brain Res.](#) 2013 Jun; 227(4): 509–522.

Published online 2013 Apr 30. doi: [10.1007/s00221-013-3527-z](https://doi.org/10.1007/s00221-013-3527-z)

PMCID: PMC3766344

NIHMSID: NIHMS473923

PMID: [23625077](https://pubmed.ncbi.nlm.nih.gov/23625077/)

## Grip-force modulation in multi-finger prehension during wrist flexion and extension

[Satyajit S. Ambike](#), [Florent Paclet](#), [Mark L. Latash](#), and [Vladimir M. Zatsiorsky](#)

Manuscript

## Required grip pressure

Dave Tutelman -- July 2, 2020

How tightly does a golfer have to grip the club in order to make a swing? I was asked this question by a reader, and the answer was more interesting than either of us expected.

Why should we care about grip pressure (or force)? Just grab the club, tightly enough and then some, and go after the ball with it. The reason is that a tight grip and the tense forearms required to produce it has a bad effect on the shot. at the very least, it reduces clubhead speed. It is also easily argued that it has the same effect as trying to manipulate the club with the hands; it hurts consistency and accuracy.

## More science-based evidence....

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Section

Abstract

1. Introduction

2. Contact area

3. Occlusion

4. Evolution of slip in the contact region

5. Influence of sliding velocity

Review articles

#### Finger pad friction and its role in grip and touch

Michael J. Adams<sup>1</sup>, Simon A. Johnson, Philippe Lefèvre, Vincent Lévesque, Vincent Hayward, Thibaut André and Jean-Louis Thonnard

Published: 06 March 2013 <https://doi.org/10.1098/rsif.2012.0467>

#### Abstract

Many aspects of both grip function and tactile perception depend on complex frictional interactions occurring in the contact zone of the finger pad, which is the subject of the current review. While it is well established that friction plays a crucial role in grip function, its exact contribution for discriminatory touch involving the sliding of a finger pad is more elusive. For texture discrimination, it is clear that vibrotactile plays an important role in the discriminatory mechanisms. Among other factors, friction impacts the nature of the vibrations generated by the relative movement of the fingertip skin against a probed surface. Friction also has a major influence on the perceived tactile pleasantness of a surface. The contact mechanics of a finger pad is governed by the fingerprint ridges and the sweat that is exuded from pores located on these ridges. Counterintuitively, the coefficient of friction can increase by an order of magnitude in a period of tens of seconds when in contact with an impermeably smooth surface, such as glass. In contrast, the value will decrease for a porous surface, such as paper. The increase in

$$G = \frac{0.00129 V^2}{\mu_s R} (M + m/2) [1 - \sin(a)]$$

where:

- $V$  is the clubhead speed, in miles per hour.
- $\mu_s$  is the static coefficient of friction between the hand and the grip.
- $R$  is the distance from the mid-hand point to the centre of the grip.
- $M$  is the mass of the clubhead, in grams.
- $m$  is the mass of the shaft, in grams.
- $a$  is the angle of taper of the grip where the hands are.

that depends on the topography of the surface [22], which supports the contention that friction is a significant factor in tactile appraisal. Data from such *active touch* studies on

NIH National Library of Medicine  
National Center for Biotechnology Information

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Published online 2014 Jan 31. doi: 10.1007/s00221-014-3830-0

PMCID: PMC4013148  
NIDMSID: N8-MS561707  
PMD: 26477762

Factors affecting grip force: Anatomy, mechanics, and referent configurations

Satvjit Ambika,\* Florent Poizat,\* Vladimir M. Zatsiorsky,\* and Mark L. Latash\*<sup>1</sup>

# Five Components Affect Needle Insertion

The amount of grip pressure applied to the system.

Finger placement on the system.

Position of Bevel

Needle Angle of Entry

Speed of insertion

---

GPA  
assesses  
the first  
two.

The amount of  
grip pressure  
applied to the  
system.

Finger placement  
on the system.



Any medical professional  
who inserts a needle  
for any reason  
needs a ***GPA***.

This GPA is only **one**  
component  
of a successful  
venipuncture !

*Not just a successful needle insertion...*

The others are:

---

Needle angle of entry

---

Specific gauge needle for the vein you have selected

---

Indwelling bevel position - for that venipuncture

---

Ergonomic position of the Nurse

---



Anatomical position of the patient's arm

---

*Patient cooperation/participation*



YOU need the  
*21cVA* Training





*VAT's*  
new method  
for

- Locating
- Dilating
- Grading &
- Accessing Veins

Leave a Google review of this  
GPA presentation here

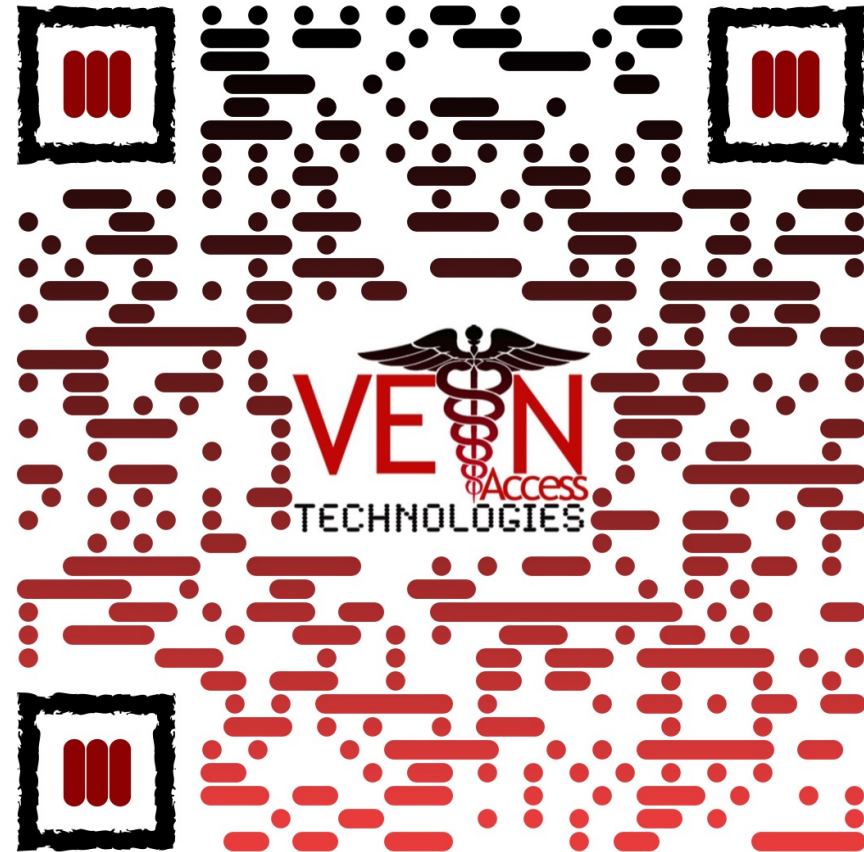


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618-259-7781

[www.VATmethod.com](http://www.VATmethod.com)

What's your 'natural stick-ability"

Have you every wondered why  
some needle insertions don't  
hurt, at all, while others you  
can feel every ounce of the  
needle insertion?



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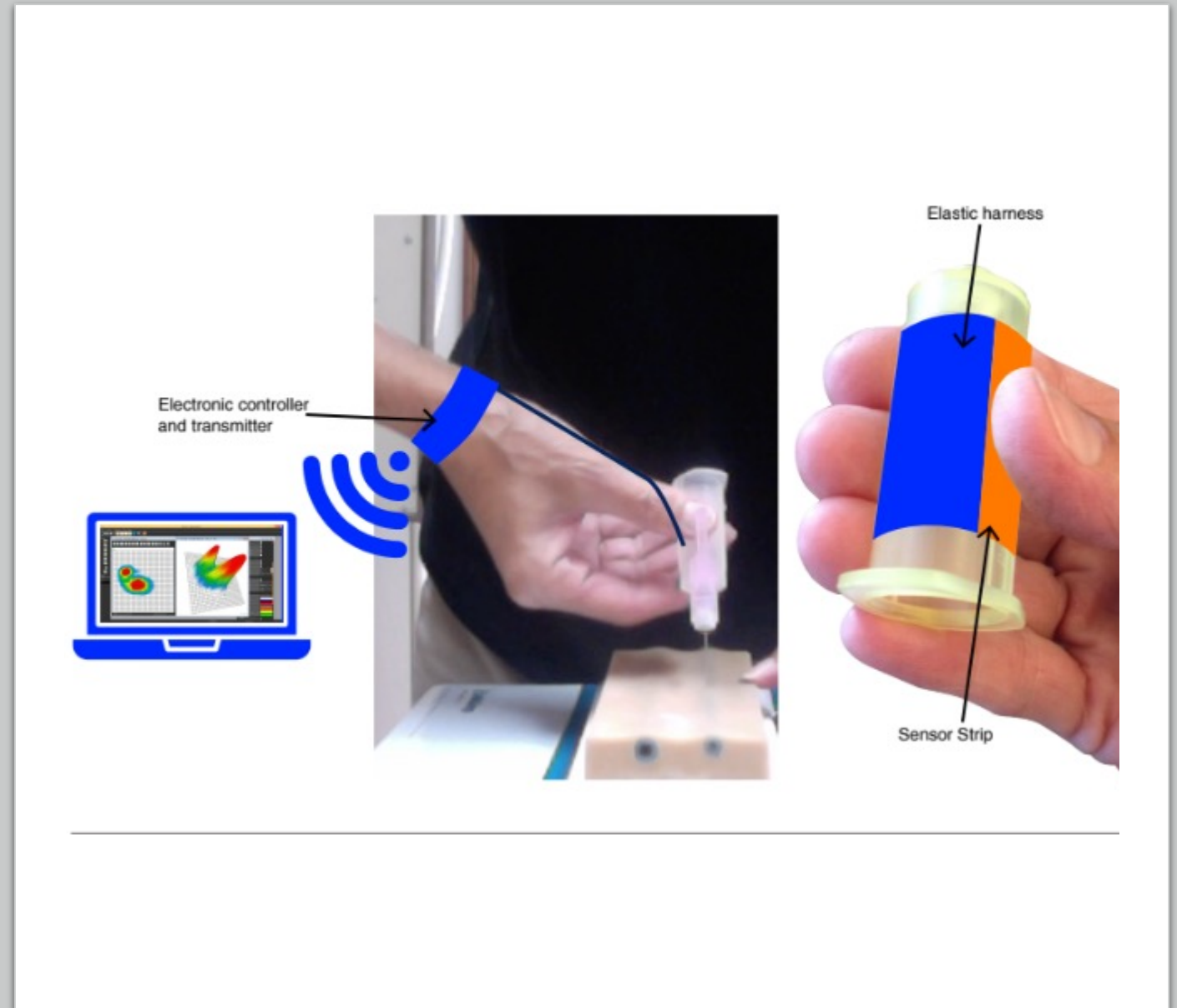
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the patient won't feel the stick.



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the patient will feel every ounce of that insertion.



*... just the right touch!*

# Schedule your GPA today!

- ✓ Individual Medical Professional
- ✓ Facility Group Assessments
- ✓ Facility or Teaching Institution purchases their own GPA tool to make it part of a Performance Improvement Program & part of the new employee job orientation & training.



