

# Demonstrating Impression Making Competency

Technical Assistance Illustrating The  
Acceptability Of Various Actions In  
Demonstrating Competency In Making Ear  
Impressions for the Arizona Hearing Aid  
Dispenser Practical Examination.

**Jay Griffin, State Licensing Surveyor**



## About this Technical Assistance Document

The following slides are snapshots taken from video captured during actual ear impression-taking demonstrations in the Practical Exam for the Fitting and Dispensing of Hearing Aids in Arizona.

Since there are many ways to safely and effectively accomplish ear impressions, this presentation will not attempt to describe or prescribe that you use any particular method.

The photos (with explanatory captions) illustrate what kinds of actions will be considered acceptable and not acceptable in demonstrating the making of ear impressions.

## How do you properly brace an instrument?

Proper bracing means you are *effectively* controlling the instrument *throughout the procedure* so that if the person were to move, the instrument will move the same way. By controlling the instrument so that it stays fixed in the same position relative to the client's ear, you prevent hurting the patient.

So, *failing* to properly brace means using the instrument in a way that would allow it to move counter to or against the client, risking harming the person.

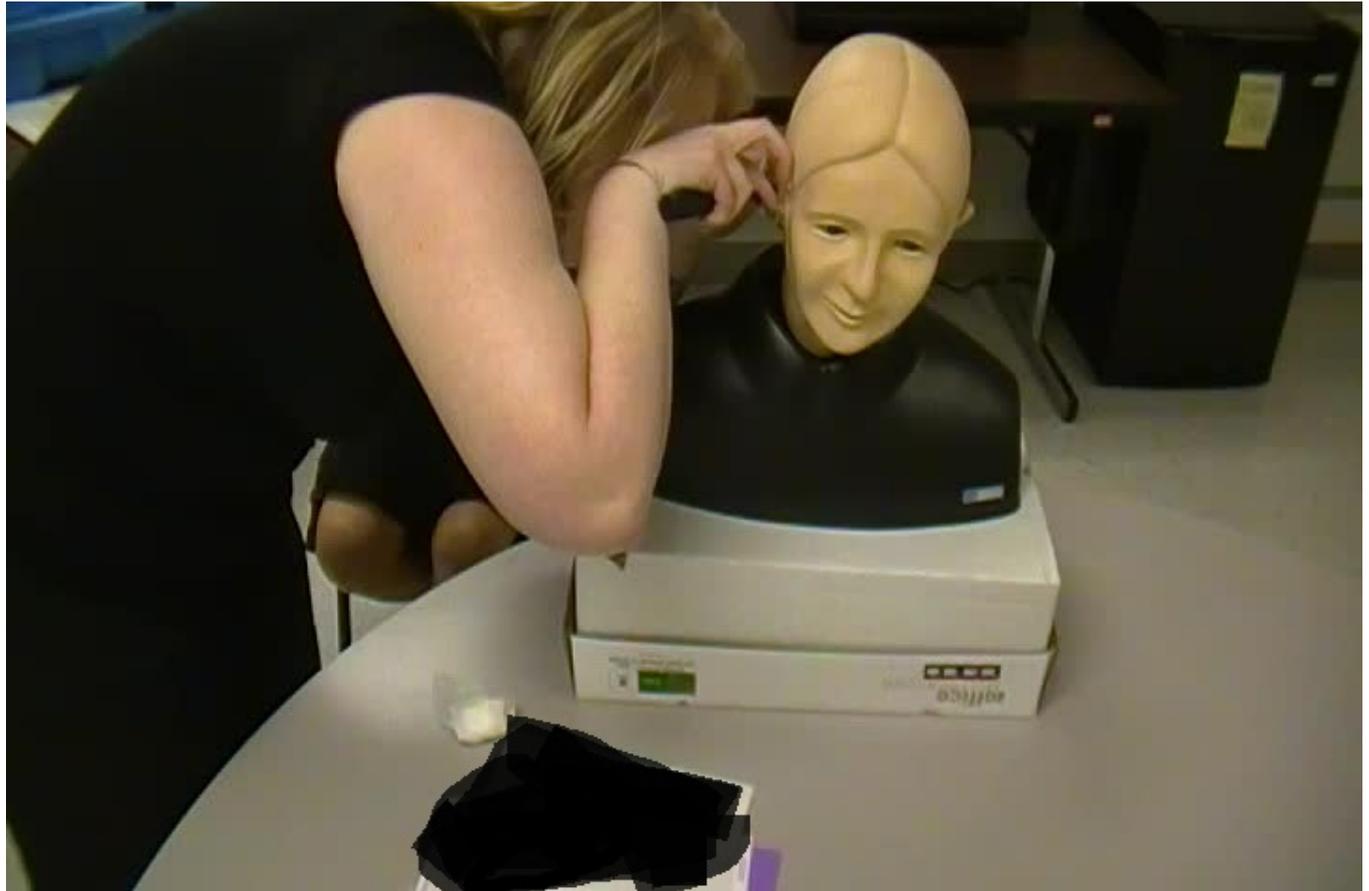
The focus is on your effective control of the instrument, not the patient's head. The methods you use should allow you use the tool effectively in a stable position close to the ear. Sometimes this can be accomplished with the instrument hand alone. But if is necessary to use both hands to control the *instrument* effectively, you must still maintain proper bracing.

For example, effective use of an otoscope involves inserting the speculum into the ear canal in order to fully inspect the canal and eardrum. So, while using a 'hovering' technique (i.e. not actually inserting the speculum into the ear canal) reduces the risk of harm, it also reduces the effectiveness of using the instrument.

You must also maintain this control throughout the entire instrument-to-ear encounter. For example, if your non-instrument hand stops supporting the tip of the impression syringe because you need it to help you finish syringing the material, that will be considered a critical error because you've stopped bracing the instrument.

# Acceptable Otoscope

While this position looks awkward and it is better if the dispenser were seated, it does demonstrate a bare minimum of bracing with the index fingertip and the long portion of the middle finger.



# Acceptable Otoscope

The entire curve of the fingers provides stable contact against the cheek from the tragus to the cheekbone.



# Acceptable Otoscope

Another view of the previous slide showing full grasp of the otoscope and the curves of the ring and pinky finger contacting the cheekbone and cheek.

Ideally, the bracing contact should be made with the non-moving bony sections on the skull close to the ear.



# Acceptable Otoscope

Excellent bracing and effective control is being provided by both hands in this example. The left hand holds the otoscope handle with the middle, ring, and pinky fingers contacting the skull behind the ear. The right hand has three fingers laid out flat on the top of the head above the ear with the head of the otoscope held between the right index finger and thumb.



# Acceptable Otoscope



# Acceptable Otoscope

This example illustrates bracing using the pinky and hypothenar surface of the hand (the outside edge of the palm).



# Acceptable Otoscope

This bracing method is acceptable because the middle and ring fingers are laying flat (providing a lot of contact) and are right underneath the earlobe.

If the hand were in the same position but moved farther down on the jaw (which can move independently relative to the ear) it would become unacceptable.



# Acceptable Otoscope

The non-instrument hand basically palms the head like a ball with the thumb directly underneath the canal providing a stable stop against which the instrument hand is set.

This 'stacked' method is acceptable as bracing, but it might not provide adequate effectiveness if the speculum needs to be inserted deeper into the canal.



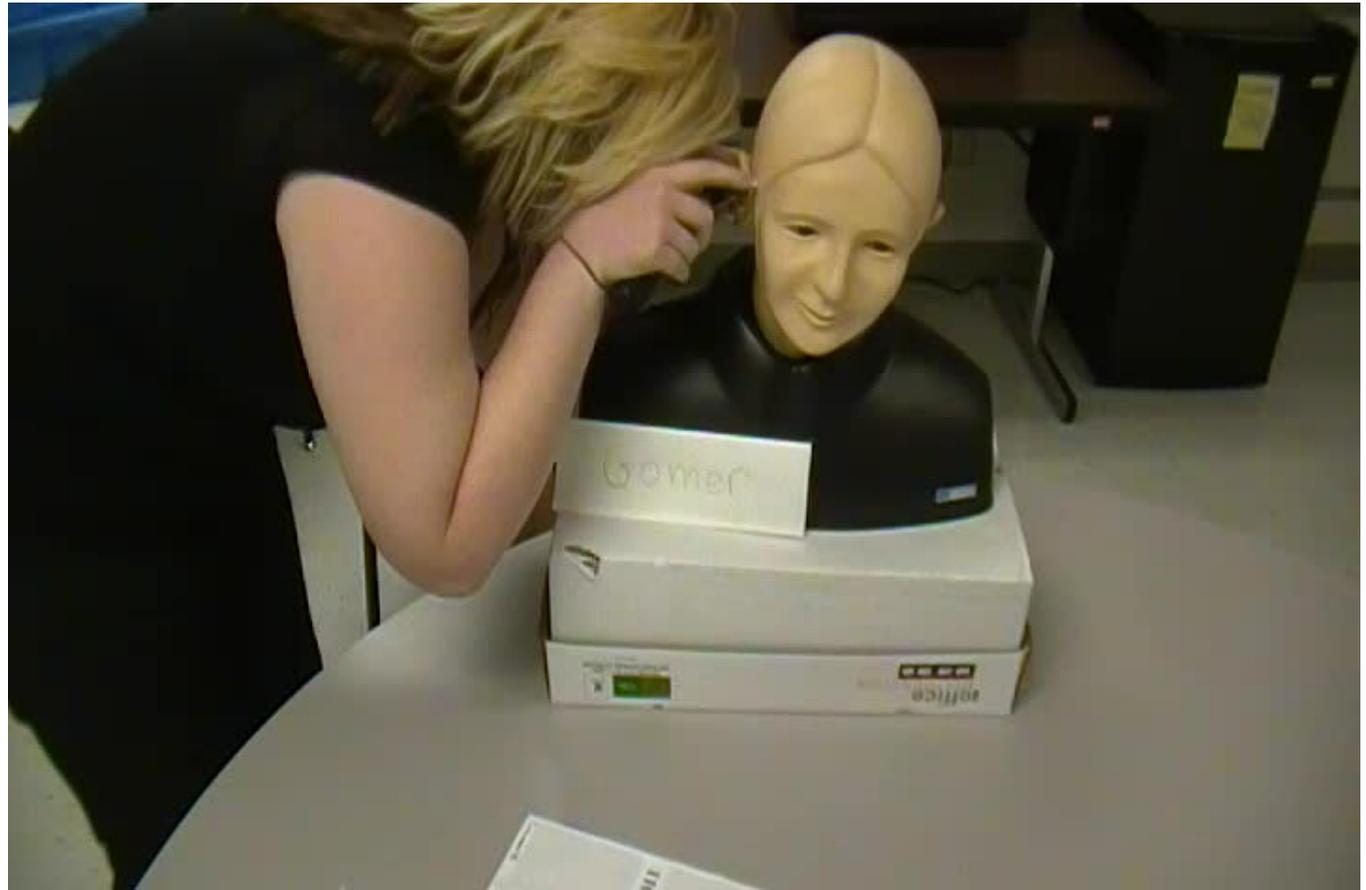
# Acceptable Otoscope

A good illustration of how dexterity varies from person to person. Almost the entire ring finger is bent and stable against the patient's cheekbone (not cheek).



# UNacceptable Otoscope

The index fingernail of the instrument hand alone against the temple provides stability only if the finger were 'locked' and only for head motion vectors in-line with the finger. The client is very likely to be uncomfortable too.



# UNacceptable Otoscope

The tip of the pinky touching the cheekbone not only provides no stability for the otoscope, but is far away from the ear canal affecting both stability and effective control.



# UNacceptable Otoscope

The otoscope speculum itself is the only thing contacting the ear in this encounter, thus no bracing.



# UNacceptable Otoscope

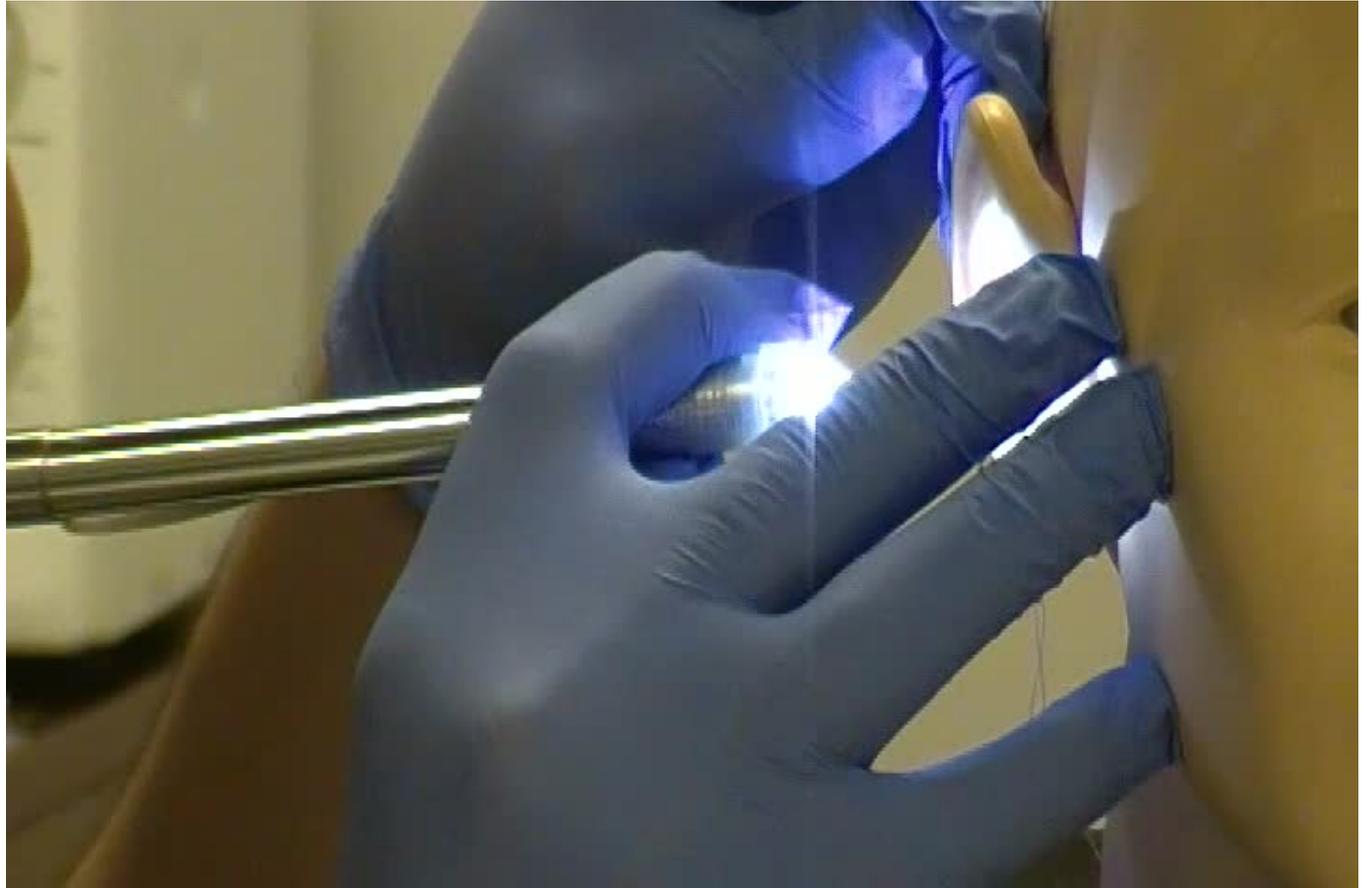
The fingernail 'back side' tip of the pinky is the only contact other than the speculum. This provides very little stability against any movement of the head.

Using the pinky finger like this makes a very weak position for the instrument hand.



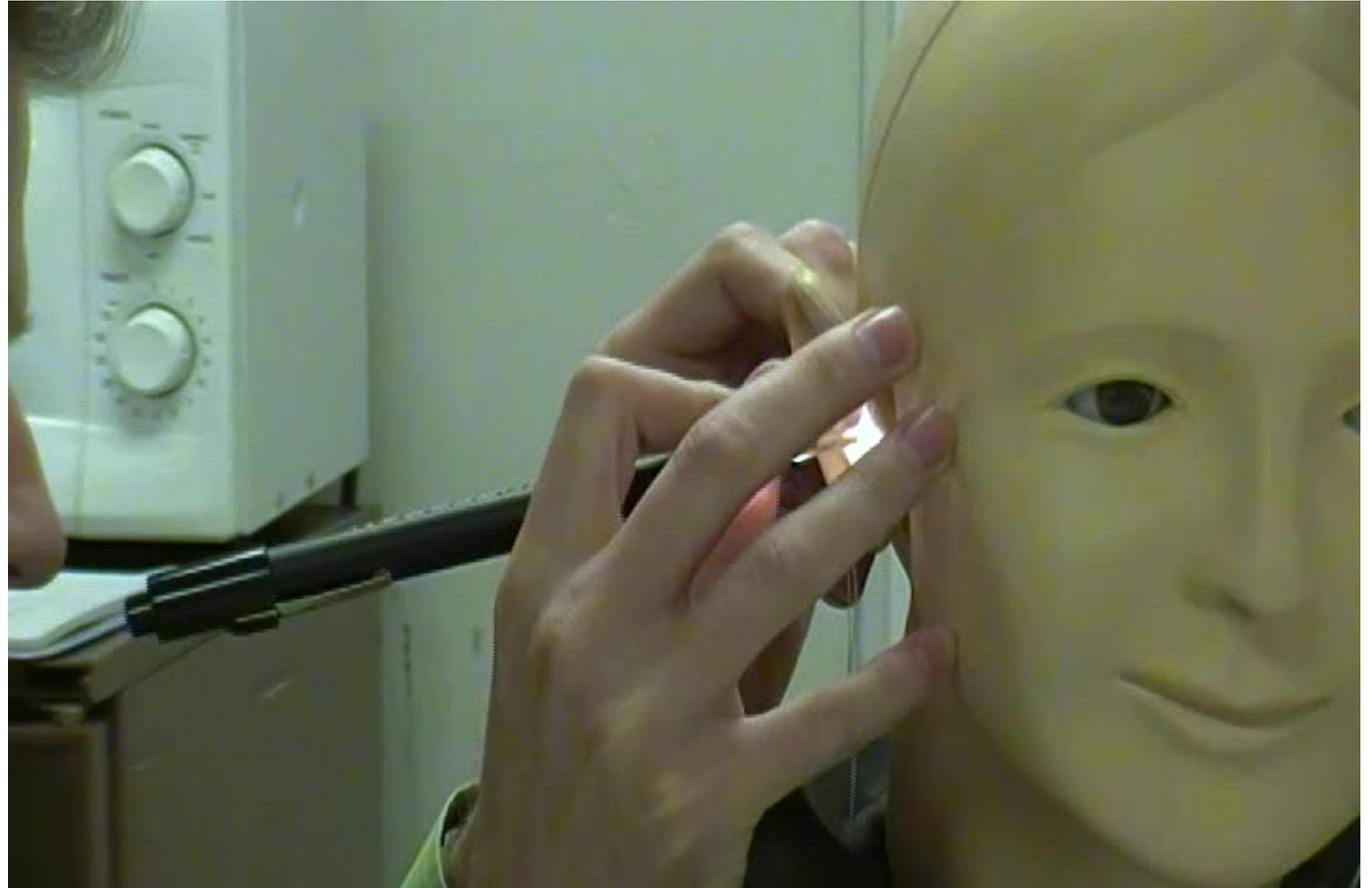
# Acceptable Otolight

While the overall position might be a little stiff to be effective, the position of the three fingers of the instrument hand provide at least '3 legs' supporting the otolight.



# Acceptable Otolight

Another example of the otolight being controlled as the '4<sup>th</sup> leg' of the tripod in the instrument hand.



# Acceptable Otolight

The palm and curled knuckles of the instrument hand provides a very stable contact against primarily bony portions of the client's head.

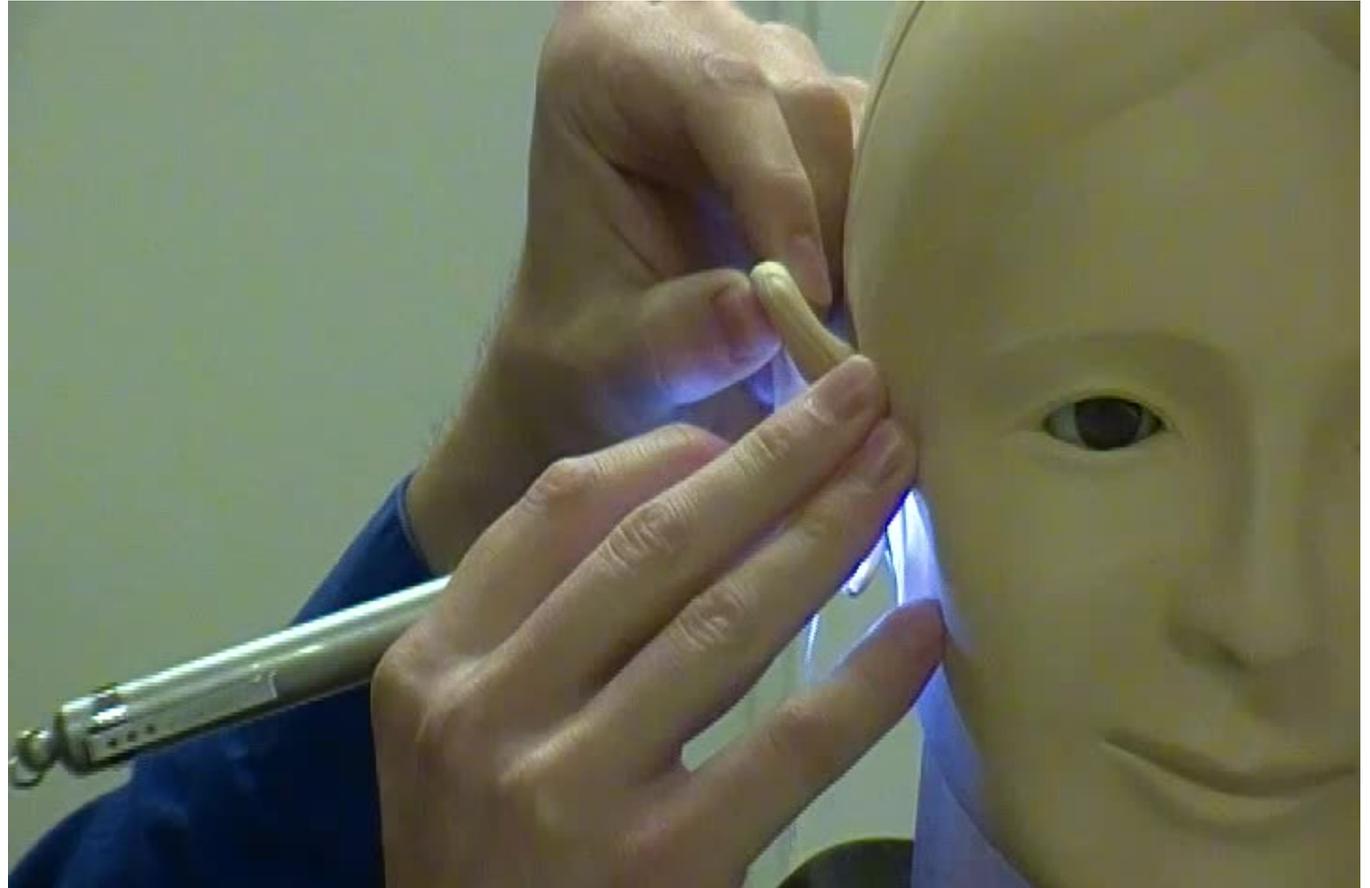


# Acceptable Otolight

An example of  
hypothetar stability  
using the otolight.



# Acceptable Otolight

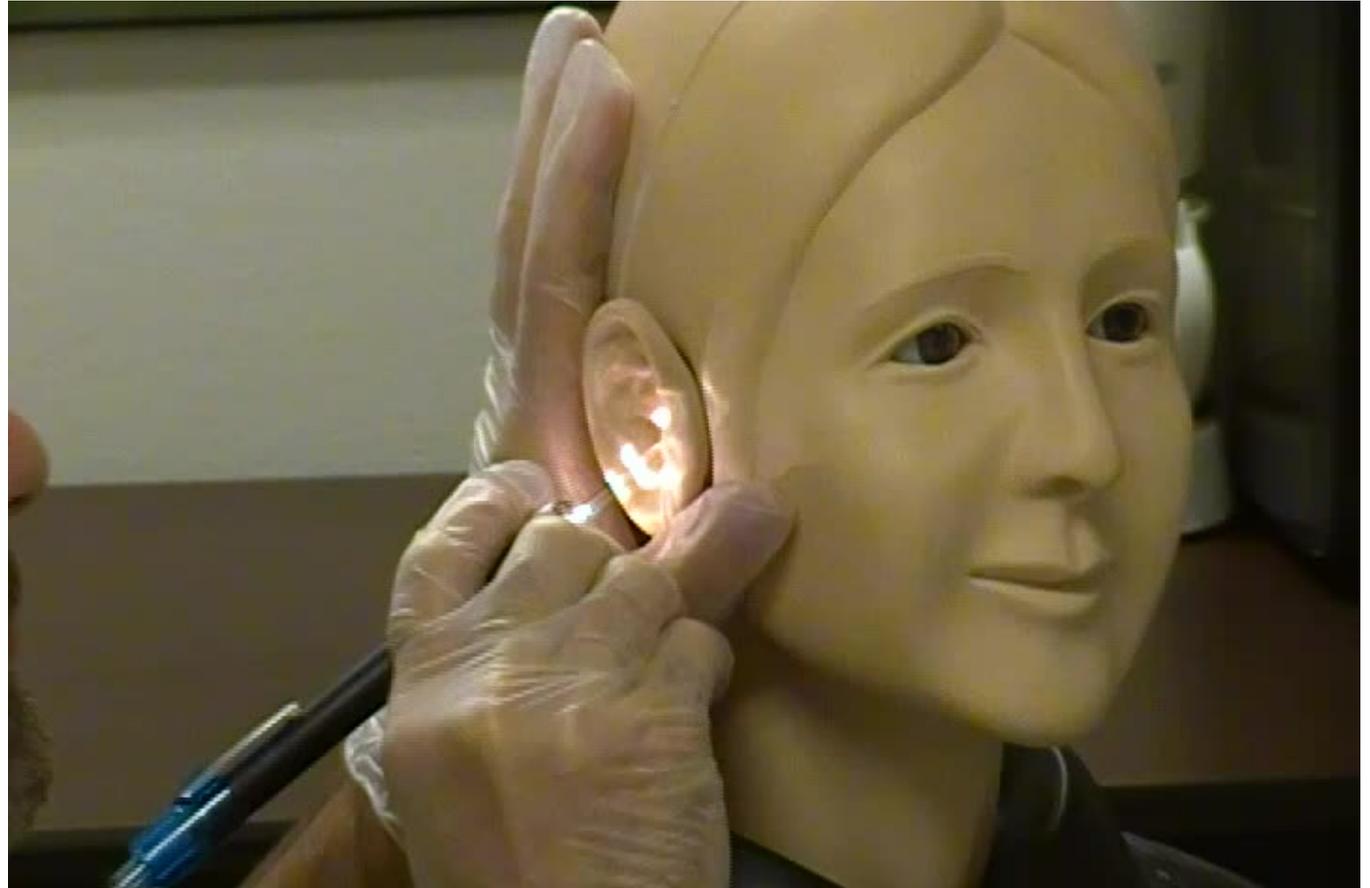


# Acceptable Otolight

While acceptable, this technique could be improved if the instrument pinky and ring fingers were wrapped around the thumb or tucked into the 'pocket' of the palm.

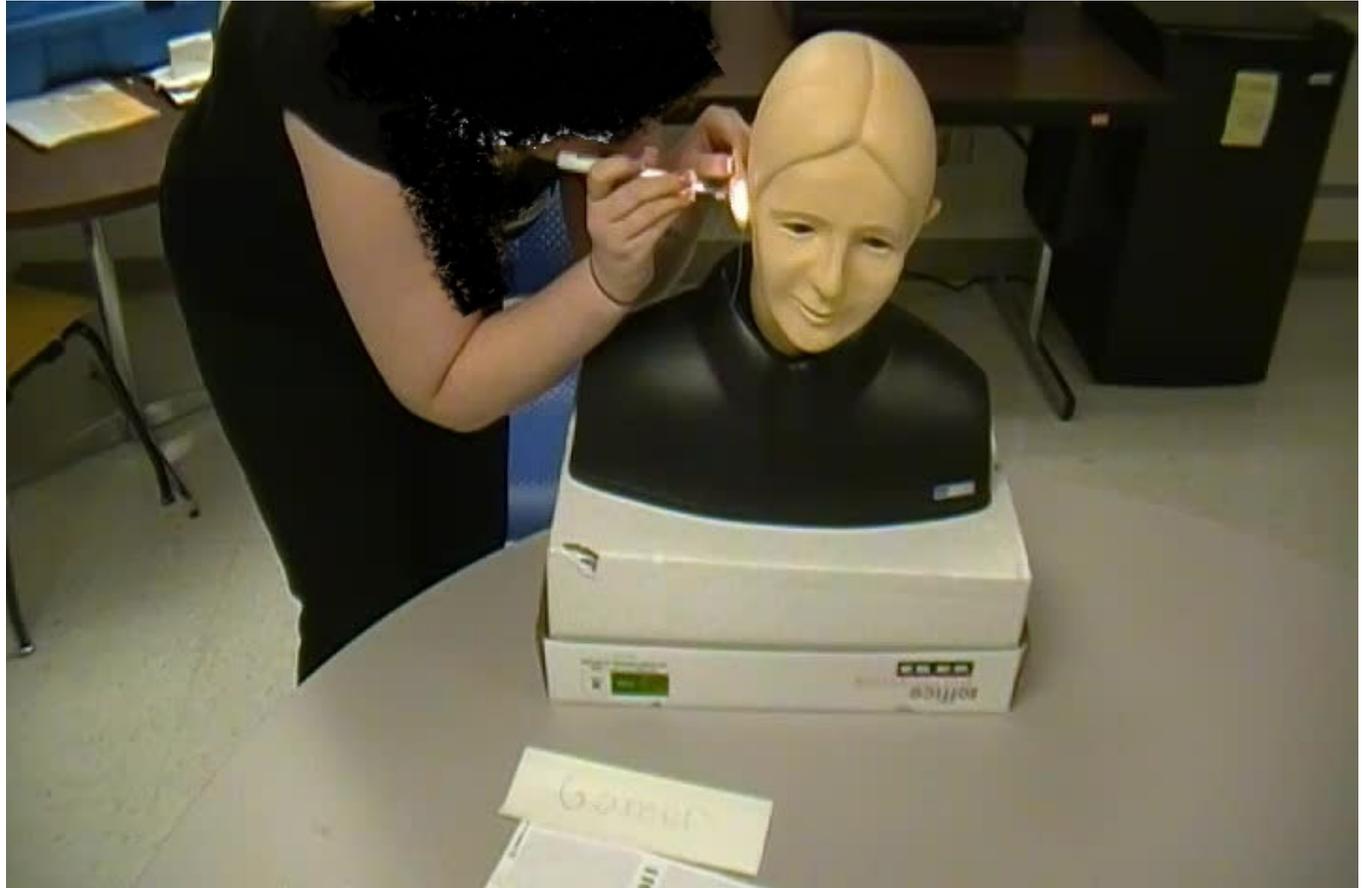


# Acceptable Otolight



# UNacceptable Otolight

The instrument is the only thing making contact with the ear. Notice that the middle of the arm is resting on the shoulder which provides no stability against head motions. Pretty much lawsuit waiting to happen.



# UNacceptable Otolight

The instrument hand has no contact with the head and the left hand pinky finger is insufficient for providing bracing in this position.



# UNacceptable Otolight

A single finger providing contact of the instrument hand with the head is always unacceptable. This 'pogo stick' method is better than no bracing, but it is inadequate because it can only brace and control in the same vector as the finger.



# UNacceptable Otolight



# UNacceptable Otolight

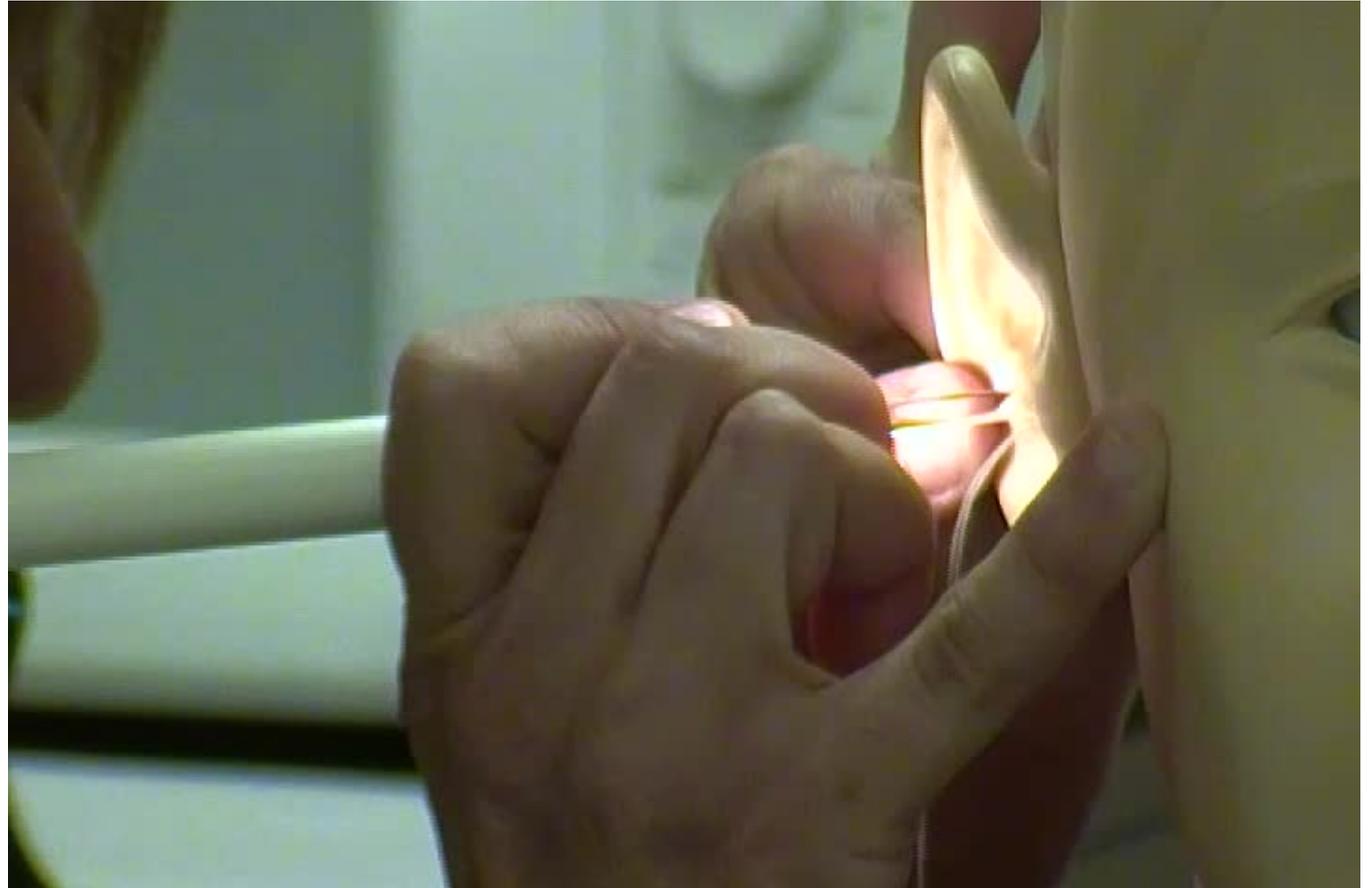


# UNacceptable Otolight

Pinky fingertip of instrument hand (itself insufficient) against the soft part of the cheek which provides no stability.

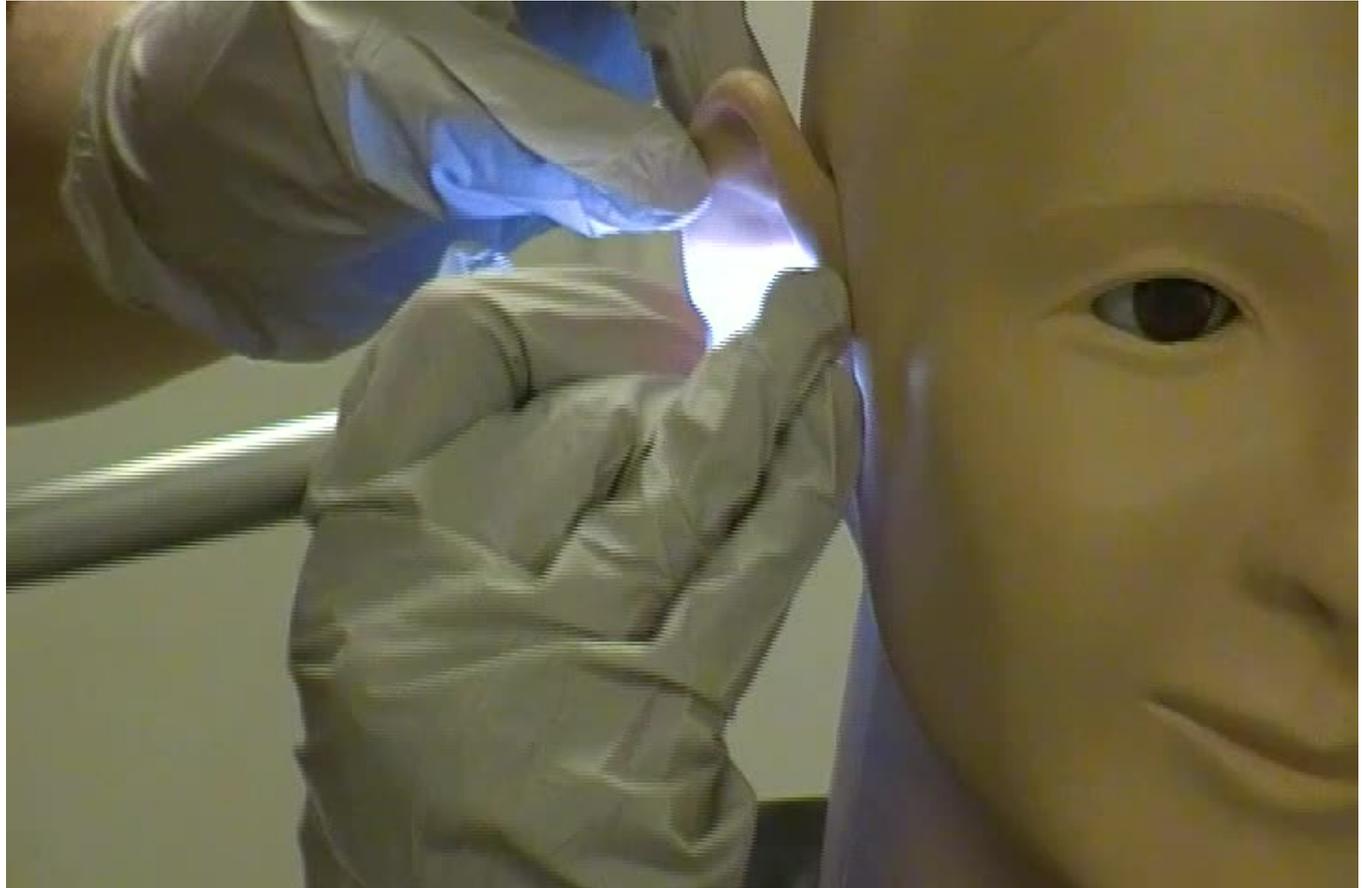


# UNacceptable Otolight



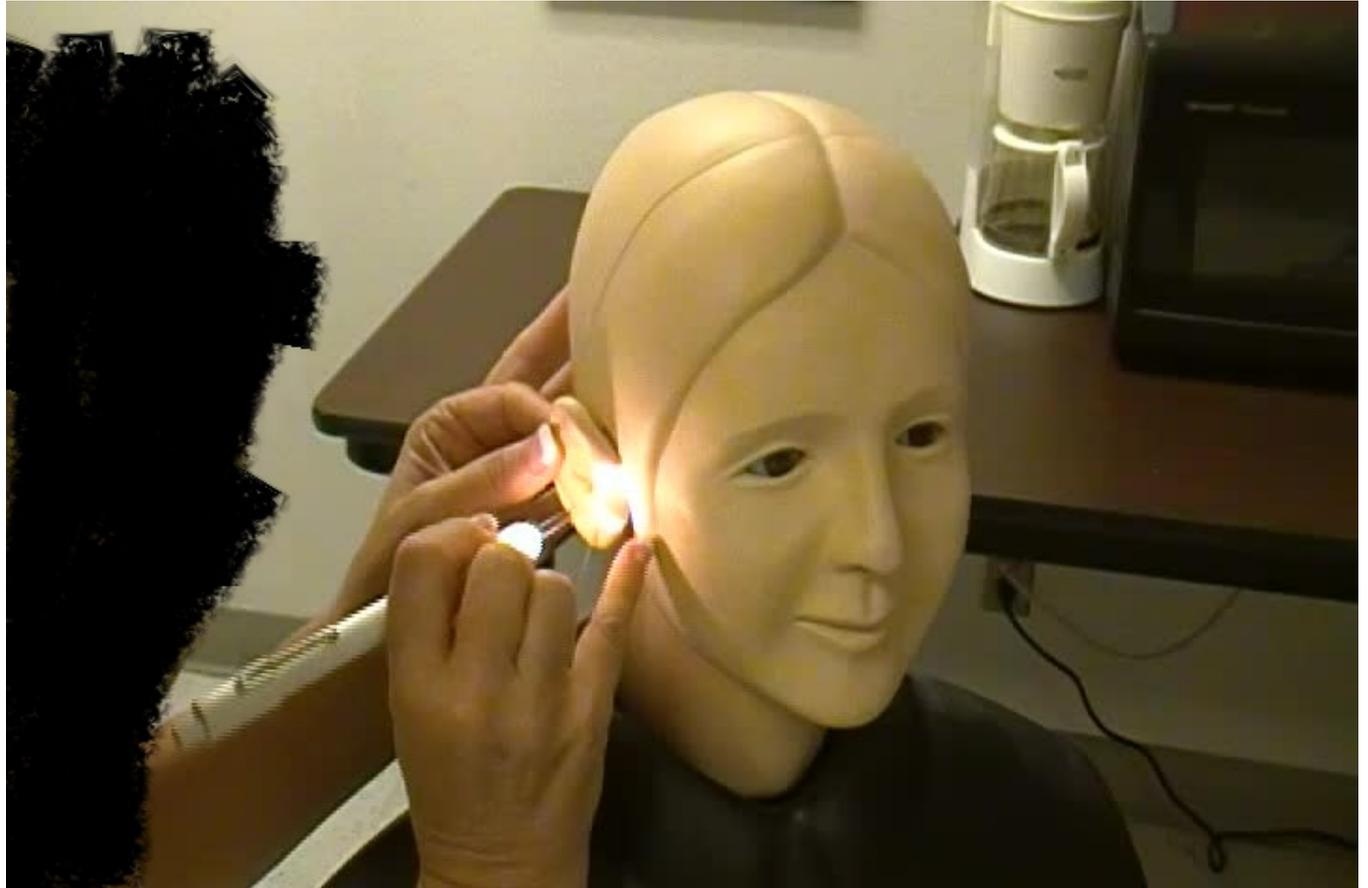
# UNacceptable Otolight

This frame shows what could have been acceptable bracing not being maintained throughout the procedure. The ring and pinky fingers of the instrument hand have lifted away from the head.



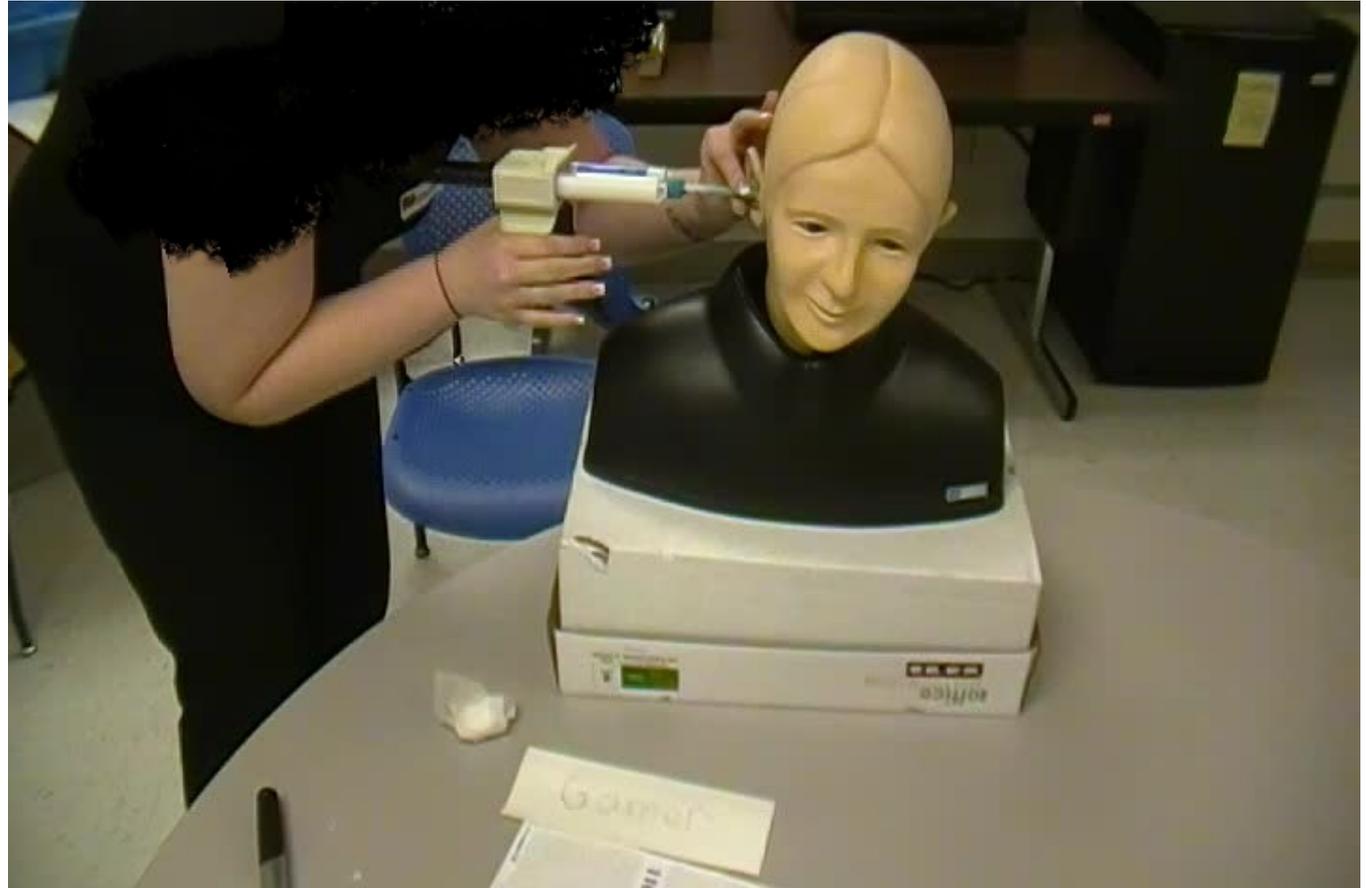
# UNacceptable Otolight

Not only is this highly inadequate for bracing, it's uncomfortable to the patient.



# Acceptable Syringe

The non-instrument hand is mostly 'palmed' on the back of the head and the index finger and thumb are holding and controlling the syringe cartridge tip very close to the ear. This method is also useful with the otoscope and otolight.



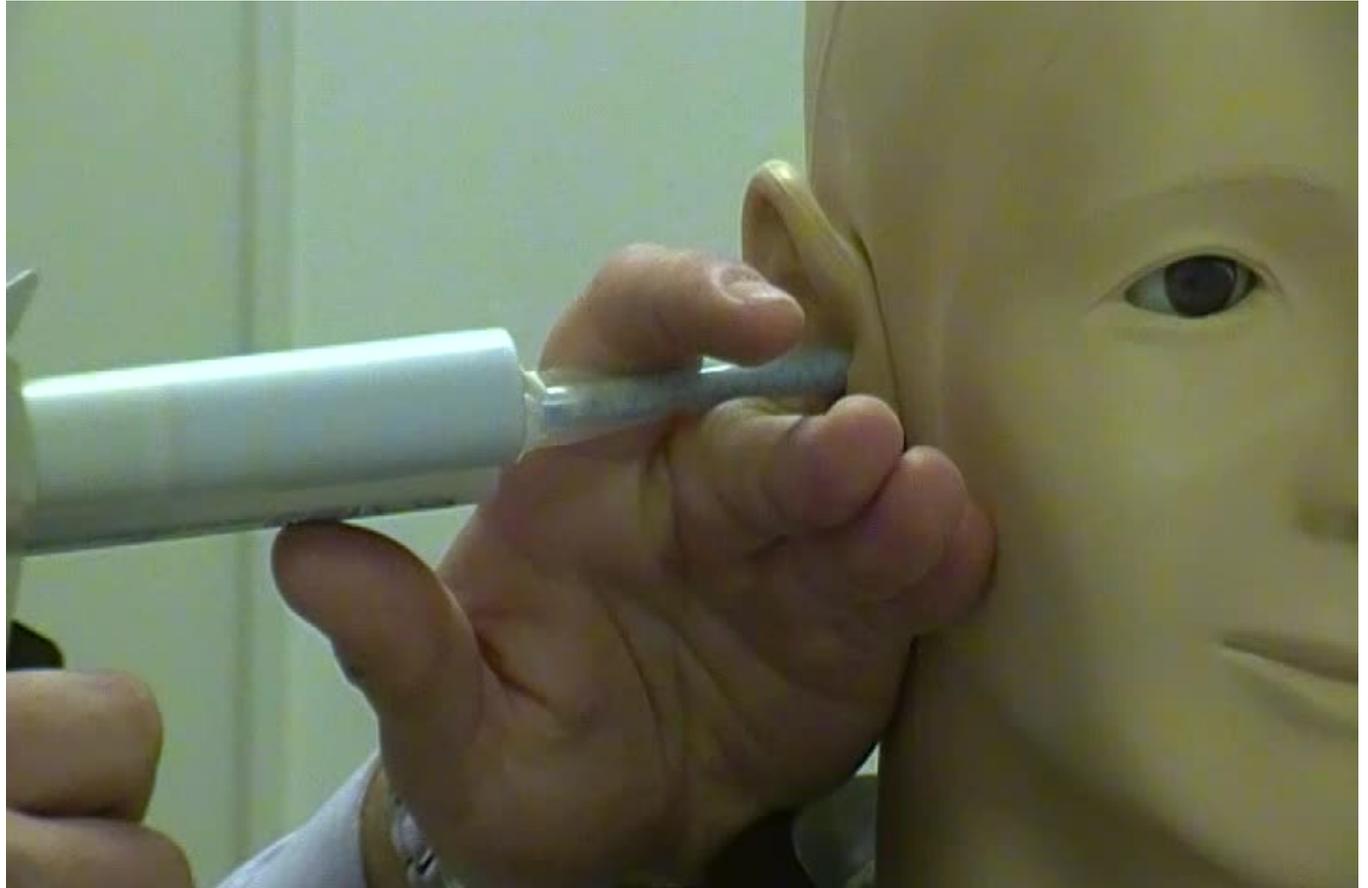
# Acceptable Syringe

Same technique as the previous slide but using a manual syringe. This provides excellent stability and control of the syringe tip letting the other hand exercise full compression of the plunger.



# Acceptable Syringe

While a bit limited in control flexibility, the syringe tip is locked within the 'scissors' of the index and middle finger.



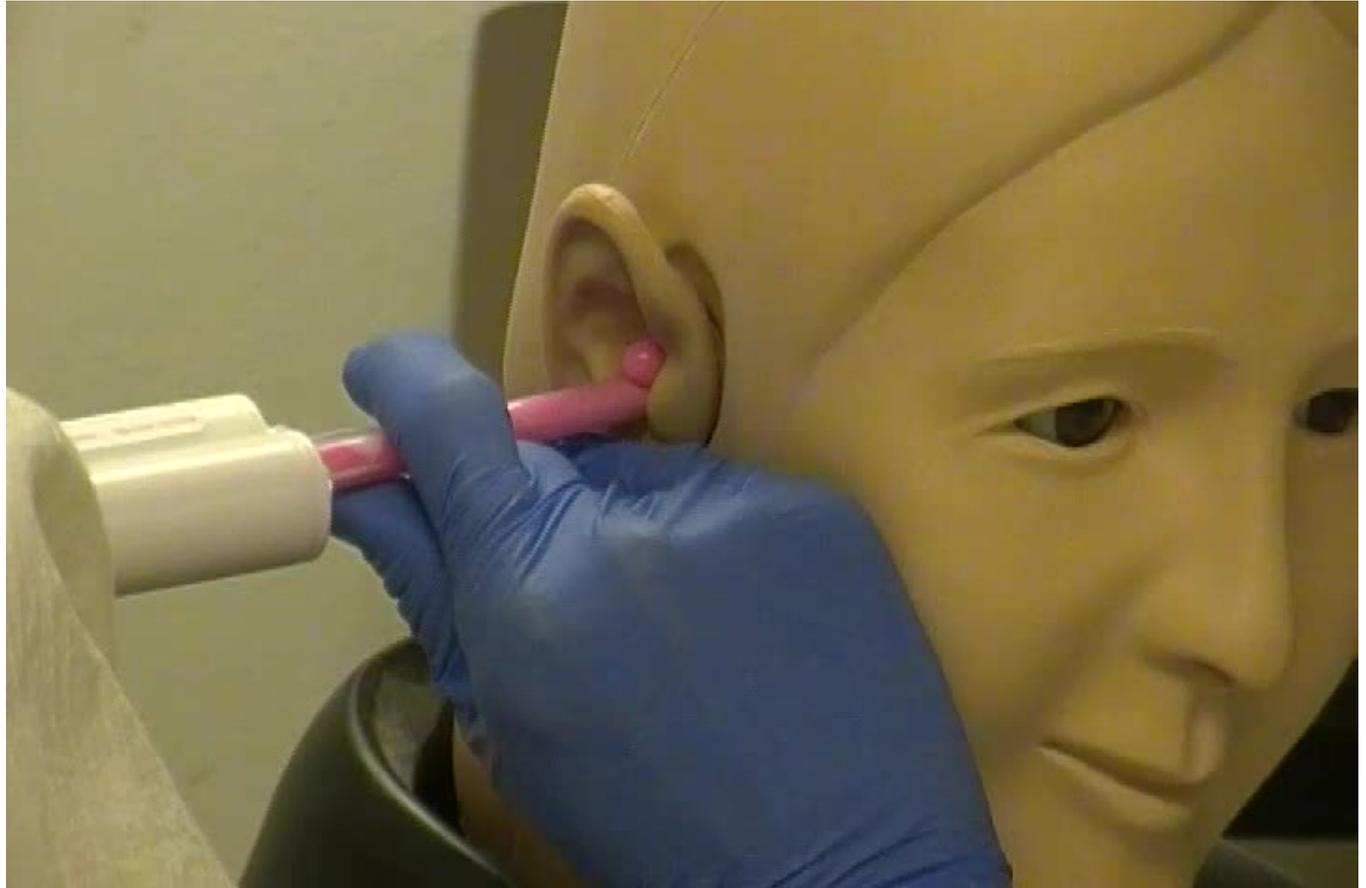
# Acceptable Syringe

An example of the first method but braced on the face side of the client rather than the back of the head.



# Acceptable Syringe

Again, while limited in control flexibility, which you can see by the impression material bulging out above the tip, the syringe tip is very stable close to the ear.



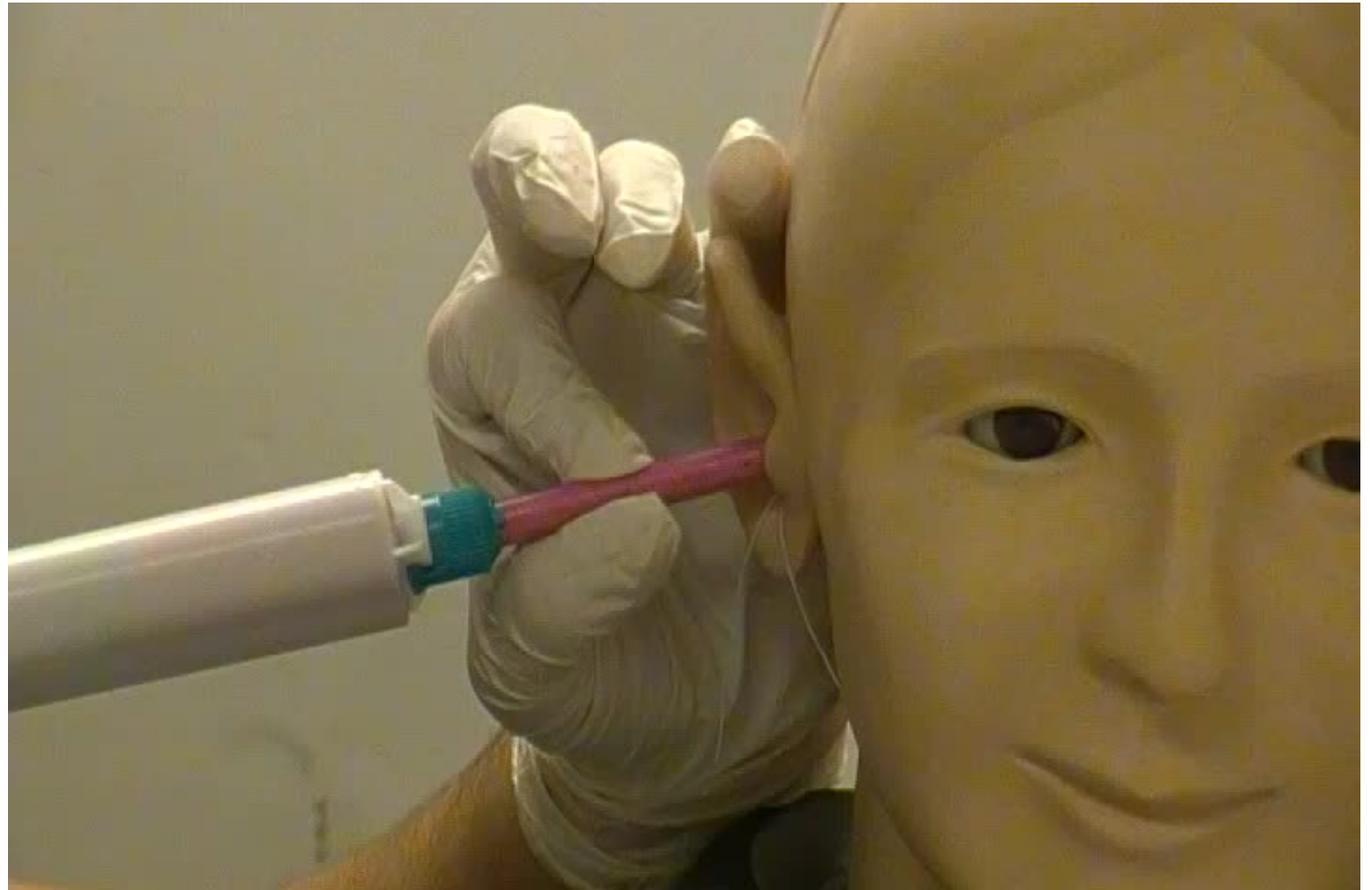
# Acceptable Syringe



# Acceptable Syringe



# Acceptable Syringe



# Acceptable Syringe



# Acceptable Syringe

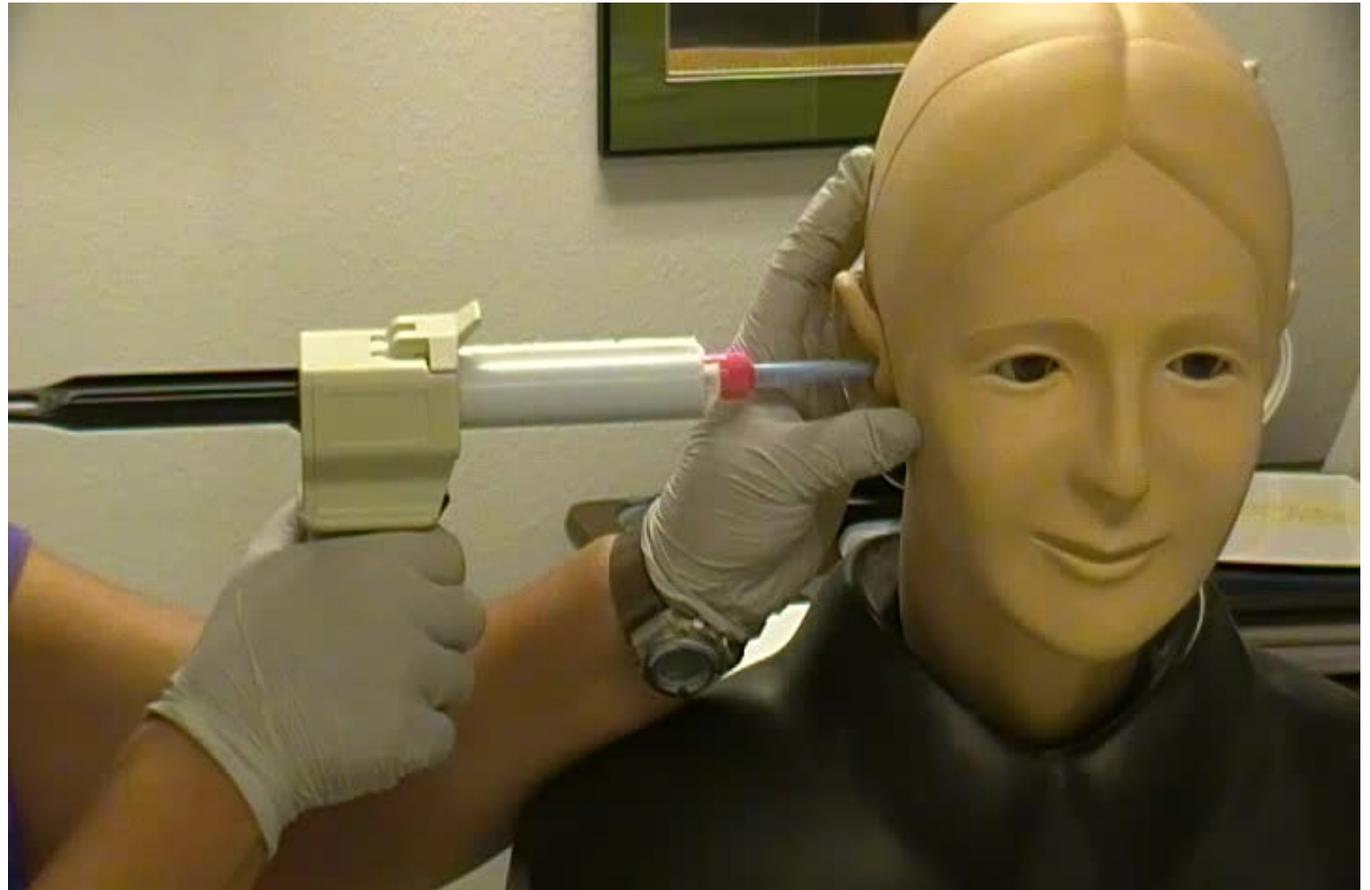


# UNacceptable Syringe

There is effectively not difference between this position and if you took the non-instrument hand away. The left hand is neither stabilizing nor controlling the cartridge tip in any way.



# UNacceptable Syringe

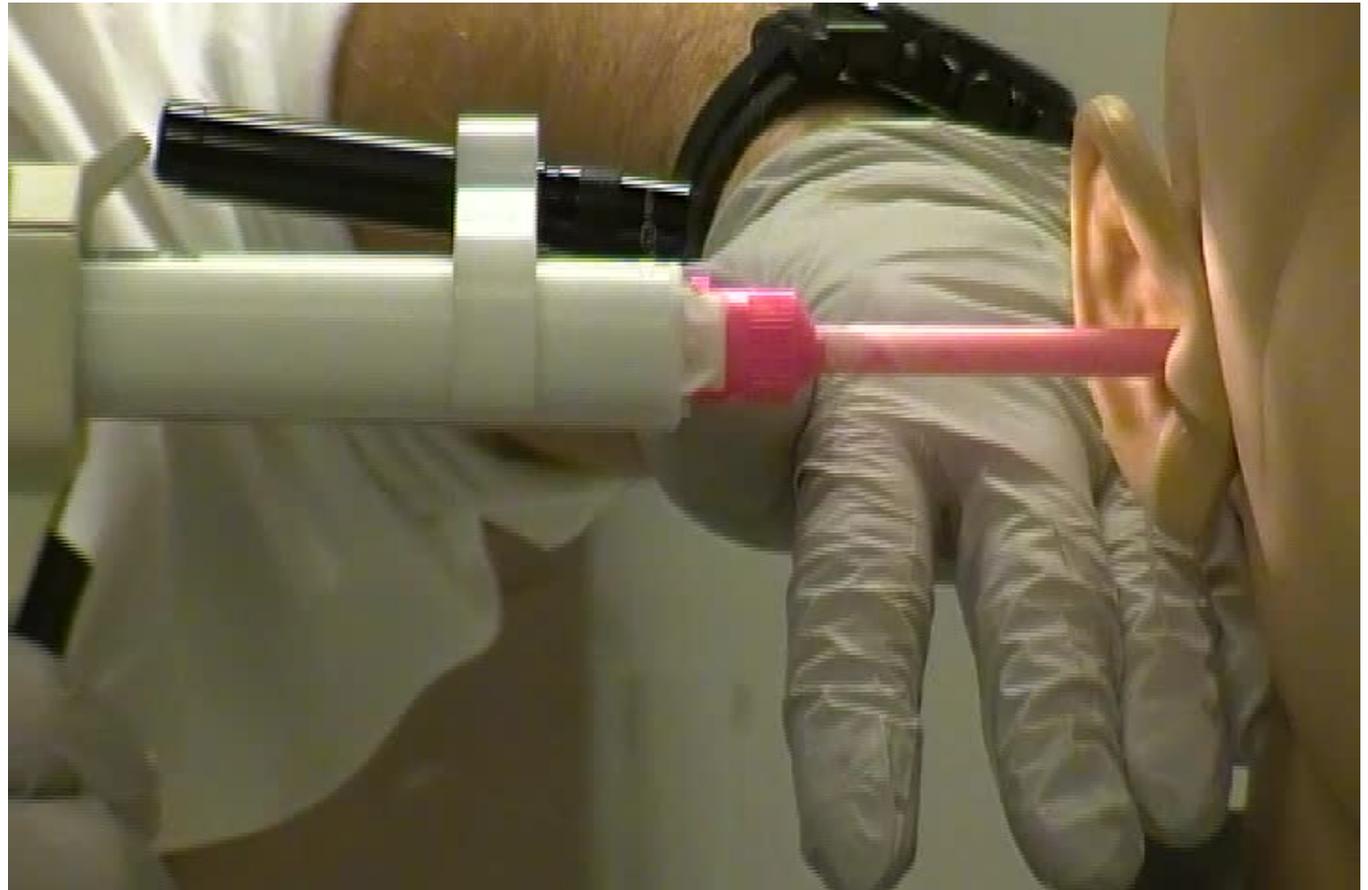


# UNacceptable Syringe



# UNacceptable Syringe

The force the non-instrument hand thumb applies to the base of the cartridge tip provides no bracing against head movement vectors.



# UNacceptable Syringe

As with the otolight, single pinky 'pogo stick' provides very little stability in the event the patient moves their head. It may also become difficult to compress the syringe.



# UNacceptable Syringe

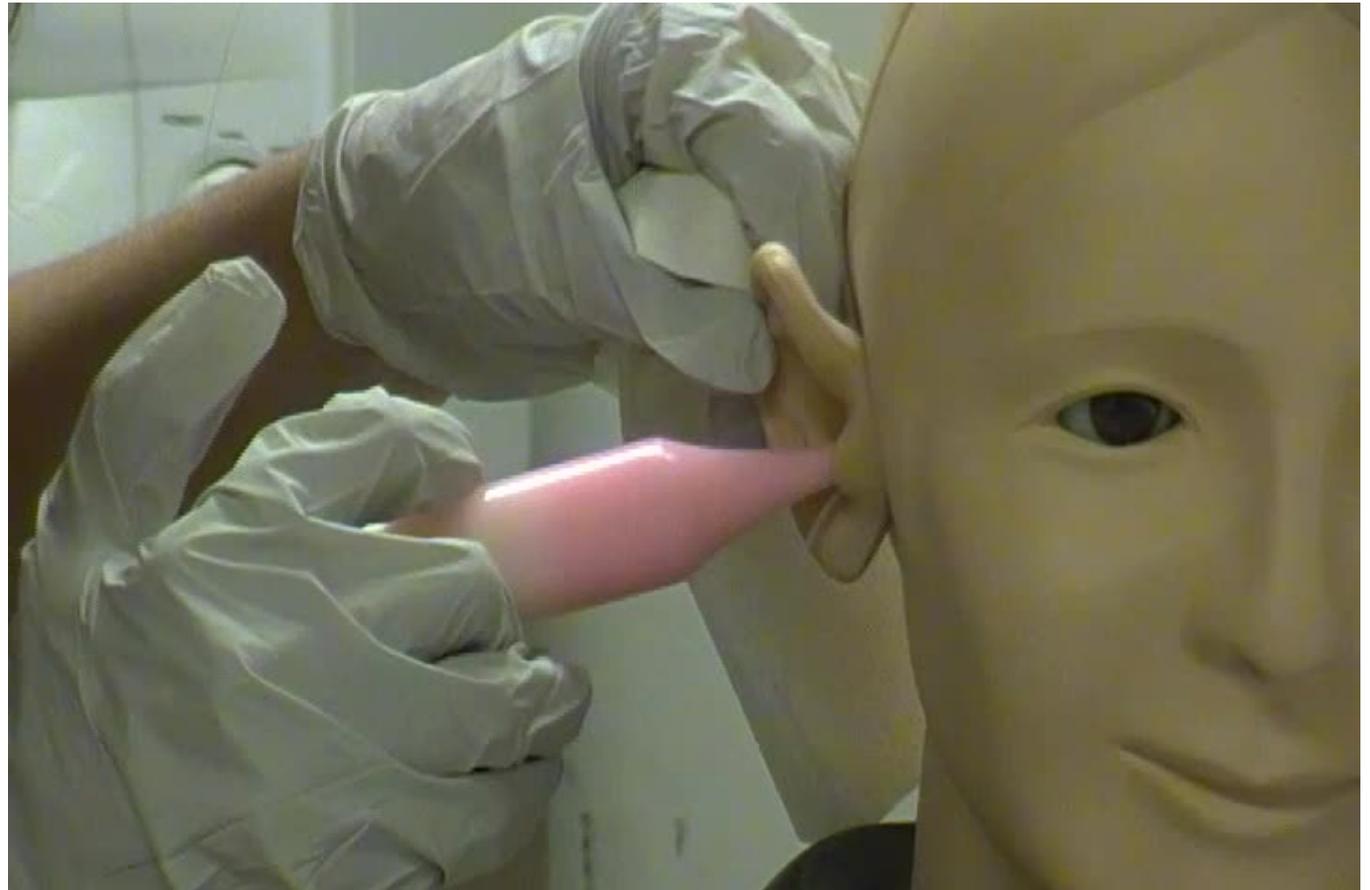
Continuing from the previous slide, the person did encounter difficulty with injecting the impression material and ended up providing no bracing of the instrument in the process.

It is important to understand the viscosity and curing characteristics of the impression material you use.

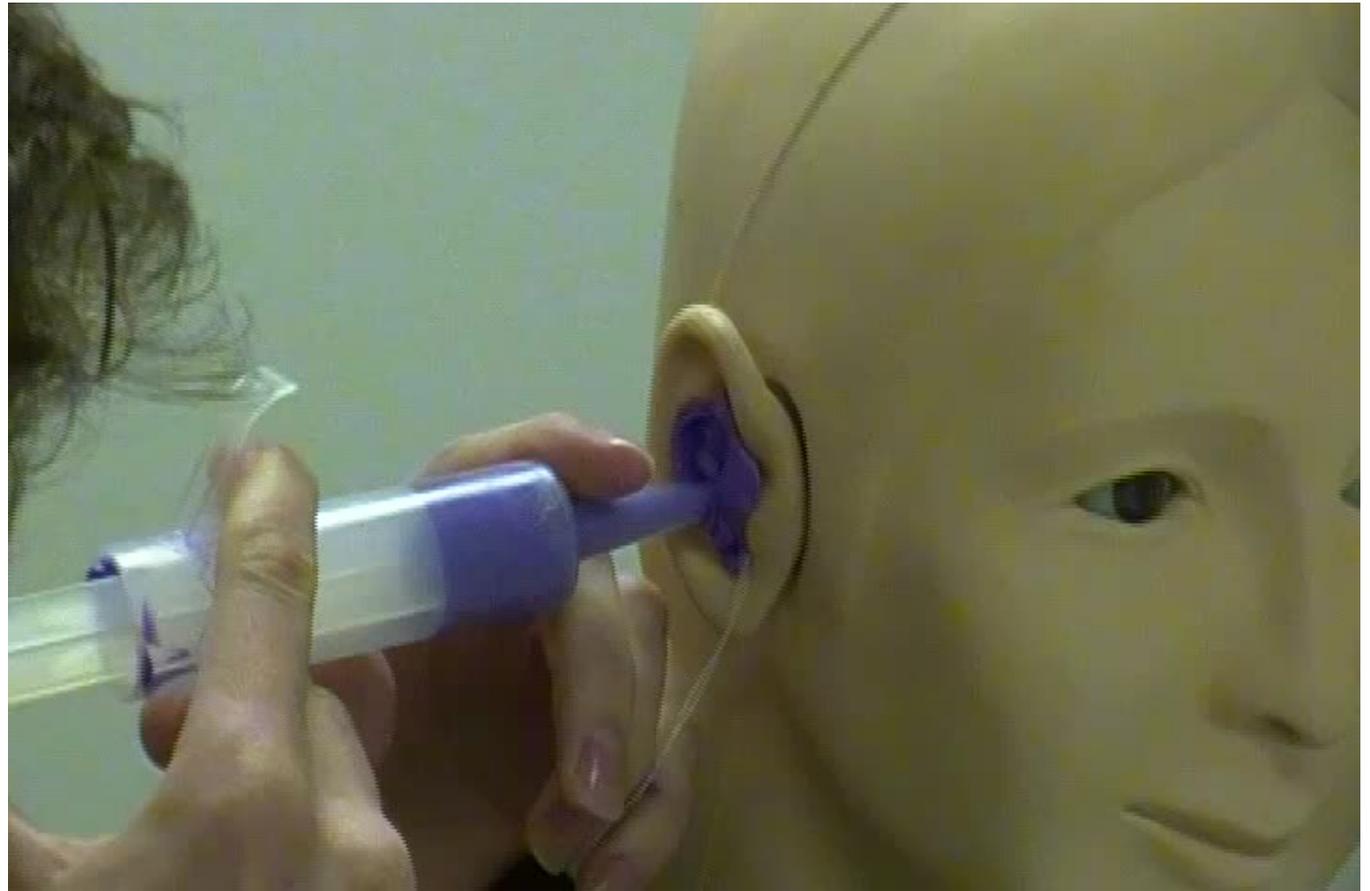
You should also choose a syringe and material that is appropriate for your dexterity and skill.



# UNacceptable Syringe



# UNacceptable Syringe



# UNacceptable Syringe

You can take the left hand away without any change in the effect of instrument bracing or control.



# UNacceptable Syringe

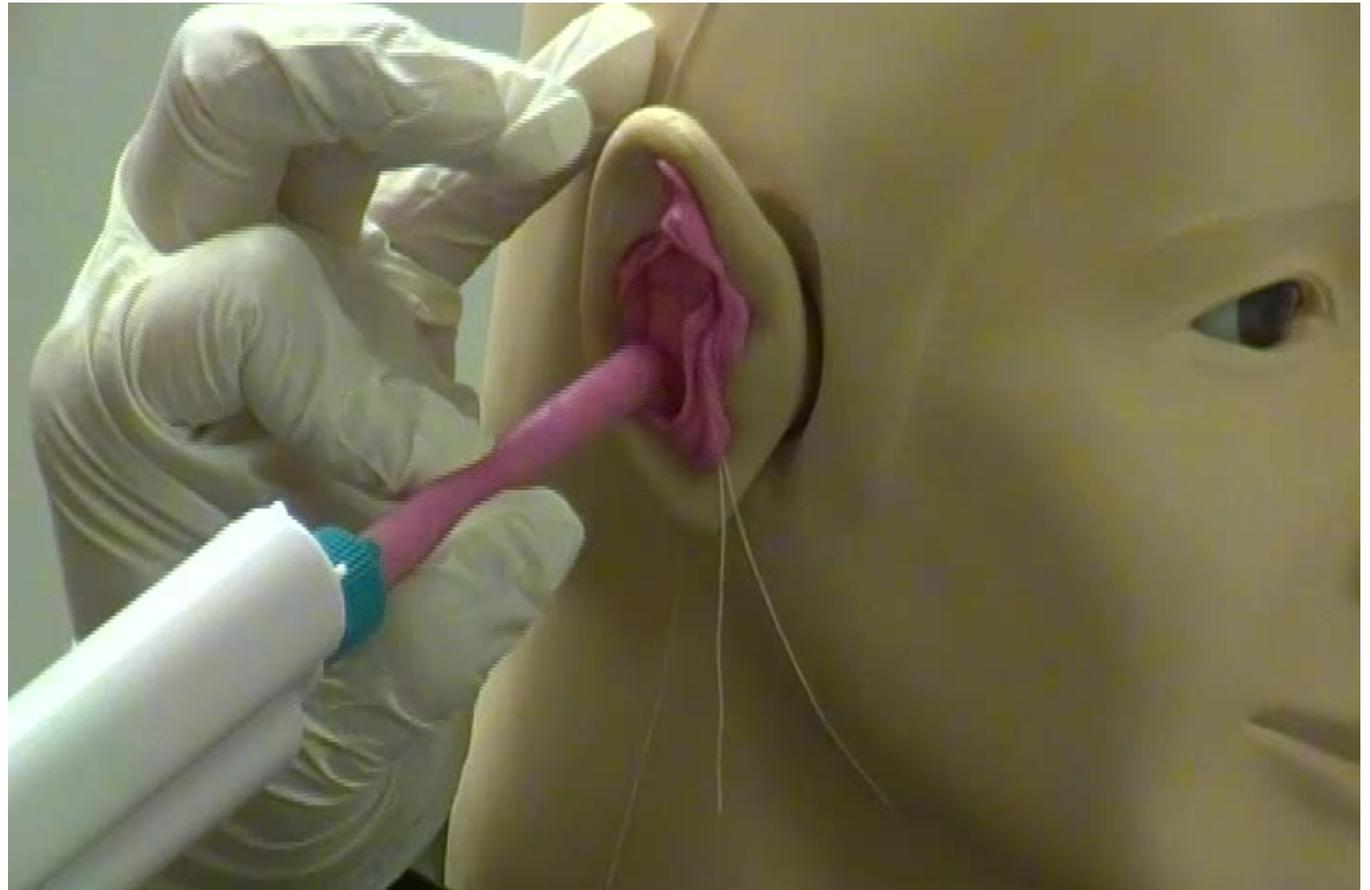


# UNacceptable Syringe

A frame showing a failure to maintain bracing throughout the ear encounter.



# UNacceptable Syringe



# UNacceptable Syringe



# UNacceptable Syringe

The infamous  
embedded fingernail  
has returned.

