



HOW TO MAKE A SIMULATION KIT

*The LifeguardHOME
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Having a good simulation kit can make all the difference for your lifeguarding or first aid students. Not only does having props and realistic victims make your simulations more realistic, but your students will thoroughly enjoy it more as well. Over the past few years I have slowly put together a fairly thorough simulation kit that always gets peoples' attention and keeps them interested (in my opinion, anyway). I've had tons of instructors ask me where I got all the stuff I have. So I decided to put together a bit of a "how-to" make a sim kit. If you have any other tips, products, or ideas email me at rradford@shaw.ca so I can keep it updated.

SIM KIT CONTENTS

MAKE-UP

- With different types of make-up or colourings, I've found you definitely get what you pay for. If you're going to get anything from an actual Theatrical supply shop, get the make up.



"Bruise Wheel"

- Used for making bruises
- Can also use the blue for cyanosis

Red

- Used for swelling, inflammations, reactions, burns, bee stings, etc.

White

- Used to give patient a pale look to indicate shock.

Black

- Used to black out teeth, 3rd degree burns, electrical burns, etc.



To apply this make-up, you will definitely need a proper applicator. Get some high-density foam/sponge. You can buy this at the same spot as the make-up. Buy a long strip of it and cut it into wedges or triangles.

SCAR PUTTY ("Dermal Wax")

- Dermal wax can be a little tricky at first, but it can do some amazing things. It is a very malleable substance that can be spread onto the skin to create realistic looking injuries such as lacerations and abrasions. It is also great for doing embedded objects (spread the wax onto the skin smoothly and put in a piece of clear plastic to make an embedded piece of glass, for example)
- Depending on your victim's skin colour, dermal wax can be spread smoothly enough to simulate the victim's own skin quite accurately. Add some inflammation and some blood around the injury or object for a great effect.
- Make sure it's not too cold, otherwise you won't be able to do much with it.
- I use a variety of instruments to spread it around; however your best bet is to buy a metal spatula (as shown in the middle). Ice cream "sample spoons" work well, too.
- Note: the best way to get the dermal wax off is to apply a little cold cream before the wax goes on. After, scrape the wax off the skin, and use some laundry detergent (granular) to scrub it off.



"Ben Nye" Nose and Scar Wax



BLOOD

- Blood is the staple of a good first aid sim kit. Every student always wants to be the patient with blood. Fortunately it is one of the easiest things to come by. Again, you can buy it commercially from a theatrical shop, however it is pricy. I collect little tubes shown below from dollar stores, costume shops and post-Halloween sales. You can usually get them for under a \$1. You can also buy blood capsules (usually flavored like mint or cherry) that patients can hold in their mouth and bite down when necessary. Good for simulating oral injuries (add some white tic-tacs for teeth) or for internal injuries.





You can buy large volumes of pre-made blood, however it can become a little expensive. A great recipe I use is to buy a plastic squeeze bottle of White Corn Syrup. Add a bunch of red food colouring (and a few optional drops of blue) until you get a nice blood colour. It creates a thick, slow flowing blood that can be ingested and cleans up quite easy. The container can be tossed around without worry of it breaking and the spout works great for "distributing your blood." Be careful of using it outside though... it tends to attract bees and other insects.

Do an internet search for "fake blood recipes" and you'll get tons of ideas.



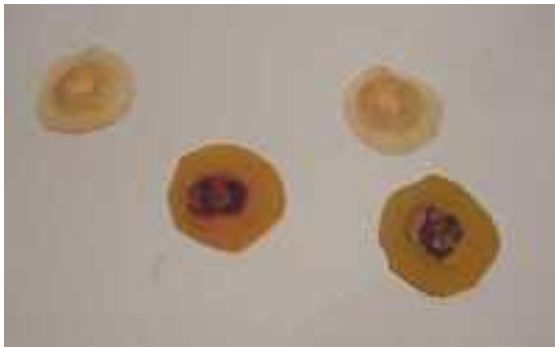
Some tubing and a little hand-pump works great for doing an arterial bleed and having the blood spurt across the room.

LATEX WOUNDS & APPLIANCES

- Although you can make realistic wounds with Dermal Wax and make-up, often times, the fastest and easiest way to simulate a wound is to use a latex appliance. The best commercial brand name out there (that I have found and use) is called "WOOCHIE" (do an internet search to see all their products). They create quite realistic wounds and are easy to just thrown down and add some blood.
- WOOCHIE wounds are quite expensive (usually between \$5 and 15 per piece). All the stuff I have, I got at a post-Halloween sale for 80% off. The week after Halloween is awesome for getting stuff like this.
- When using these wounds you'll want to use Spirit Gum (see below) as tape can cause rips depending on how thick the wound is).



Lacerations and incisions



Enter Wounds



Deep scrapes, Exposed muscle layer, Exit Wound



Embedded glass (one of my personal favorites)



Embedded objects

ADHESIVES

- If you start using props and/or appliances, you'll want them to actually stay on the victim. You can use Spirit Gum which is a product designed for sticking things to skin. Make sure you get some spirit gum remover; otherwise your skin will remain "tacky" for quite a while.
- Tape is also a good thing to have to quickly attach things to the body. When I teach secondary surveys, I tape anywhere from 3-10 things on each patient, and their rescuer has to actually find all of them. Use 3M Transpore (perforated) first aid tape for easy ripping and good sticking.



Spirit Gum & Spirit Gum Remover



Different tapes to fasten objects to skin.

BODY PARTS

- These are kind of fun to have for amputations or extruded eyeballs (the extreme first aid). I got one of the fingers at a dollar store in a "Bag of Body Parts" for \$2 (also had an ear, a tongue, etc). Quite strange, but you *can* find this kind of stuff.



This is one of the more expensive items in my kit (cost me about \$10), but it's awesome to have. It actually looks pale and has a clammy feel to it. Students LOVE having this in their sims.



Amputated Fingers

- Cut a finger from a latex glove, stuff it with gauze and/or tissue paper. Use a black marker to draw a nail and finger creases. If you have any make-up, you can use a skin tone to give it some natural colour. Pour some blood on the end of it. You can also rip the ends of the tissue paper and soak them in blood for some ligaments sticking out of the end of the finger.

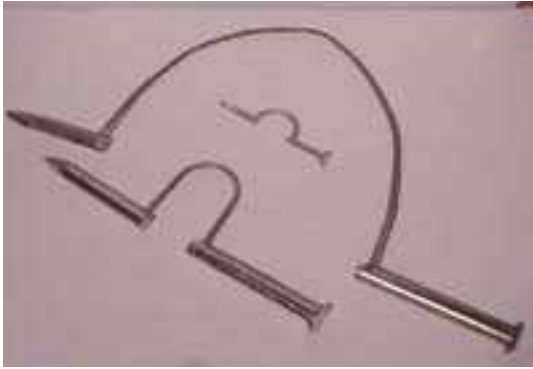


You can get fake eyeballs at almost every dollar store or party supply store (bouncy-ball eyeballs, sticky eyeballs, etc.). These are for really freaking out your students.



Mangled fingers

EMBEDDED OBJECTS



I found 2 of these at a dollar store. They slip over a head/thigh, hand, or finger for a simulated nail through the hand.



Glass can be made by taking a plastic pop bottle and cutting it into little pieces with sharp edges. They can then be inserted into some dermal wax for a convincing embedded object.

The razor is just a plastic one I found at a novelty shop.



This was a cut-off knife that came with a piece of red plastic to hold the knife against the skin.

MEDICATIONS



I try to never "simulate" medication in any sim. If there is a medication, the rescuer has to communicate with the victim and find out where it is and actually go and get it.

Try to get old puffers from family or friends who have expired ones. Pharmacies will often give you a bunch of bottles for free (or at least for cheap) if you tell them you teach first aid and want some sample meds.

The medications always have specific labels (see the end of this document for some sample medication labels I use. I usually have them with candies in them as well.



Medic Alert tags can be purchased from any medical supply store. You may also be able to find one in the lost and found at your pool (make sure it's gone unclaimed for a long time before you take it though).

You can use an old bracelet, a piece of labeled and taped up cardboard for a make-shift alert tag.

The 2 main ones I use are DIABETIC and EPILEPSY.



They don't make Ana-Kits anymore (as far as I know), so if you can find an old one kicking around, it's kind of a neat thing to show your students. More realistically, if you want to have medication for an anaphylactic reaction, get an Epi-Pen. They are only good for 1 year, so if you have a friend with one, ask if you can have it when it's expired (make sure to "use it" in a potato or something to get the epi out of it). You could buy one, but they run about \$80-\$90. Alternatively, use a permanent marker and make a label that says EPI-PEN on it.

DANGERS



You can get plastic knives of different sizes from any toy store. Good for having simulated dangers in a first aid scene.



Similarly you can get little bugs/spiders/snakes from a toy store or dollar store to use for simulated dangers.



You can get some plastic syringes (no needles) from a pharmacist or a vet. These can be used to simulate a drug OD or hook it up to some tubing to get active bleeding or spurting blood.



Simple, but I use a disposable razor (with the top glued on) for PR's like women shaving legs in the hot tub, etc. You could also use it as the cause of a bad cut.

OTHER



A small bottle of Baby powder makes excellent Dry Chemical burns or can give someone a quick pale look to them if you don't fully wipe it in.



I found a "bone necklace" at a dollar store, cut the string, and cut them down to make a few little bones to simulate compound fractures.



I use Speedo Jr. Fun goggles when I want someone to pretend they are a kid swimming at the pool.



Depending on how creative you get with your setups, you can involve guns, handcuffs, etc; all of which you can get at dollar or toy stores for cheap.



Peanuts or a chocolate bar wrapper can be used to give the history of a anaphylactic reaction.



Any kind of instant oatmeal works well for vomit. Victims can actually hold it in their mouth and spit it out when necessary. Cream of Wheat works a little better for consistency, but both are good. You can easily add a blood capsule for some internal bleeding or pulmonary edema.



You can get other commercial make-up products to enhance stuff you've done. Liquid Latex, Finishing Powder, and Burn powder are some examples.

Charcoal works great for 3rd degree/electrical burns or just making a cut/abrasion look dirty after a wipe-out.



An oral airway that has been cut off at the flange is a great way to show candidates how an airway should look once it has been inserted into a patient (assuming you can't put one in yourself)



A plastic alcohol bottle can be cut in half to make it look like broken glass. You can also use parts of the bottle for fake glass (as above).

GENERAL TIPS

- Get a good, durable container for all your stuff. I use a \$15 plastic tackle box. It's got tons of compartments, lots of room in the main area, and it's got a nice handle so it's easy to tote around.



- You might be surprised at how much household stuff you can use for fairly realistic sims.
- "Dollar stores" are worth their weight in gold. You can get tons of everyday stuff for cheap.
- Toy stores always have good little things you can get (check out the party aisle... where you get those cheap little prizes for goodie-bags, etc.)
- Some of the better make-up and appliances can only be purchased at specialty stores. If you don't mind spending a little more, go to your local Theatrical supply store (in Vancouver, I occasionally go to a little store called "Act 1.") You can get pretty much anything you might want there.

- For medications, talk to your family and friends who may have expired bottles, puffers, and what-not. You can make up your own labels to customize what you want them to say.
- If you go to a pharmacist, they will often give you a bunch of pill bottles if you tell them you're a first aid instructor and you're using them for simulations. I got about 20 of them from a local drugstore.
- Use the internet for ideas. Do a search for "Moulage" to get some ideas of how to do make-up application for simulating victims. The internet also has tons of recipes for home-made blood.
- 2nd degree burns can be made quite convincingly by laying down a reddish colour in the general area where you want the blister to be. Take a small ball of Vaseline for the blister itself. Take some tissue paper and separate it so it is "1-ply." Rip it into a small circular shape and place it over the Vaseline. The Vaseline will soak into the tissue paper and create what looks like a pretty good blister. Takes a little practice, but works well.

** The best tip I can give you for getting cheap "gore" stuff is to go to party supply stores, dollar stores, theatrical supply stores, etc. the **week after Halloween**. These stores tend to have sales on all the Halloween stuff. I got a lot of my latex wounds, and fake blood at 80% off one year from a place that was blowing out all of their Halloween accessories! Like a kid in a candy store!!



SAMPLE MEDICATION LABELS

Small Bottle

<i>Radford Supplies Ltd.</i> <i>Vancouver, BC</i> 604-837-0606		<i>Radford Supplies Ltd.</i> <i>Vancouver, BC</i> 604-837-0606	
RYAN COLTURA EPIVAL	DR. BENOIT	GENE BENOIT HALDOL	DR. MILLER
TAKE ONE PILL DAILY TO REDUCE FREQUENCY OF SEIZURES		TAKE ONE PILL, THREE TIMES A DAY TO PREVENT SCHIZOPHRENIC EPISODES.	
EXP 02/14/2009		EXP: 12/31/2009	

Large Bottle

<i>Radford Supplies Ltd.</i> <i>Vancouver, BC</i> 604-837-0606	<i>Radford Supplies Ltd.</i> <i>Vancouver, BC</i> 604-837-0606	<i>Radford Supplies Ltd.</i> <i>Vancouver, BC</i> 604-837-0606
HEATH MAHONEY β -ADRENERGIC BLOCKER	DR. BENOIT	GARY LEFEBVRE β-ADRENERGIC BLOCKER
TAKE MAX 2 TABLETS WHEN FEELING ANY CHEST PAIN, PLACE TABLET UNDER TONGUE AND WAIT TO DISSOLVE		TAKE MAX 2 TABLETS WHEN FEELING ANY CHEST PAIN, PLACE TABLET UNDER TONGUE AND WAIT TO DISSOLVE
NEVER MIX WITH ANY AMOUNT OF ALCOHOL WITHIN 6 HORUS EXP: 01/15/2005		NEVER MIX WITH ANY AMOUNT OF ALCOHOL WITHIN 6 HORUS EXP: 01/15/2009
GRAHAM ESPLEN VALIUM	DR. SCOTT	KELLY EGILSSON MORPHINE
TAKE 1 PILL DAILY WITH FOOD. IN ADDITION, TAKE 1-2 PILLS ANYTIME YOU ARE FEELING MAD, ANGRY, OR STRESSED.		TAKE ONE PILL, TWICE A DAY
DO NOT MIX WITH OTHER MEDICATIONS EXP:06/30/1999		TO BE TAKEN UNTIL SWELLING AND PAIN REDUCES. MUST BE TAKEN WITH ESTROGEN SUPPLEMENTS AS WELL TO FULLY COMPLETE SURGERY. EXP: 11/30/2009
STEVE STONE NITROGLYCERINE	DR. LEFEBVRE	MICHAEL MILLER β-ADRENERGIC BLOCKER
TAKE ONE PILL EVERY 5 MINUTES TO A MAX. OF THREE OR UNTIL CHEST PAIN CEASES.		TAKE MAX 2 TABLETS WHEN FEELING ANY CHEST PAIN, PLACE TABLET UNDER TONGUE AND WAIT TO DISSOLVE
MAY CAUSE LIGHTHEADEDNESS EXP: 12/31/2009		NEVER MIX WITH ANY AMOUNT OF ALCOHOL WITHIN 6 HORUS EXP: 06/15/2009

Puffer

<i>Radford Supplies Ltd.</i> 604-837-0606	<i>Radford Supplies Ltd.</i> 604-837-0606
GRAHAM ESPLEN FLOVENT	DR. MERCER
SHAKE WELL AND INHALE TWO PUFFS DAILY OR WHEN NEEDED	
EXP: 01/31/2009	
	KELLY EGILSSON VENTOLIN
	DR. ESPLEN
	SHAKE WELL AND INHALE TWO TO THREE PUFFS WHEN HAVING TROUBLE BREATHING.
	IF STILL UNRELIEVED WITHIN 2 MINUTES, CONTACT EMS IMMEDIATELY.
	EXP:02/23/2094