

Moulage



Lets make our Simulations real



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Why Moulage?

- Moulage is French for moulding or casting. It originates from 1656 in which anatomical models were first made by [Gaetano Giulio Zumbo](#)
- Today, its purpose is to assist in the simulation of injuries for the training of Emergency Response Teams and other medical or military personnel.
- Moulage can add realism to a simulated event and allow the participants to visualise a true representation of an injury or medical condition.
- Moulage can assist the participant in prioritising their plan of treatment.
- It can be a simple application of basic makeup such as bruising or using pre made wounds on both standardised and technically simulated patients
- It can be a more advanced and complex design to add elements of realism. For instance : Burns, Impaled objects or a Compound fractures.
- It also includes creating props to enhance the simulated event such as urine for the indwelling catheter, sweating, coffee ground vomit, infective pus from a wound drain or burnt clothing.

Bruising what does it look like?

- There are four stages to moulaging a bruise
- First stage: Use Red/Pink colouring to skin
- Second Stage occurs within hours to 2 days: Apply Purple, Blue, Red, even small black spots
- Third Stage 5-10days: Apply yellow, green with small purple spots
- Fourth stage 10-14days: Apply yellow, light brown colours



More pictures of bruises



Surgical Suture lines

To create post operative surgical wounds use colours for bruising and modelling simulation wax to create a raised suture line, or create a latex wound and adhere to the skin.

Wounds demonstrated here going from top left and clockwise

- a) Laparoscopic cholecystectomy
- b) Laparotomy
- c) 4 days Post Thoracotomy
- d) Infected/Necrotic Knee surgery
- e) Knee replacement
- f) ORIF Tibia Fibula/Knee



Lacerations, Grazes, Gravel Rash and Scratches

To simulate Lacerations, mix makeup and modelling wax to get the desired skin colour, mould it to the skin and using a sharp edge (split paddle pop stick or paper clip end) create a wound opening . Apply thick blood to centre of wound and dab around edge to create a realistic effect.

To simulate Grazes or Gravel Rash – Colour the area light pink/red, take a stipple sponge and dab it in a minimal amount of thick blood and swiftly run it across the skin in one direction. Apply dirt for gravel rash.

To simulate scratches take a fine paintbrush and paint light lines in red, feather this out gently then apply a second coating of dark red in broken lines, lightly brush the two together and put a final dab of dark red in spots.



How to Mouflage Burns

- **1st degree:** See first Picture Chest - Apply red colouring to skin.
- **2nd degree:** See second Picture Toe - As above, plus paint liquid latex and allow to dry then push edges up and insert Vaseline underneath to simulate blisters OR LATEX ALLERGY use Face Peel product instead of latex. Or soak tissue paper in Vaseline and apply to skin.
- **3rd degree:** See third Picture Face -As above plus add purples, yellow, brown. Put multiple layers of latex with single ply tissue paper soaked into to make raised edges. Allow to dry and keep layering and adding colour. Apply gelatine or Vaseline for blisters and dust with charcoal/soot from your chimney, paint edges of blisters black , and apply thick blood in random areas.
- **4th degree:** See fourth Picture Hand - Extends through entire skin fat and bone: As above plus use black makeup or remove digits as picture demonstrates below.



Impaled Objects/Compound Fractures

- To Mouflage a patient who has either an impaled object i.e. Circular Saw Blade, Glass, Stick or Nail or who has presented with a compound fracture the following technique can be used. See Pictures below.
- Clean area with alcohol wipe to aid adhesive.
- Using adhesive spirit glue or applying double sided sticky tape attach the object or bone to the area.
- Secure with skin coloured moulding wax and smooth out the edges, dabbing with water if necessary.
- Redden the area with red and brown colours.
- Apply thickened blood around the edges of the wound.



Skin Rash/ Abscess

To moulage a skin rash or abscess you will need basic pink, creams, yellows and purples. Using stipple brushes gently dab the colour onto skin. For

Urticaria- Stipple and blend joining the rash

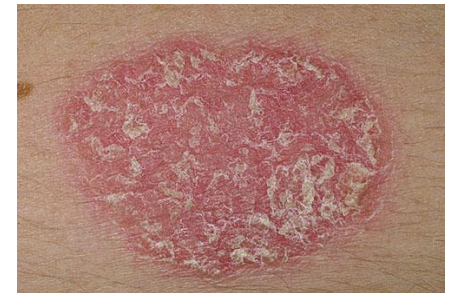
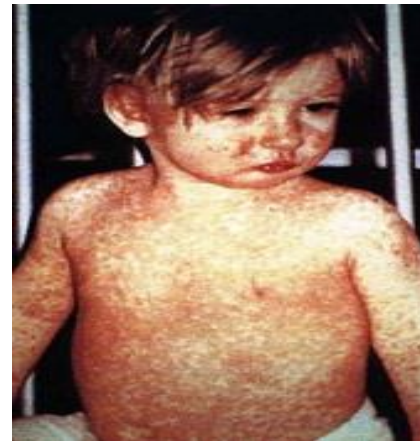
Chickenpox- Purple/Brown Red

Measles- Stipple red all over

Psoriasis- Apply a base of dark pink and stipple white/yellow on top. Can apply latex for crusting.

Shingles- Use light brown/pink and create blisters using gelatine

5 Day old Abscess- Make a latex/silicone circular base, apply one large bubble wrap dome. Inject with yellow/green pus (Sorbolene and food colouring). Apply thick blood on top of sealed dome, allow to dry then paint with skin coloured latex, silicone or gelatine. Dust with talcum powder. Adhere to skin with sticky tape or Ben Nye adhesive skin glue.



Other Recipes

- Sweat: Add a few drops of Glycerine to water and spray it onto patient. Dab with Cotton wool Ball.
- Bile: Mix Cola with Dark Green Food colouring.
- Nasogastric : Cream soup with coffee grounds.
- Vomit: Chunky Vegetable soup.
- Urine: Tea bag or yellow food colouring
- and water
- Faeces: Metamucil and coffee or Oatmeal and Chocolate sauce mix together and refrigerate.
- Blood Clots: Black cherries turned inside out.
- Blood: Mix chocolate sauce, golden syrup, evaporated milk, red and yellow food colouring until you get the desired effect.
- Snot: KY Jelly, yellow/green food colouring

End of Day Cleaning

- Try to remove moulage from manikins as soon as possible as it can stain.
- Standardised patients wipe as much of the top layer off as possible and then clean with normal skin cleanser.
- For manikins wipe the top layer off then clean with Eucalyptus/Orange or Tea Tree Oil followed by soapy water and then talcum powder.
- Clean all brushes with brush cleaner.

To get started a basic Moulage kit should have.....

- Makeup brushes, spray bottles, sponges, stipple sponge, paddle pops, toothpicks, palette knives, scissors, cotton buds, pads and tissue paper
- Vaseline, Sorbolene Cream, Gelatine for burns
- Alcohol prep for skin
- Liquid Latex or Facial peel product for those with latex allergies
- Moulage Makeup- A mix of colours of pinks reds blues greens yellow and black - Ben Nye Bruise Wheel EW-4 and Death Wheel is my favourite. Plus Mehron grease paints in Red, Blue, Brown, and White.
- Spirit Gum adhesive for adhering wounds
- Double sided sticky tape.
- Red ballpoint and Red Marker pen.
- Mehron Rigid Collodian
- Nose and Scar Modelling wax.
- Blood- Mehron Thick Blood, Fresh Scratch and Scab are all good.
- Charcoal or Soot
- Eucalyptus Oil for cleaning up
- Foreign objects for impaling wounds pencils, nails, steel rods, fish hooks, rubber glass
- Pre-made wounds
- Never throw old makeup or clothes away as it always comes in useful. Burn, rip or apply grass stain or dirt to clothes to suit the simulation on the day.
- Hunt around cheaper shops for fake blood and scars, wigs (especially around Halloween time)

So.....

- Good luck with your creativity, enjoy your artistic flair and don't be afraid to try ideas out.
- Share your successes and Mishaps if need be.
- Recycle what you can
- Have fun Clare

