BrienHoldenVisionInstitute

CLINICAL TECHNIQUES: FIRST AID

THINK

A person comes to your clinic after a chemical has splashed into their eye.
You need to irrigate the eye to try and avoid serious long term damage.
How do you do this?

WHAT YOU WILL LEARN

When you have worked through this unit you should be able to:

- Irrigate an eye
- Make and apply an eye shield
- Make and apply an eye patch.

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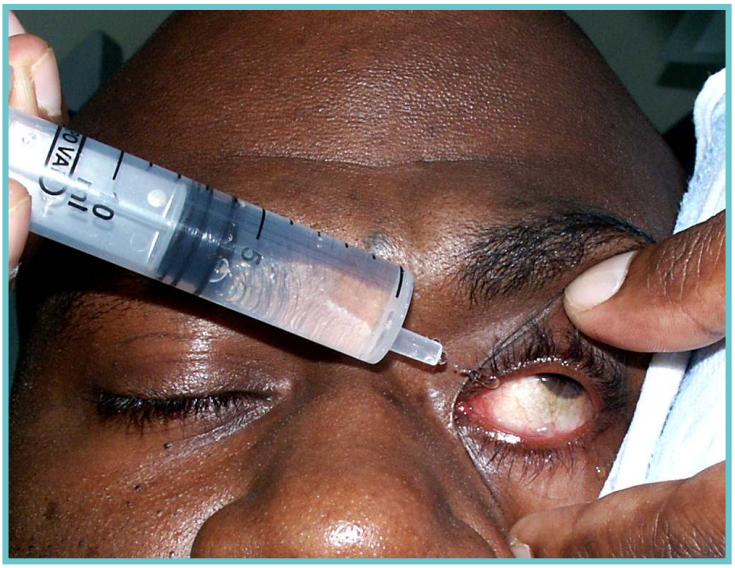
IRRIGATING AN EYE

WHAT IS IT AND WHY IS IT USED?	• Sterile saline solution or sterile water is used to flush the eye of any foreign bodies or chemicals that might have splashed into the eye • The purpose of irrigating (washing) an eye is to: ○ Wash the eye thoroughly following a chemical burn ○ Prevent scarring of the cornea and conjunctiva ○ Remove multiple foreign bodies from the eye.
WHAT DO I NEED?	• Syringe (without a needle) • Clean cup • Sterile saline solution or boiled (and then cooled) water • Cloth or paper towel • Chair or bed.
HOW IS IT DONE?	 ***Figure 24-1: Irrigating the eye [photo courtesy of ICEH]*** **Procedure for irrigating the eye** • Ask the person to sit or lie down, with their head held back and the eyelids held open • Tilt their head away from the eye that you are irrigating, so that the water doesn't run into the other eye • Hold a cloth or paper towel against the person's face • Squirt (or pour) saline solution or sterile water from a syringe with no needle,(or a cup if a syringe is not available • Only use clean tap water in an emergency – when no sterile saline or cooled down boiled water is unavailable • In the case of a chemical burn, you need to keep rinsing the eye for about 30 minutes • Make sure you evert the eyelids and irrigate underneath the eyelids as well.

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REFERRAL CRITERIA	• Anybody who has had a chemical splashed into their eye should be referred to an ophthalmologist or medical practitioner for a comprehensive eye examination – after you have rinsed the eye for about 20-30 minutes
	• If you are not able to remove a foreign body from the eye through irrigation, you need to refer the person to somebody who is trained in the surgical removal of foreign bodies from the eye
	• Immediately refer the person to an ophthalmologist or medical practitioner if:
	  ○ The foreign body has become embedded in the cornea, conjunctiva or sclera
	  ○ The foreign body has penetrated the eyeball
	  ○ There is staining with fluorescein after you take the foreign body out
	  ○ The person is in pain.

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MAKING AND APPLYING AN EYE SHIELD

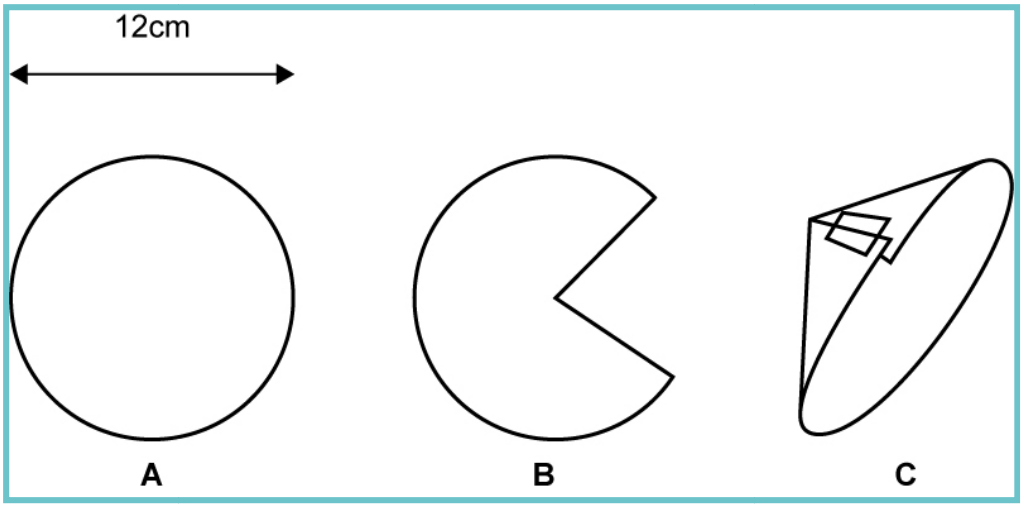
WHAT IS IT AND WHY IS IT USED?	• When a person has had a penetrating eye, an eye shield can be applied to protect the eye from further injury, and from being bumped or touched while the person is taken to the hospital • The eye shield helps to prevent further damage to the eye until treatment can be given.
WHAT DO I NEED?	• Cardboard, or a polystyrene cup • Scissors • Tape
HOW IS IT DONE?	 ***Figure 24-2: How to make an eye shield*** • Cut a piece of cardboard into a circle – about 12 cm in diameter (Figure 24-2 A) • Cut a V shaped piece out of the circle (Figure 24-2 B) • Tape the edges together to make the shield (Figure 24-2 C) • Place it over the person's eye (Figure 24-3) • Place 3 strips of tape over the shield to secure it to the person's face, so it doesn't fall off **You can use a clean plastic or polystyrene cup as an eye shield**

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	 Figure 24-3: Applying an eye shield [Photo courtesy of ICEH]
REFERRAL CRITERIA	• Anybody who has a penetrating eye injury needs to be referred to an ophthalmologist IMMEDIATELY – to prevent infection and to minimise serious permanent damage to the eye • Place a loosely fitting eye shield over the eye (not a pressure patch!) • Make sure the shield does not press on the eye • Have the person lie down while you arrange for a doctor or trained eye care professional to see them • Advise the use of protective eyeglasses or safety goggles when welding, using a grinder or sander, or when conducting other activities that could cause foreign bodies to enter the eye.

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MAKING AND APPLYING AN EYE PATCH

WHAT IS IT AND WHY IS IT USED?	• Keeps the eyelids closed to help with the healing process and make the eye feel more comfortable
	• An eye patch is typically applied:
	  ○ After surgery to the eye
	  ○ After a foreign body has been removed from a person's eye.

WHAT DO I NEED?	• Antibiotic ointment • Eye pad • Tape.

HOW IS IT DONE?	• Put antibiotic ointment on the eye pad
	• Ask the person to close their eyes
	• Place the pad over the eye (Figure 24-4 A)
	  ○ If the person has deep set eyes, use a second pad, or fold the pad double to make it thicker
	  ○ If you fold the pad, make sure you place the fold is just under the eyebrow
	• Tape the pad onto the person's face:
	  ○ Use 1 cm tape if you have it
	  ○ Place one piece diagonally over the middle of the patch (Figure 24-4 B)
	  ○ Line the edge up with the lower part of the person's
	  ○ Add another piece of tape on either side (Figure 24-4 C)
	• Ask the person to try to open their eye
	  ○ The eye should not be able to open
	  ○ If the person can open their eye, you need to make the pad thicker, or tape it on more tightly and securely
	• Tell the person that they may have problems judging distances, and they should be careful when crossing the road
	• Tell the person that they MUST come back to see you tomorrow – as it is very important that you check their eye the next day
	
	EYE PATCH AND INFECTIONS:
	• **Bacteria thrive in dark and moist environments (e.g. when the eye is patched)**
	• **To prevent eye infections, an eye pad should NEVER remain in place for *longer than* 24 hours**
	• **The eye needs to be monitored daily for any signs of new infections, and to make sure it is healing properly.**

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a. Place the pad over the eye

b. Tape the pad on

c. Put more tape onto the pad

Figure 24-4: Patching an eye [photos courtesy of ICEH]

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SUMMARY – CLINICAL TECHNIQUES: FIRST AID

IRRIGATING THE EYE

- Used to wash foreign bodies or chemicals out of the eye
- Preferably use sterile saline solution, or else clean water (which was boiled and cooled down)
- Evert the lids and irrigate under them
- Make sure that you don't get the irrigating water into the other eye.

EYE SHIELDS

- Used to protect an eye that has a large foreign body in it during the person's journey to hospital
- Can be made with cardboard or a cup, scissors and tape.

EYE PADS

- Used to keep the eye closed – to minimise discomfort after surgery to the eye
- Put antibiotic ointment on the pad, and secure the pad to the person's face with strips of tape
- Make sure the person cannot open their eye
- Be sure to check the eye the following day
- Never leave an eye patch on for more than 24 hours.

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TEST YOURSELF QUESTIONS

1. **We leave eye pads on until the person can be seen by a doctor.**
   ☐ **True** ☐ **False**

2. **If sterile saline solution is not available, sterile water is safe to use when irrigating an eye.**
   ☐ **True** ☐ **False**

3. **When would you use an eye shield?**
   _____
   _____
   _____

4. **When would you use an eye patch?**
   _____
   _____
   _____

5. **When is it appropriate to irrigate an eye, and how long should you do it for?**
   _____
   _____
   _____

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