

# Schirmer's test



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## Before performing any eye procedure

- Wash your hands (and afterwards too).
- Position the patient comfortably with head supported.
- Avoid distraction for yourself and the patient.
- Ensure good lighting.
- Always explain to the patient what you are going to do.

## Reasons for Schirmer's test

To record measurement of tear secretion in patients with suspected 'dry eyes'.



Figure 1

## You will need (Figure 1):

- Schirmer's test strips
- Watch or clock
- Clear adhesive tape
- Pen.

## Preparation

- Explain to the patient that although this procedure may be uncomfortable, it is not painful.

**Remember:** Do not instil any anaesthetic drops or other eye medication before the test. This would give a false result.



Figure 2

## Method

- Remove two strips from the sterile packet and label them 'R' (right) and 'L' (left) (Figure 2).
- Bend each strip, at the notch, to a 90 degree angle (Figure 3).
- Ask the patient to look up and, with an index finger, gently pull down the lower eyelid.

Figure 3



Figure 4



Figure 5

- Hook the bent end of the strip over the centre of the lower eyelid and allow it to 'sit' inside (Figure 4).
- Repeat the procedure for the other eye.
- Note the time (Figure 5).
- Ask the patient **not to squeeze**, but just to keep the eyes gently closed.
- After five minutes, ask the patient to open both eyes and look upwards.
- Carefully remove both strips.
- Using the package scale, measure the length of the moistened area on the strip, from the notch, and indicate this with a pen mark (Figure 6).
- Stick the strips into the patient's documentation and record the measurements below each strip, e.g., "10 mm in 5 minutes". If the strips are completely moistened before five minutes, record appropriately, e.g., "30 mm in 3 minutes".



Figure 6

blade. Do not apply too much force. The repetition of the movement is what sharpens the scissors.

- 4 Repeat until most of the pit reflections are gone. If the pits are too deep, the amount that has to be filed off to get rid of them may be too large and you run the risk that the cutting surfaces of the scissor blades no longer touch each other. It may be necessary to remove such scissors from circulation.
- 5 After sharpening, a burr (an accumulation of filed metal) may be formed on the inner surface. This burr has to be removed. If not, it will damage the cutting edge on the opposite side during cutting. You can remove any burrs by scratching them off with your fingernail.
- 6 Repeat the procedure for the other scissor blade. Always sharpen both blades.
- 7 Clean the scissors thoroughly after sharpening. Any remnants of oil and metal on the instrument can cause inflammation in the eye.

## Tightening a loose joint

Another reason why scissors may not cut properly is a loose joint. If the screw or rivet is not tight, the distance between the two inner surfaces will be too large, causing the cutting surfaces to not touch each other. As a result, tissues will be clamped instead of cut.

- 1 Place the scissors on a flat, hard surface.
- 2 Close the scissors so that the blades are top of each other.
- 3 If the joint has a screw, then tighten it. If it has a rivet, then proceed to the next step.
- 4 Place the tip of a pin punch on top of the rivet head, keeping the pin punch perpendicular to the scissors.
- 5 While holding the scissors down, have someone else hit the top of the pin punch with a small hammer.
- 6 Test the scissors after every hit, to prevent them from becoming too tight.

Adapted from Haddad D and Worst JGF. Standard Operating Procedure Manual for the Maintenance and Repair of Microsurgical Instruments. 1992. [www.infratechonline.net/wp-attachments/MaintenanceOfSurgicalInstruments.pdf](http://www.infratechonline.net/wp-attachments/MaintenanceOfSurgicalInstruments.pdf)