How to administer eye drops and eye ointment

Rationale and key points

Eye drops and eye ointment are the mainstay of treatment of ocular conditions. Failure to prioritise administration of these medicines can prolong the condition and may present a risk to the patient’s vision.

- Eye drops and eye ointments are used to treat acute and chronic conditions of the eye and surrounding structures. Eye drops must be instilled before applying eye ointment, since the ointment will affect the absorption of the eye drop.
- Nurses require knowledge of the technique, side effects and potential interactions associated with systemically or topically applied medicines to the eye to ensure patient safety and optimum outcomes.

Reflective activity

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1. How this article will change your practice.
2. How you intend to develop your knowledge and skills regarding treatment of ocular conditions.

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Preparation and equipment

- The nurse should explain any treatment of an ocular condition to the patient to ensure they understand what is involved and to gain informed verbal consent, where possible.
- The nurse requires knowledge of the anatomy of the eye (Figure 1), the eyelids and eyelashes.
- The nurse should assess the patient’s eye and eyelids for any signs of infection or allergic reaction. In the case of allergic reaction, the nurse should not proceed with the administration of eye drops or eye ointment. Findings should be documented on the patient’s prescription chart and in the patient’s notes, and medical staff should be informed immediately.
- The nurse should ensure the necessary equipment is available, including: patient’s prescription, eye drops or ointment, tissues or an eye dressing pack containing sterile cotton wool or non-linting swabs, and sterile water or saline for aseptic technique.

Procedure

1. Consult the patient’s prescription to ascertain the following: drug and dose, date and time of administration, route and method of administration, including which eye is to be treated, and expiry date of the drug.
2. Check that there are no contraindications, such as allergies, to the medicine.
3. Wash your hands. If using alcohol hand gel, ensure that your hands are dry before you commence the procedure to prevent irritation of the eye. Follow local policy regarding the use of personal protective equipment, such as gloves.
4. Ask the patient to sit back or lie down.
5. Clean the eyelids if necessary to remove discharge or crust. Moisten sterile cotton wool or a non-linting swab using sterile water or saline, squeezing excess liquid out. Ask the patient to look downwards and swab the upper eyelid from the nasal corner outwards. Repeat if necessary, using a clean swab each time. Do the same with the lower eyelid, but ask the patient to look up before you swab the eyelid. The action of the patient looking up or down helps you to avoid

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touching the cornea with the swab inadvertently.

6. Gently shake the eye drop bottle to mix the contents and ensure even distribution of the active drug.

7. Remove the cap and place it on a clean surface to prevent contamination.

8. Ask the patient to look up and carefully pull the skin below the lower lid of the affected eye using a clean tissue to make a pocket (fornix) and expose the conjunctival sac (Figure 2).

9. Instil the prescribed number of eye drops. If the patient blinks or closes their eyes, repeat the procedure. Or apply a thin stream of ointment, approximately 1mm-1cm in length along the lower eyelid margin on the inner conjunctiva from the nasal corner outwards. Ensure that the tip of the eye drop bottle or ointment tube does not come into contact with the patient’s eye or eyelids to avoid contamination of the medicine.

10. Release the eyelid.

11. Ask the patient to close their eye for approximately one minute.

12. Wipe any excess eye drops or eye ointment from the patient’s cheek, avoiding the eyelid margin so as not to wick away the drug from the eye.

13. Explain to the patient that they may have blurred vision for a short time following administration of the medicine.

14. Wash your hands. Clean any equipment used and dispose of swabs and any other disposable equipment as per local policy.

15. Record the administration of eye drops or eye ointment in the patient’s notes.

**Evidence base**

Eye drops and eye ointments are used to treat acute and chronic conditions of the eye and surrounding structures, including the lacrimal apparatus, eyelids and eyelash follicles. However, many healthcare professionals lack knowledge of eye diseases or eye trauma and the treatment required, including knowledge of topical eye medicines (Shaw 2014).

Nurses should prioritise treatment of ocular conditions with eye drops or eye ointment to ensure the maximum therapeutic effect and to minimise possible loss of vision. Failure to adhere to treatment regimens could, in some cases, lead to ocular discomfort, some loss of vision or even blindness.

Nurses require knowledge of the anatomy and physiology of the eye, as well as an understanding of the effects and side effects of medicines, including knowledge of any interaction that may occur with systemically or topically applied medicines. Eye drops and eye ointments are usually instilled or applied into the lower fornix, the pocket formed by gently pulling the lower eyelid down. Eye ointments may be prescribed for structures other than the eye, such as the eyelids, for example, following trauma or surgery to these structures (Shaw et al 2010).

Some patients may resist attempts to instil eye drops. This may be because of a previous negative experience or a feeling of natural revulsion to the eyes being touched. Nurses should ensure that they explain to the patient why treatment is required, what could happen if treatment is delayed or not administered, and that treatment may result in minor discomfort, which will usually resolve quickly.

If there is difficulty instilling eye drops, nurses may need to consider alternative methods.
The closed eye technique involves instilling one eye drop onto the nasal corner of the closed eyelid. The patient should then be encouraged to open the eye. The eye drop should flow into the eye (Alster et al 2000). It is imperative that nurses advise the patient that the eye drops will sting momentarily.

The patient should be asked to close their eye following administration of eye drops or eye ointment for approximately one minute. This helps prevent systemic absorption and also maintains the drug in contact with the eye to aid therapeutic action. Systemic absorption should be avoided especially in respect of drugs that affect other body systems such as beta blockers (Marsden 2007).

Effective hand hygiene and cleaning of equipment are necessary to reduce the risk of cross-infection or contamination. Hands should be washed before and after the procedure and at any point during the procedure if they become contaminated. Equipment, depending on the procedure, should be sterile (Shaw et al 2010). In some care settings, and depending on whether it is an uncomplicated eye drop instillation for a chronic condition or a post-operative dressing, the nurse may be required to wear sterile or non-sterile gloves and an apron. Generally, if instilling eye drops for diagnostic purposes, gloves do not need to be worn. Nurses should adhere to local policy regarding the use of personal protective equipment.

Before instilling eye drops or applying eye ointment, nurses need to establish the condition of the patient’s eye and surrounding structures. Assessment of the eye should continue throughout the course of treatment to determine if there is any improvement or deterioration, and should include observing the state of the skin surrounding the eye and assessing if the skin looks pink and sore, potentially indicating an allergic reaction to the medicine being administered. If an allergic reaction is suspected, the medicine should not be administered and medical staff should be informed immediately (Marsden 2007).

It is not always necessary to clean the eye before instilling eye drops, but if there is evidence of crustating or discharge on the eyelids or surrounding structures, the eyelids should be cleaned using cotton wool swabs or non-linting swabs dipped in sterile saline or sterile water. The swab should be used to gently wipe the eyelid margins from the inner (nasal) canthus to the outer corner of the eyelid. In the domestic setting, cooled boiled water in a clean container may be used. Cotton wool swabs should not be used to clean the eyelids if there are sutures or lesions present because the cotton fibres may delay wound healing (Carr 2006).

Some eye drops and all eye ointments cause some degree of visual disturbance, which is usually transient. Where necessary, nurses should advise the patient not to drive or operate machinery if their vision is compromised.

Eye drops and eye ointment must be stored as per the manufacturer’s instructions and in accordance with local policy. In the home, they should be out of the reach of children.

Administration of eye drops or eye ointment must be documented, including any observations involving the eye and surrounding structures. If for any reason the eye drops or eye ointment was not administered, this must be documented and medical staff informed (Nursing and Midwifery Council 2010, Royal College of Nursing 2013).

Every opportunity should be taken to educate the patient and/or their carers about treatment, including how to manage self-medication. If appropriate, nurses should show the patient or carer how to instil drops or apply ointment to ensure continuity of, and adherence to, the treatment regimen. In some cases, it may be necessary to recommend an eye drop dispensing aid for the patient to use. There are several types available and one should be selected based on the patient’s needs and preferences NS.

Disclaimer: please note that information provided by Nursing Standard is not sufficient to make the reader competent to perform the task. All clinical skills should be formally assessed at the bedside by a nurse educator or mentor. It is the nurse’s responsibility to ensure their practice remains up to date and reflects the latest evidence.

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References


