Grading Scales
### Bulbar redness

<table>
<thead>
<tr>
<th>Etiology</th>
<th>Normal grade</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dilation of bulbar vessels, e.g. due to mechanical stimulation, allergy/hypersensitivity etc</td>
<td>Up to grade 2</td>
<td>Useful to evaluate using the same magnification each time</td>
</tr>
</tbody>
</table>

### Limbal redness

<table>
<thead>
<tr>
<th>Etiology</th>
<th>Normal grade</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dilation of bulbar vessels, e.g. due to hypoxia</td>
<td>Up to grade 2</td>
<td>Often seen in combination with bulbar redness</td>
</tr>
</tbody>
</table>

### Tarsal redness

<table>
<thead>
<tr>
<th>Etiology</th>
<th>Normal grade</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dilation of tarsal vessels, e.g. due to preservatives in lens care products, ocular dryness, mechanical irritation etc</td>
<td>Up to grade 2</td>
<td>Roughness of the tarsal conjunctiva increases in higher grades</td>
</tr>
</tbody>
</table>

### Corneal neovascularisation

<table>
<thead>
<tr>
<th>Etiology</th>
<th>Normal grade</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primarily due to corneal hypoxia</td>
<td>Grade 0</td>
<td>Classification based on the extent of blood vessel ingrowth</td>
</tr>
</tbody>
</table>
### Corneal staining: Dessication

**Etiology**  
Superficial cells of the corneal epithelium become damaged

**Normal grade**  
Grade 0. Grade 1 may be a normal consequence of an incomplete blink

**Comment**  
Stain with fluorescein, view with blue light and a yellow filter

---

### SICS – Solution induced corneal staining

**Etiology**  
Toxic reaction to contact lens solution

**Normal grade**  
Grade 0

**Comment**  
Stain with fluorescein, view with blue light and a yellow filter. Consider changing the solution type

---

### Polymegethism

**Etiology**  
Variation in the endothelial cell size; normally age related, in CL wear due to hypoxia

**Normal grade**  
Cells appear roughly hexagonal and of approximately equal size

**Comment**  
Best observed using specular reflection of the corneal endothelium

---

### Patient benefits of upgrading to silicone hydrogel lenses

- Superior comfort\(^1\).
- Significantly lower likelihood of common hypoxic complications\(^2\).
- Improved longevity of contact lens wear versus hydrogel wearers\(^3\).

---


\(^3\) Sweeney D. Silicone Hydrogels, are they the answer? AAO 2000. Orlando. Florida.
Defining locations on the cornea

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Describing/documenting the corneal location of a slit lamp finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indication</td>
<td>Infiltrates, staining, foreign bodies etc</td>
</tr>
</tbody>
</table>

- **C** – central
- **S** – superior
- **I** – inferior
- **N** – nasal
- **T** – temporal

Practice orientated

Scientific/research

---

Defining locations on the tarsal conjunctiva

<table>
<thead>
<tr>
<th>Purpose</th>
<th>To grade tarsal slit lamp findings exactly if there are local differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indication</td>
<td>Papillae, foreign body, redness/hyperaemia, follicles etc</td>
</tr>
</tbody>
</table>

- **C** – central
- **S** – superior
- **I** – inferior
- **N** – nasal
- **T** – temporal

---

Striae and folds in Descemet’s membrane

<table>
<thead>
<tr>
<th>Etiology</th>
<th>Indicative of corneal oedema, e.g. due to hypoxia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal grade</td>
<td>No folds. Some striae may be visible immediately following waking</td>
</tr>
</tbody>
</table>

**Comment**

- 0 % corneal oedema: no striae
- 5 % corneal oedema: very few striae
- 7 % corneal oedema: more striae
- 12 % corneal oedema: striae and folds
- 16 % corneal oedema: striae, folds, microcysts and vacuoles

---

Microcysts and vacuoles

<table>
<thead>
<tr>
<th>Etiology</th>
<th>Indicative of chronic hypoxic stress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal grade</td>
<td>No microcysts or vacuoles</td>
</tr>
</tbody>
</table>

**Comment**

High magnification, monitor in the reflected light, note the quantity

**Microcysts (display reversed illumination)**

**Vacuoles (display unreversed illumination)**