SKIN PRICK TEST

A practical guide
THE SEVEN “GOLDEN RULES” OF SPT

1. Use standardized extracts when available.
2. Include a positive and a negative control solution.
3. Perform tests on normal skin.
4. Evaluate the patient for dermographism.
5. Determine and record medications taken by the patient and time of last dose.
6. Record the reactions after 15 min.
7. Measure the longest wheal diameter.
## COMMON ERRORS

**Table 2** Common errors in skin prick tests

1. Tests are placed too close together (<2 cm), and overlapping reactions cannot be separated visually.
2. Induction of bleeding, leading possibly to false-positive results.
3. Insufficient penetration of skin by puncture instrument, leading to false-negative results. This occurs more frequently with plastic devices.
4. Spreading of allergen solutions during the test or when the solution is wiped away.
EAACI
EUROPEAN ACADEMY OF ALLERGY AND CLINICAL IMMUNOLOGY

Skin prick

Histamine increases the permeability and distension of blood capillaries

IgE bind to the surface of mast cell or basophil
<table>
<thead>
<tr>
<th>Treatment</th>
<th>Degree</th>
<th>Duration</th>
<th>Clinical significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral H1-antihistamine</td>
<td>++++</td>
<td>2–7 days</td>
<td>Yes</td>
</tr>
<tr>
<td>Intranasal H1-antihistamine</td>
<td>None</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Intransal H2-antihistamine</td>
<td>0 to +</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Imipramines</td>
<td>++++</td>
<td>Up to 21 days</td>
<td>Yes</td>
</tr>
<tr>
<td>Phenothiazines</td>
<td>+ to ++</td>
<td>Up to 10 days</td>
<td>Yes</td>
</tr>
<tr>
<td>Corticosteroids</td>
<td>0</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Systemic, short term</td>
<td></td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Systemic, long term</td>
<td>Possible</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Inhaled</td>
<td>0</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Topical skin</td>
<td>+ to ++</td>
<td>Up to 7 days</td>
<td>Yes</td>
</tr>
<tr>
<td>Dopamine</td>
<td>+</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Clonidine</td>
<td>++</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Montelukast</td>
<td>0</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Specific immunotherapy</td>
<td>0 to ++</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>UV light treatment</td>
<td>++++</td>
<td>Up to 4 weeks</td>
<td>Yes</td>
</tr>
<tr>
<td>systemic depending on light source, most intensive with PUVA</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
GALEN-SUGGESTED PANEL OF ALLERGENS

Pollen
- Birch (*Betula verucosa*) or mixed Betulaceae
- Cypress (*Cupressus sempervirens*) or other cypress pollen species
- Grass: one species or mixed grass pollens
- Mugwort (*Artemisia vulgaris*)
- Olive (*Olea europaea*) or ash (*Fraxinus excelsior*)
- *Parietaria officinalis*
- Plane (*Platanus occidentalis*)
- Ragweed (*Ambrosia eliator*)

Mites
- *Dermatophagoides pteronyssinus*
- *Dermatophagoides farinae*

Animals
- Cat (*Felix domesticus*)
- Dog (*Canis familiaris*)

Moulds
- *Alternaria alternata*
- *Cladosporium album*

Insects
- Cockroach (*Blatella* sp.)
POSITIVE RESULTS

- only the wheal is needed
- wheal diameters $\geq 3$ mm are considered positive

FALSE POSITIVE RESULTS

- dermographism
- irritant reactions
- non-specific enhancement from nearby strong reactions
FALSE NEGATIVE RESULTS

- Extracts of poor initial potency or subsequent loss of potency
- Drugs or other topical treatments
- Diseases attenuating the skin response
- Improper technique (no or weak puncture)
- Limited local production of allergen-specific IgE (only in the nose or in the eye)