WHY THIS GUIDE WAS CREATED AND HOW TO USE IT

IN 2005, THE AMERICAN CONTACT DERMATITIS SOCIETY DESIGNATED CORTICOSTEROIDS AS ALLERGEN OF THE YEAR. In response, the following classification chart has been constructed with the objective to allow for quick referencing and cross-referencing of the members of the corticosteroid family.

REVIEW OF THE CHART DEMONSTRATES FIVE CORE STRUCTURAL CLASSES: A, B, C, D1 AND D2. Each column represents one structural class organized from low to high potency. Because of the cross-reactivity seen between the substances within each structural class, a specified patch test substance — noted at the bottom of the chart — has been selected to screen for class-specific sensitization.

IN ADDITION, THE CHART CAN BE UTILIZED TO CHECK FOR CROSS-REACTION BETWEEN STRUCTURAL CLASSES. For example, Class A components can cross-react with Class D2, thus warranting caution in prescribing a product in either class in a known sensitized patient. One further utility of this chart is that it will enable you to efficiently switch between steroid classes, while maintaining the same numeric potency classification.

We hope you’ll find this guide informative and useful.

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### References

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### Table: Structural Class and Corticosteroid Classification

<table>
<thead>
<tr>
<th>Structural Class</th>
<th>Class A: Hydrocortisone Type</th>
<th>Class B: Triamcinolone Acetonide Type</th>
<th>Class C: Betamethasone Type</th>
<th>Class D1: Betamethasone Dipropionate Type</th>
<th>Class D2: Methylprednisolone Acetonate Type</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CLASS 7: LEAST POTENT</strong></td>
<td>Hydrocortisone</td>
<td>Hydrocortisone acetate</td>
<td>Methylprednisolone, prednisolone</td>
<td>Tixocortol pivalate</td>
<td></td>
</tr>
<tr>
<td><strong>CLASS 6: LOW POTENT</strong></td>
<td>Desoximetasone 0.05% C, F</td>
<td>Fluticasone propionate 0.05% C</td>
<td>Betamethasone valerate 0.1% C</td>
<td>Betamethasone dipropionate 0.05% C, O</td>
<td>Hydrocortisone buteprate 0.1% C, O, S</td>
</tr>
<tr>
<td><strong>CLASS 5: LOWER MID-STRENGTH</strong></td>
<td>Desoximetasone 0.05% O</td>
<td>Fluticasone propionate 0.05% C</td>
<td>Betamethasone valerate 0.1% L</td>
<td>Diflornasone propionate 0.05% C</td>
<td>Hydrocortisone buteprate 0.1% C, O, S</td>
</tr>
<tr>
<td><strong>CLASS 4: MID-STRENGTH</strong></td>
<td>Amscinonide 0.1% L</td>
<td>Fluticasone propionate 0.05% C</td>
<td>Betamethasone dipropionate 0.05% C</td>
<td>Betamethasone valerate 0.1% C, L</td>
<td>Hydrocortisone buteprate 0.2% O</td>
</tr>
<tr>
<td><strong>CLASS 3: UPPER MID-STRENGTH</strong></td>
<td>Amscinonide 0.1% O, L</td>
<td>Fluticasone propionate 0.05% C</td>
<td>Betamethasone dipropionate 0.05% C</td>
<td>Betamethasone valerate 0.1% C, L</td>
<td>Diflornasone propionate 0.05% C</td>
</tr>
<tr>
<td><strong>CLASS 2: HIGH POTENT</strong></td>
<td>Amscinonide 0.1% O, L</td>
<td>Fluticasone propionate 0.05% C</td>
<td>Betamethasone dipropionate 0.05% C</td>
<td>Betamethasone valerate 0.1% C, L</td>
<td>Diflornasone propionate 0.05% C</td>
</tr>
<tr>
<td><strong>CLASS 1: SUPERPOTENT</strong></td>
<td>Amscinonide 0.1% O, L</td>
<td>Fluticasone propionate 0.05% C</td>
<td>Betamethasone dipropionate 0.05% C</td>
<td>Betamethasone valerate 0.1% C, L</td>
<td>Diflornasone propionate 0.05% C</td>
</tr>
</tbody>
</table>

**ADDITIONAL INFORMATION**
- Oral: Cloprednol Fludrocortisone acetate Methylprednisolone, prednisolone
- Oral: Budesonide Triamcinolone
- Oral: Betamethasone Dexamethasone
- Oral/IM: Betamethasone
- Oral/IV: Hydrocortisone

**STRUCTURE**
- No substitutions in the D ring, except C21 – short-chain esters
- C16,17 – cis-diol or – ketal
- C16 – methyl substitution
- C16 – methyl substitution C17/C21 – long-chain ester
- C16 – no methyl substitution
- C16 – no halogenation
- C17 – long-chain ester
- C21 – possible side chain

**CROSS-REACTIONS**
- Cross-reacts with D2
- Budesonide specifically cross-reacts with D2
- Cross-reacts with Class A and budesonide

**PATCH TEST SUBSTANCE**
- Tixocortol-21-pivalate
- Budesonide Triamcinolone acetonide
- Diflornasone-17-propionate
- Hydrocortisone-17-butyrate

**LEGEND:**
- C = Cream, G = Gel, L = Lotion, O = Ointment, S = Solution, F = Foam

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