Skin tests in patients with IgE-mediated immediate-type allergy are performed with the intention to establish a contact between allergens and skin mast cells. The latter carry specific IgE antibodies on their surface. If mast cells get activated, mediators (mainly histamine) are released, which induce a visible skin reaction (wheal and erythema). Skin tests are indicated, if an immediate-type allergic disease is suspected. Systemic anaphylactic reactions at skin testing are very rare. However, it is necessary to take them into account and to provide emergency treatment. Relative contraindications comprise skin diseases in the test area, poor general condition, and insufficiently treated severe asthma. If tests are used, which have a higher risk for a systemic anaphylactic reaction, pregnancy or beta-blocker therapy are further contraindications. Skin test application does not depend on patient age. However, in preschool age tests are reluctantly performed. It is essential to consider the half-life of drugs which may interfere with the test result, and which have to be discontinued early enough before testing. After anaphylactic reactions there may be a refractory period. Therefore, tests should not be done within the first week after such reactions. Skill prick tests are the procedures of first choice, intradermal tests are more sensitive than prick tests. Skin tests are performed at the
flexor side of the forearm. As intradermal tests are more inconvenient, testing can also be done at a
less susceptible site of the body (upper back). It is recommended to use standardized test extracts.
However, if standardized extracts are not available or do not yield suitable test results, one may
switch to other preparations. If the patient shows a positive reaction to a nonstandardized substance,
control tests should be performed in healthy subjects in order to exclude an unspecific reaction. The
reaction is read after 15 - 20 minutes. Skill tests are regarded as positive if the mean wheal diameter
is $\geq$ 3 mm at the prick test, and $\geq$ 5 mm at the intradermal test. Skin test results may be negative
although patients are allergic. If a skin test is positive, one will have to distinguish reactions, which are
clinically relevant, from those, which are not. History and/or challenge tests help to clarify the
relevance of a sensitization. Usually, a clinically irrelevant sensitization does not lead to practical
consequences.