

HOW TO DESIGN AN ODOUR TEST

Without a good impression of the sense of smell of the patient and his/her method of olfaction, a good rehabilitation is impossible. The Zürcher Geruchstest has proven a good test for SLPs in determining this. A standardized test like this, as well as other comparable tests, is always the preferred method of testing as a critical validation has already taken place. If such tests are unavailable, you should attempt to assemble your own odour test. What follows are tips on how to design such a test.

Odours and their use

Bottles containing ethereal oils may be used as part of an odour test. These oils are available at drugstores; they are not very expensive and retain their odour for quite some time. These bottles should be stored in a dark, cool place and after use be closed tightly.

These oils may be presented to the patient in the bottle itself but may also be sprinkled on strips of paper. The advantage of this latter method is that the oil is not only smelled, but also used up so that a new bottle must be bought, when the old one is finished. It is also more hygienic to offer each patient his/her own strip of paper.

Odour test with multiple-choice questions

The patient will often be unable to name the odours of the odour test even though he/she is able to smell them, and they seem familiar. Therefore, it is a good idea to allow the patient to answer multiple-choice questions about the odours of the homemade odour test. This will cost less energy and less time for the patient. A good example of such a test would be to label the ethereal oil bottles with numbers and give an answer form with three or four names or pictures of specific odours for each number. Objects may also be used instead of pictures. When the choice is to use pictures, remember that the scents chosen should be those, which can actually be illustrated. For example, the scent of anise will be more difficult to illustrate than that of peppermint.

Which multiple-choice questions are chosen will determine the difficulty of the test. If, for example, the scent of rose is chosen as one of the odours, the test is made more difficult when the patient must choose between the scents of lilac, rose, and apple blossom. To make this less difficult, allow the patient to choose between such odours as fish, peppermint and rose. This is all a matter of classification. In the first case, the odours are all the same class; such odours are difficult to tell apart. Even those who have not undergone a total laryngectomy will have difficulty to make a distinction between these odours. For the olfaction rehabilitation it is necessary to determine if the patient can smell, how well he/she can smell and how he/she does this after total laryngectomy. It is of no importance whether the patient is able to distinguish between similar odours.

General principles and advice

It is best to use a limited number of odours in an odour test in order to minimize cross adaptation. This means that when the patient has grown accustomed to one odour,

olfaction of another odour will be influenced. Besides this, the reaction of the sensory cells in the nose may be negatively affected by fatigue. This is called adaptation (Köster, 1971; Köster en De Wijk, 1991; Vroon t al., 1994).

The order in which the odours are presented may also influence the test. Penetrating odours may not only linger in the air, but also in the nose. Therefore, these odours should be presented nearer to the end of the test. In this way, also the factor fatigue is taken into consideration; the patient will have to exert himself less at the end of the test. Besides this, it is also a good idea to present the odours from different classes in a diverse order.

It is recommended that identifying labels be removed from the bottles with scent and be replaced with a code, which is coupled to the scent in the bottle. This will remove the temptation to use sight in distinguishing the odours as opposed to olfaction. This type of code will also decrease the necessity of opening the bottle often to identify the contents. The odour will then be contained in the bottle for a longer period.

Administering the odour test

During the test, the patient should be given the bottle with odour and allowed to determine the odour at his own tempo. If the patient is unable to determine the odour after a few attempts, move on to the next one so as not to spend too much time on just the one odour. The patient may attempt to distinguish the odour again later on in the test.

It is a good idea to take a small pause between presenting the various odours. About 45 seconds should suffice. This time may be filled with closing the bottle, writing down the answer of the patient and looking for the following bottle of scent. A forced pause is then unnecessary.

Do not take too much time noting the answers of the patient. His sense of smell will be tested approximately three times during the olfaction rehabilitation. If there is too much time spent on each individual answer, the patient may remember the exact answers he/she gave in a previous test.

For the most reliable results it should be mentioned that the patient should not be made aware of his answers as being correct or incorrect. A neutral reaction to his answers should be made. A general impression of the patient's sense of smell may be made at the end of the test. For example, the patient may be told that he/she has a good sense of smell, or one that is poorer than others.

