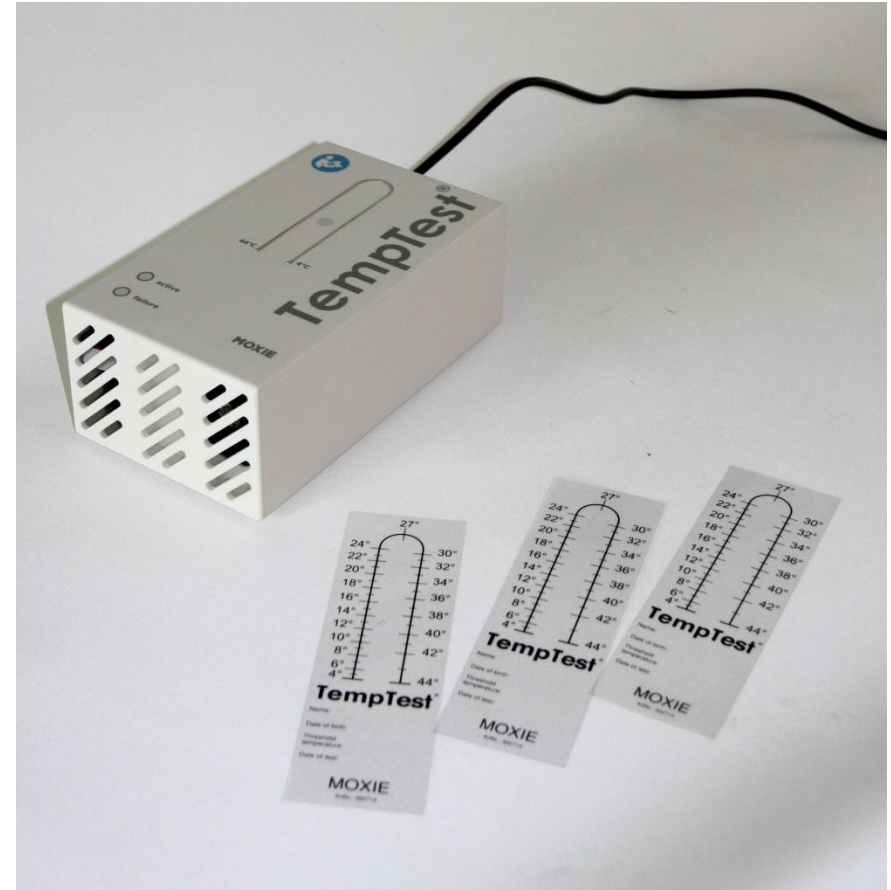


A New Device in the C+K Product Portfolio – The TempTest®



November 2014



General Description of the TempTest®

The device determines if a patient has a cold or heat contact urticaria. They are both forms of physical urticaria, in which with contact of the skin with temperatures below or above skin temperature, symptoms like itching, burning wheals, etc. will occur. Cold contact urticaria (CCU) however is the more frequent type.



Information about Cold Contact Urticaria (CCU)

Physical urticaria as the CCU are characterized by wheal reactions paired with itch and burn and/or angioedema following exposure to a specific, exogenous, physical stimulus, in this case cold.

It is classified as a pseudo-allergic reaction and quite widely-spread (especially in colder climate countries – in Germany approx. 400.000 patients). Also women seem to be more concerned than men.



Information about Cold Contact Urticaria (CCU)

Trigger examples from every-day life:

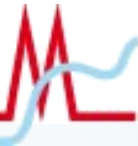
- Cold drinks or ice cream
- Getting in contact with a cold surface (e.g. putting the arms on a metal table)
- Swimming
- The evaporative cold after sweating
- Being outdoors in cold temperature
- Etc., etc.



Information about Cold Contact Urticaria (CCU)

Whereas most encounters lead to extremely uncomfortable but rather harmless symptoms, in individual cases the consequences are much more severe (examples):

- Eating something cold (e.g. ice cube) may cause pharyngeal swelling leading up to asphyxiation.
- A jump in cold water may cause an anaphylactic shock leading to unconsciousness or drowning.
- Infusions not warmed to body temperature may lead to extreme histamine distribution and an anesthesiologist has to be informed about a CCU, prior to the anesthesia.



How does the TempTest® work?

With TempTest® the described urticaria cannot only be determined but also the exact temperature triggering it for this person can be stated.

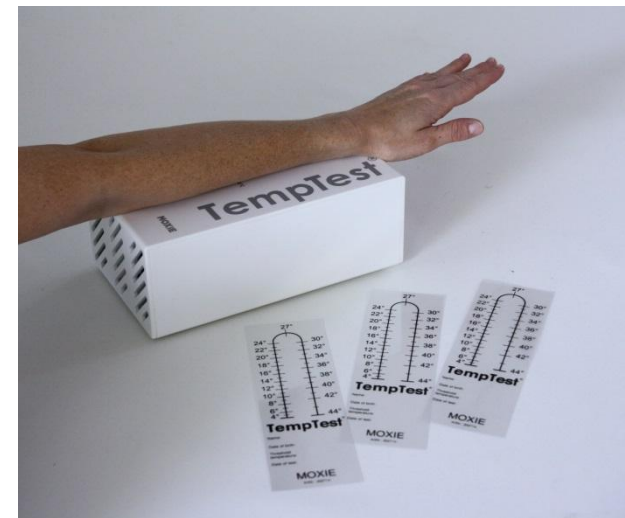
There is no general threshold temperature for the patients. It is as individual as different.



How does the TempTest® work?

The TempTest® is extremely easy and quick to handle.

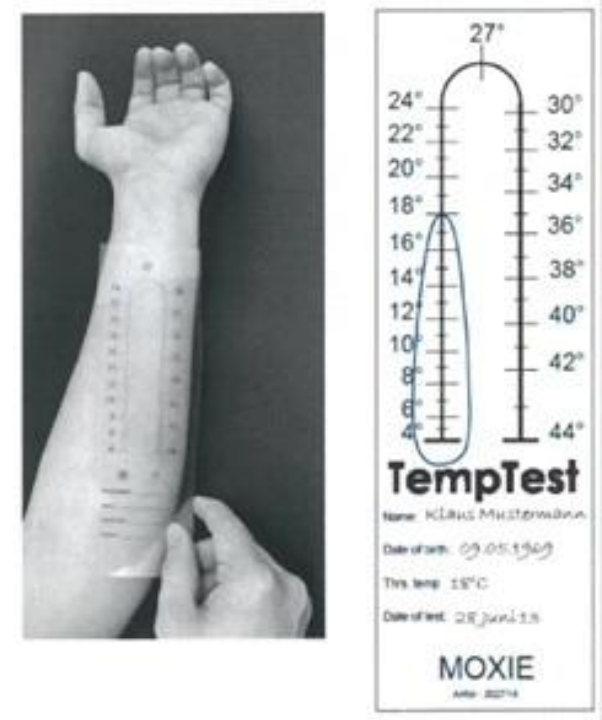
It produces temperatures of 4°-44° C, which are applied to the skin. The patient places the inner forearm on a changeable aluminum stencil on the device for 5 minutes. The stencil shows the temperature range continuously. With this procedure it is determined at what threshold temperature (highest temperature for cold- and lowest temperature for heat urticaria) wheals are triggered.



How does the TempTest[®] work?

After 10 more minutes, the wheals on the skin are compared to the stencil and the threshold temperature is determined conveniently.

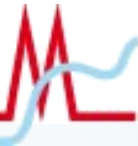
The wheals can be marked on the stencil and it can be saved in the patient file for medical documentation.



What is the Benefit of the TempTest®

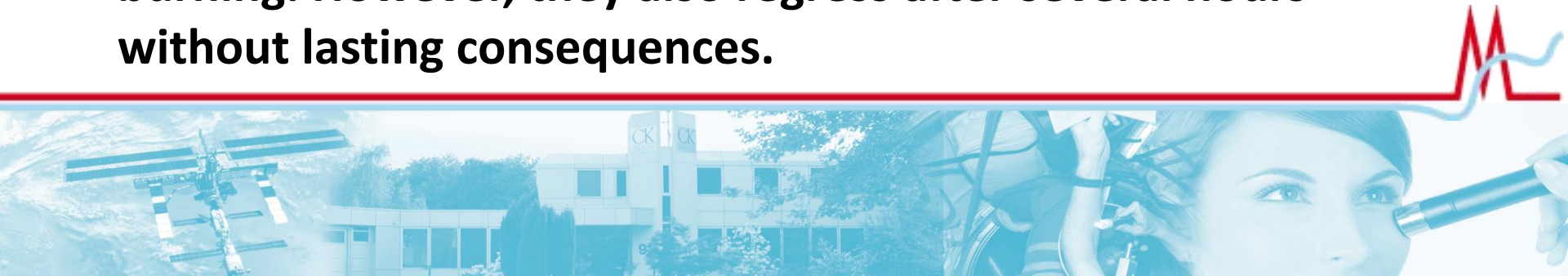
Once the patient knows the individual threshold temperature for the CCU, symptoms can be avoided as far as possible:

- **by appropriate behavior (e.g. avoid special food, drinks, extreme sweating or specific sports)**
- **Wear protective clothes whenever it is below the threshold temperature**
- **Use skin protection products**
- **Inform other doctors so that no risk can occur**



Side Effects of the TempTest®

- The device can be used on adult and pediatric patients.
- Unwanted side effects are very uncommon. During the test, the portions of the skin exposed to cold and heat may experience temporary sensations of discomfort which will end quickly and without lasting consequences once the test is finished.
- If the test is positive and wheals form, they may last some minutes up to hours, including in some cases itching and/or burning. However, they also regress after several hours without lasting consequences.



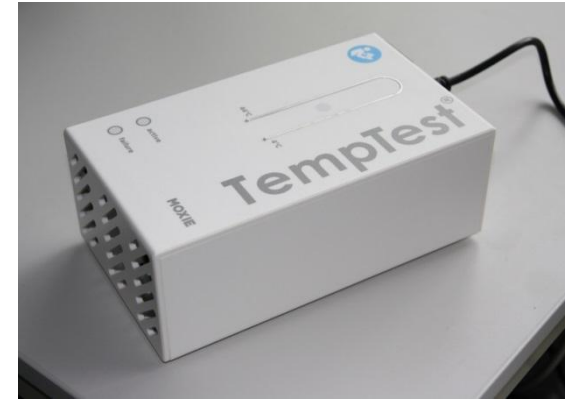
Description of the TempTest®

- The device has been developed by Germany's first medical university, the Charité in Berlin (Prof. Marcus Maurer)

<http://www.urticaria.org/>

<http://www.ecarf.org/en/home.html>

<http://www.allergie-centrum-charite.de/>



- It is readily produced and already registered Medical Product
- A check calibration function is in preparation.
- The device is ready to order!!! Art. no. G154: price 2.550,00 EUR (incl. 20 stencils)



Literature:

Various studies and presentations have been performed with the device, stating the benefits and usefulness of the device.

Here is one example:

- Causes, Triggers and Mechanisms of Physical Urticarias – Insights from Cold-Contact Urticaria, Krause, Ardelean et al., *Adv Psor Inflamm Skin Dis* 2010;1(3):99–104.

A detailed literature list will follow soon.

Prof. Maurer and his team will also continue to do publications and presentations of the device internationally.



Technical Data

Dimensions: approx. 35.5 x 14 x 9.5 cm (L x W x H),

Weight: approx. 1.7 kg

Power supply: 100-240 V, 50/60 Hz, Power consumption: 1.5 -0.5 A,

Fuse: T10AH250V, 5 x 20 mm

Protecting class IP21, Protection rating 1, **Class IIa medical product**,

Accuracy: +/- 2° C,

Operation temperature: 10-27° C, max. r.H.: 80%,

Storage temperature: -10-35°C



<http://www.courage-khazaka.de/index.php/en/products/dermatology/317-temptest-e>

