**Calibration of Thermal Pain Threshold and Tolerance (Control Part)**

NOTE:This part serves as a control and validation part: temperatures reached in this part are compared to those obtained in part one and two. If extreme variations occur, the subject will be excluded from the experiment but will receive a small monetary compensation.

**1.** Hand her a computer mouse for the left hand, which is connected to the thermal stimulator.

**2.** Provide the subject with instructions of the thermal calibration procedure.

NOTE: An instruction for this calibration part could be as follows: “The temperature will slowly rise from a baseline level below your body temperature. Immediately press one of the mouse buttons when the temperature changes from warm sensation to low heat pain. This will be when you are experiencing a stinging, burning, piercing or pulling sensation in addition to the feeling of heat. As soon as you press a button, the temperature drops to its baseline level, rests there for a few seconds and will then slowly rise again. We will repeat this four times. Afterwards, we start a second round, but this time you should press a button immediately when you can no longer tolerate the heat regarding the stinging, burning, piercing or pulling sensation anymore. We will also repeat this four times.”

**3.** Begin **thermal calibration (control part)** by applying a slowly rising thermal stimulus, starting from 32 °C with a temperature rate of increase of 1 °C/s (cutoff 50.5 °C).

CAUTION: This thermal calibration part has a cutoff temperature of 50.5 °C in order to prevent skin burns.

**4.** Write down the temperature reached each time the participant presses a button. Wait 10 seconds and start the next stimulus. After the fourth time, calculate the mean temperature of the last three pushes of the button. Write it down and mark it as “validation Heat Pain Threshold” (vHPTh).

**5.** Tell the subject that the second round will start and she should now press a button when she cannot bear the heat stimulus any more.

**6.** Apply a rising thermal stimulus, starting from 32 °C with a temperature rate of increase of 1 °C/s (cutoff 50.5 °C).

**7.** Write down the temperature reached each time the participant presses a button. Wait 10 seconds and start the next stimulus. After the fourth time, calculate the mean temperature of the last three pushes of the button. Write it down and mark it as “validation Heat Pain Tolerance” (vHPTo).

NOTE: If a participant exhausts the cutoff at any time, write down the cutoff as vHPTo and proceed with the next step.

**8.** Take the PC mouse from the subject.

**9.** Compare vHPTh with pHPTh and vHPTo with pHPTo. If the absolute value of vHPTh minus pHPTh or the absolute value of vHPTo minus pHPTo is less than 5 °C, continue with the experiment. Otherwise, end the study here: explain the reasons to the subject, hand her a small monetary compensation and have it acknowledged with a receipt.

NOTE 1: pHPTh and pHPTo was performed previously as described in Section 4.

NOTE 2: Within a short period of time and without meeting the criteria mentioned in step 2., a person should rate same stimulus intensities very similarly. In this study, a participant is considered “unsuitable” for the pain stimulation part if one of the absolute values of the differences (see step 9 above) exceeds the predefined threshold of 5 °C, because their reported pain thresholds cannot be considered reliable. Fortunately, no participant had to be excluded in our study.