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**Surname, First name** Mustermann, Max

**DOB** 01-12-1970

**Sex** male

**Lab number** 3-4316

**Report date** 08-10-2021

## Laboratory report


Enclosed you will find the results of your laboratory examination. In addition to your results, you will also receive a summary of the correlating effects, regarding the tested parameters. These are compiled without any knowledge on the clinical background and as such, may only be used as an interpretation aid. In case of health problems, please consult a doctor or practitioner for medical treatment and accompaniment for making the best decisions for your health. We explicitly warn against beginning, suspending, or changing any medication or therapy without consulting your doctor or practitioner.

**Test:** Serotonin Test

**Sample material:** Urine

**Date collected:** 26-09-2021

**Date received:** 28-09-2021

Analyte	Result	Reference Range	Result
<b>HbA1c</b>			
Serotonin	> 700 µg/g	60-450 µg/g	



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## Serotonin

Your measured serotonin level lies over the reference value of 3450-22900  $\mu\text{mol/l}$  and is therefore too high.

Serotonin is a tissue hormone and also works as a neurotransmitter, which means it serves as a messenger within the central nervous system. It is often called the “happy hormone” because, next to its many other functions, it has a positive effect on the mood and ensures inner peace and contentment. Serotonin is mostly found in the gastrointestinal tract but also in the central nervous system, the cardiovascular system, and the blood. It is made of the amino acid tryptophan and is mostly produced in the intestinal lining. Since serotonin can't pass the barrier to the brain (blood-brain barrier), it is also produced directly in the nervous cells of the brain.

Taking medications that increase the release of serotonin or inhibit the reduction of serotonin can be possible reasons for a serotonin excess. Especially in the case of antidepressants, many of these contain serotonin because depression is often related to a serotonin deficiency. Additionally, medications that are metabolized in the same way as serotonin can also cause a serotonin excess.

However, in rare cases, a serotonin excess can be an indicator for a neuroendocrine tumour inside the gastrointestinal tract. This is accompanied by symptoms such as diarrhoea, racing heart, flushing, or stomach cramps.

A high serotonin excess is called “serotonin syndrome”. It is followed by flu-like symptoms (e.g., fever or headache). Additionally, the signal transmission between muscles and nerves can be disturbed, which might lead to shaking, cramps, or uncontrollable twitching. Other symptoms can be nervousness, impaired consciousness, coordination disorder, or hallucinations. In serious cases, a strong case of serotonin syndrome can become deadly and should therefore be treated immediately.

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