

The Pandemic Reached Europe

Coronavirus is officially pandemic now. However, the individual risk to acquire an infection depends on the region you are living in. The following recommendations are valid for Germany and other countries in a similar stage of the regional outbreak. They are not adequate for special high-risk hotspots, where a higher personal protection level may be adequate.

Personal Alert Level (PAL) scheme indicating the recommended personal preventive actions:

"Green"	No threat, no action needed
"Yellow"	No immediate threat, but preemptive measures recommended
"Orange"	A threat that requires personal protective measures
"Red"	A serious threat demanding changes of behavior

Personal Alert Level for Germany: Orange

These levels of personal alertness are therefore not identical to the WHO pandemic stages or other schemes from public health authorities, which aim to coordinate the activities of governments and other official bodies. When you are in a hurry or not interested in details, you may just watch the PAL indicated on the top of my web page. In case the level is increased or lowered, I will inform you by Twitter and email (see contact form in the side bar).

The Personal Alert Level has been increased to Orange today. This means that the present threat requires personal protective measures.

Some readers might wonder why the PAL has not been raised earlier. In fact, German health authorities have been promoting hygiene measures (“wash your hands frequently”) already for weeks and are recommending drastic preventive measures such as avoiding unnecessary travel. However, those official recommendations do not reflect the real and present threat (i.e., probability of infection) for an individual person. They are rather pro-active measures to prevent the spread of the disease in the population as a whole (if everybody follows these recommendations, Covid-19 will spread with lower speed). In contrast, the PAL reflects the real and present threat for the individual.

According to the report issued by the German Robert Koch Institute today, recorded cases have doubled from approximately 1500 to 3000 within the last two days. Considering that these numbers reflect a past situation about 8 to 10 days ago (5 days average incubation period + lag time before lab confirmation and registration) and using a factor of 3 for the dark figure of unreported cases, it cannot be excluded that the real and present number of infected people exceeds 80 000. Given a population of 82 m, the probability that any given individual is infected would be in the range of 1:1000. This is an extremely rough estimate because the individual risk to encounter a presently infectious person depends on location and many other factors. The PAL increase from Yellow to Orange was triggered by the following judgements:

1. The (raw statistical) risk of encountering an infected individual may have reached the threshold 1:1000
2. The anti epidemic measures in Germany came into effect too late. In the following days, the epidemic will enter the exponential phase.

These personal protection rules were developed to provide individuals with a protection level adequate for the epidemic threat, i.e. the risk of becoming infected by Sars-CoV-2, in the present outbreak situation. In addition, governmental measures targeted to protect the population at the community level, particularly full or partial lock-downs, apply in many European countries. The personal rules given here do not substitute governmental statutes and recommendations but should be followed additionally.

The Rules of The Game

Follow these 5+1 rules and stay cool in the viral storm

As during any epidemic, the first questions that arise are: How great is the danger, and to what extent do we have to change our lives in order to react appropriately? The World Health Organisation estimates the mortality rate in China due to infections with the new Corona virus to be 0.7 per cent. In Germany, the basic risk assessment results in a rate of 0.5 per cent, equivalent to one death per 200 people infected. Thus 'Covid-19' is roughly ten times more dangerous than a normal seasonal flu, but considerably more harmless than the lung disease SARS or even Ebola, where the mortality rate is 10 per cent and 70 per cent respectively. Because the new Corona virus is less infectious than influenza or measles, fatalists might decide to forego personal protective measures and take their chances. The statistical risk of contracting the virus for an otherwise healthy person, if current estimates are correct, would be similar to one parachute jump per day. But whoever considers the much higher risk for older people (over 65) and those with chronic diseases cannot but follow the rules of the game concerning this pandemic.

In addition to the official advice of 'avoiding shaking hands', 'coughing into the crook of the elbow' and 'frequently washing hands', the following recommendations take into account the concrete, situational hazard and demand considerable self-discipline. Whoever internalizes the six rules and adheres to them religiously can confidently ignore the flood of well-meant tips for self-protection. When we know our adversary and focus on the essential, even a potentially deadly virus becomes a danger like any other.

1. Don't come too close to other people's faces

The corona virus aims for the mucous membranes of eyes, mouth and nose. This is the only way it can enter our body. The virus can't permeate healthy skin. And according to current findings, transmission may only very rarely occur via the breath (aerogen, i.e. airborne over longer distances). Danger arises when, while speaking, coughing, or sneezing, droplets are sprayed into the face of the other person. As secretions can be carried one meter maximum during speaking, and two meters during coughing or sneezing, a minimal distance of two meters is generally recommended. Normal glasses, and a simple OP-mask (mouth and nose protection) or a cloth covering mouth and nose provide additional protection. Both have to be dry; otherwise droplets containing the virus can form during exhalation. If you weren't able to avoid someone coughing or sneezing, you should change your mask immediately and disinfect your face or clean it

with soap and water. A piece of cloth can be used again after being washed at 60 degrees Celsius. Secretions containing the virus on skin, hair or clothes are – as unappetizing as it may sound – not dangerous, as long as they don't reach the mucous membranes.

2. Wash your hands before you touch your face and before you eat something

The corona virus can survive on clothes, skin, hair and other surfaces for several hours, (in exceptional cases even days). For example, someone who touches a handle in a bus that is contaminated by the fresh secretion of a sick person, and then rubs their eyes or touches their food with their hands, can infect themselves via a 'smear infection'.

Therefore one should never touch eyes, nostrils or mouth with unwashed hands. This is easier said than done. Human beings subconsciously touch their faces roughly ten to twenty times per hour. Neuropsychologists believe that these spontaneous actions – prevalent in all cultures and even among apes – support memory functions and emotional stability. The corona virus takes advantage of this reflex. To suppress it consistently is no easy matter. Those who find it difficult can remind themselves by wearing mouth and nose protection.

3. Only embrace people with whom you want to exchange viruses

When during an embrace, hair or skin of an infected person come into contact with eyes, mouth or nose of a (still) healthy person, pathogens of all kinds have a field day. Therefore brotherly love during the times of the corona virus demands a strict abstinence from kisses on cheeks and embraces of all kinds. Between partners and one's own children kisses are permitted, since people living in one household will sooner or later infect each other anyway (but naturally this only applies if there is no concrete indication of an infection with Covid-19.) When considering a visit to the grandparents, you should think beforehand if you really want to risk them contracting a potentially life threatening disease.

4. Consider public in-door spaces to be contaminated

On public transport facilities, in restaurants, shops and other publicly accessible in-door spaces the corona virus can sit on every surface. After you've returned from such an area to your own four walls, outer clothing and hands should be considered contaminated. Therefore: hang up your coat immediately and wash your hands. If there's a chance that your hair could also be contaminated (for example via a head rest on the train) it should be washed at the latest before going to bed. However in the open air the virus load on surfaces is smaller, because the pathogen is diluted and deactivated by environmental factors.

5. Avoid contact with others if you have a cough or a temperature

During the corona virus pandemic, no one should go to work, school or kindergarten, use public transport or visit areas with large crowds if they are coughing or have a temperature (having the sniffles, contrary to some claims, is not a typical symptom of Covid-19). Day nurseries in particular have to follow this rule strictly, because children – according to current research – often show only mild symptoms, but can secrete the virus. If you develop fever or cough, contact a doctor and ask if a Covid-19 test is required.

Stay calm!

Whoever follows these rules, can with great probability avoid an encounter with the new corona virus. To do any more hardly provides any further protection and makes life unnecessarily complicated – after all we are not dealing with Ebola and Co. (this, of course, does not apply to higher risk groups). In daily life neither masks designed for medical personnel (FFP2-respirators), nor great amounts of disinfectant are necessary. Whoever falls ill at the moment should bear in mind, that common colds and flu are still more widespread than Covid-19. And those who do become infected have a 99 per cent chance of survival.