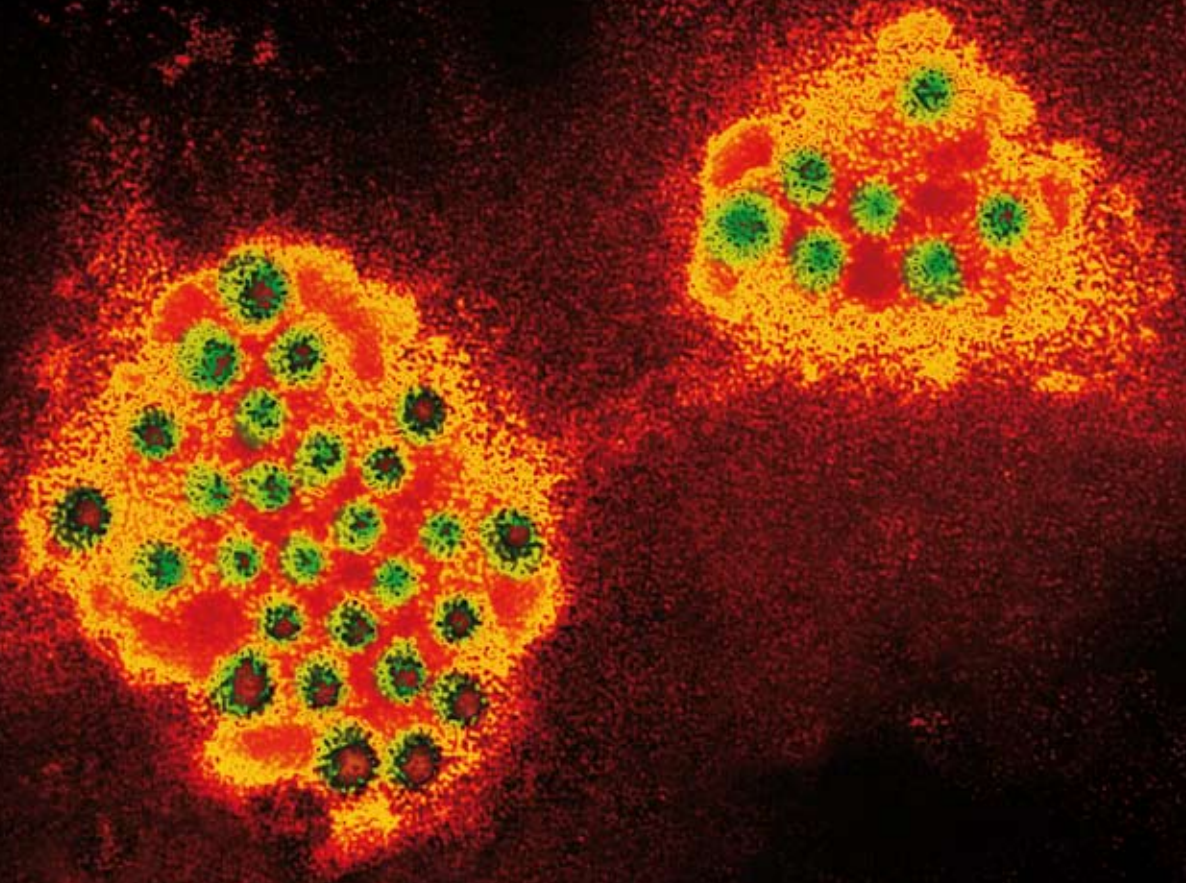


Norovirus – Effective prevention with innovative solutions!

Safe with schülke.



the plus of pure
performance

Noroviruses – highly infectious and life-threatening.

Only 26 to 35 nanometres in size – and despite this the main cause of non-bacterial gastro-intestinal infections throughout the world: Noroviruses!

The number of outbreaks has increased in the last six years by a factor of 20 and has risen to over 200,000 affected by illness each year.

The number of unreported cases is estimated at almost three times this number. In addition to sporadic individual cases, outbreaks of considerable magnitude are occurring in communal institutions such as hospitals and rest homes.

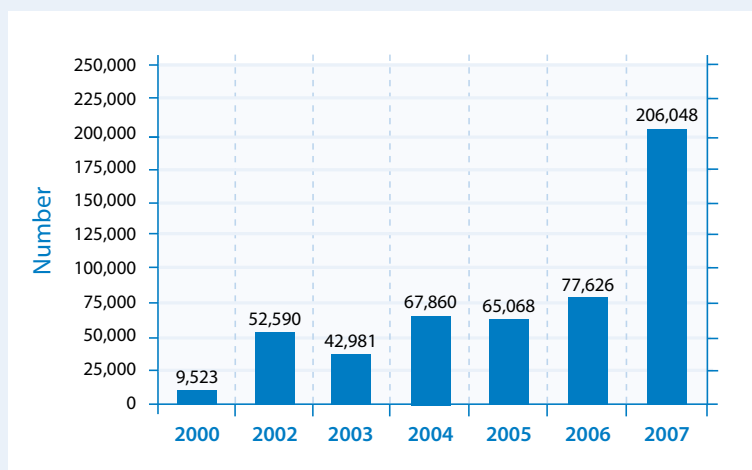
Particularly problematic with Norovirus outbreaks is its explosive spread both among patients and to medical staff.

The consequences of an outbreak of the viral disease range from ward closures to admission bars owing to high staff sickness rates. This results in a serious shortfall in primary care as well as enormous economic damage.

The virus is transferred either by the faecal-oral route, if the viruses have been excreted via the stools, or via droplets from vomiting. Dispersion of the virus also begins a few hours before the first symptoms appear and can continue for a further 7 – 14 days after the symptoms have subsided.

After an incubation period of 10 – 50 hours, the body reacts with diarrhoea and vomiting, in order „to free“ itself of the viruses. Because there is no known treatment which is directly effective against the virus, all measures are directed at treating and compensating for fluid loss.

Increase in Norovirus reports in Germany



2008: 159,746 cases already and this is a rise of almost 40 % more than in the same period for 2007

Sources:

- Norovirus winter epidemic 2007/2008 exceeds the infection figures for previous years. First epidemiological and molecular-genetic investigation results. Robert Koch Institute, Berlin, Epidemiological Bulletin 2008, 6: pp. 43 – 52
- Norovirus infections in Germany. Federal Health Bulletin - Health Research - Health Protection 2006, 49: pp. 296 – 309

Further information on Noroviruses: www.rki.de

Sources: - RKI, Infection-epidemiological diaries 2001 – 2007
- RKI, Epidemiological Bulletin 2008, No. 36; Date: 3.9.2008

Over 90% of infections from October to February.



The infection, notifiable in Germany since 2001, may even be life-threatening for the old, the sick and children, because these patients react particularly badly to electrolyte imbalances.

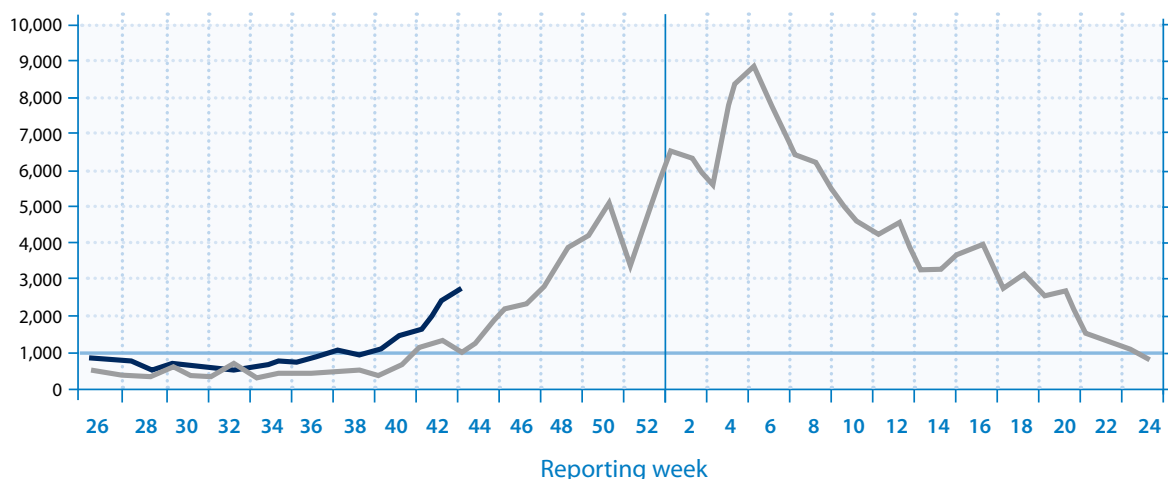
Direct transfer from one human being to another is the most significant way of becoming infected with Noroviruses, but food and surfaces can be contaminated and thus carriers. Because Noroviruses are particularly resistant, they can remain infectious on surfaces for over a week. The risk of recontamination is therefore particularly high with these viruses.

Annual distribution

The reported statistics for previous years show increased occurrence of Norovirus infections particularly in the winter months. Although this can occur at any time throughout the year, the numbers of outbreaks rise rapidly in October and November. In recent years, over 90% of all cases of infection during a given year were reported in the winter months. This leads to a regular winter epidemic, which can extend on average until the middle of June.

Annual distribution of Norovirus infections in Germany

Number of cases



2007/2008

2006/2007

Source: Norovirus gastro-enteritis cases in Germany notified to the RKI, by reporting week, in 2006/2007 until the start of 2008

We are fighting diseases before they emerge.

New testing methods guarantee improved safety

Owing to the extremely high risk of infection, the relationship between preventive measures and combatting outbreaks of Norovirus gastroenteritis cases is also an indicator for the standard of hygiene in communal institutions.

Only appropriate hygiene measures can prevent a Norovirus epidemic. The use of effective disinfectants also plays a deciding role.

In the opinion of the Robert Koch Institute, it is sensible to use preparations with proven effectiveness against those unenveloped viruses which frequently cause outbreaks (e.g. Rotaviruses, Noroviruses). This procedure achieves proper and appropriate disinfection, taking due account of environmental impact and compatibility (RKI recommendation „Test and Declaration of the Effectiveness of Disinfectants against Viruses“, Federal Health Bulletin – Health Protection 2004; 47: 62 – 66).

The human pathogenic Norovirus cannot be cultured in animals and, as such, efficacy testing cannot be carried out on the virus itself. Instead, feline Calici virus (virus found in cats), which belongs to the same family, was previously used as the test organism

Both German and international hygiene experts have now reached the opinion that the murine Norovirus (virus found in mice), which is significantly more closely related to the human Norovirus, is better suited for disinfectant tests than the feline Calici virus, because the murine Norovirus causes similar symptoms in mice. Also, this can be grown in a cell culture and thus tested directly.

These advantages have persuaded schülke to respond to the latest scientific developments and allow the preparations already tested successfully on feline Calicivirus to be tested against the murine Norovirus.

The hand disinfectant **desderman® pure** (or **desderman® N**) and the surface disinfectant preparations **terralin® protect**, **perform®**, **terralin® liquid**, **antifect® N liquid** and **mikrozid® AF wipes** were investigated successfully for virus inactivating properties against murine Norovirus as specified in EN 14476: 2007-02.

The advantages of measures working preventive measures, incl. the general use of Norovirus-effective preparation are obvious:

- a significantly lower number of Norovirus cases and hence fewer official decontamination orders
- lower costs through the use of standard preparations
- no product change needed for suspected cases of Norovirus
- higher compliance with hand disinfection, because **desderman® pure** has better skin compatibility than preparations which contain 95 % alcohol and therefore less refatting agents.

➡ With schülke, you fight diseases before they emerge.

Prevention instead of infection.

The „murine Norovirus“ will become the standard for schülke. Successful prevention of infection and prophylactic measures to prevent an outbreak of the illness are from our prospective much more important than a later campaign with aggressive special chemicals.

Example of hand disinfection

Preparation	desderman® pure (or desderman® N)	Competitive product (based on a 95 g ethyl alcohol content)
Proven effectiveness against murine Norovirus	Yes	No
Effectiveness hygienic hand disinfection (30 seconds)	Yes (within 15 seconds)	No (120 secs for virucidal efficacy)
Refattening agents	Yes (proven scientifically with SELS test)	minimal
Amount needed	approx. 3 ml	approx. 12 ml
Recommended for continuous use	Yes	No

Hygiene measures – key measures at a glance

Targeted hygiene	Products
1) Hand hygiene <ul style="list-style-type: none"> Carrying out a careful hand hygiene program. Use of disposable gloves and, if necessary, face masks (e.g. when in contact with a vomiting patient) Hand disinfection with a product which is effective against Norovirus (e.g. desderman® pure) after discarding the disposable gloves and before leaving the isolation room. 	desderman® pure (or desderman® N)
2) Surface disinfection Daily disinfecting of all contact surfaces, incl. door handles with a surface disinfectant effective against Norovirus (e.g. terralin® protect, perform®). After doing face mask and gloves, clean contaminated surfaces with a targeted disinfection. (e.g. terralin® liquid, antifact® N liquid, mikrozyd® AF).	terralin® protect perform® terralin® liquid antifact® N liquid mikrozyd® AF
Organisational measures	
Isolation Isolation of affected patients is preferable e.g. a room with its own WC, cohort isolation or, if necessary, block a ward for new admissions.	
Miscellaneous <ul style="list-style-type: none"> Minimising of patient, occupants and staff movement between areas/wards. Movement into other areas of ward care or between communal institutions only 72 hours after the last case of illness. Re-opening of barred wards or areas no earlier than 72 hours after the occurrence of the last case of illness and after final disinfection is completed. 	

Source: In accordance with the Robert Koch Institute, RKI „Norovirus“ advisor“, www.rki.de, extended by product recommendation.

Fast, powerful solutions for deactivating Noroviruses.

Skin | Hands



desderman® pure | desderman® N

Advanced rapid acting alcohol based hand rub, formulated for hygienic and surgical hand disinfection

Our Plus

- very good efficacy and increased skin compatibility
- effective against bacteria (Tb, MRSA, VRE), fungi and viruses (incl. HBV, HCV, HIV, polio, herpes simplex, adeno, rota, noro and vaccinia)
- suitable for frequent use
- desderman® pure: colour & perfume free

Pack Size

- 150 ml bottle
- 500 ml bottle
- 1 l bottle
- 5 l canister

desderman® pure - Composition: 100 g solution contain: ethanol 96 % 78.2 g, 2-biphenylol 0.1 g. Other ingredients: povidone 30, isopropylmyristate (Ph.Eur.), (hexadecyl,octadecyl)[(RS)-2-ethylhexanoate], sorbitol solution 70% (crystallizing) (Ph.Eur.), 2-propanol (Ph. Eur.), purified water. • **Therapeutic indications:** desderman® pure is used for hygienic and surgical hand disinfection. The active pharmaceutical ingredients ethanol and biphenyl-2-ol work against bacteria (incl. mycobacteria), fungi and many viruses. The efficacy of desderman® pure against viruses includes coated viruses* and rotaviruses. • **Contraindications:** If you are hypersensitive (allergic) to the agents or one of the other ingredients of desderman® pure. Avoid contact of desderman® pure with mucous membranes. • **Special warnings and special precautions for use:** For external use only. Flash point 16 °C according to DIN 51 755. Highly flammable. Do not expose to open flame. After spilling of the disinfectant, immediate action for prevention of fire and explosion risk has to be taken. Appropriate action includes absorbing spilled liquid and diluting it with water, airing the room and removing the ignition sources. • **Undesirable effects:** Side effects may occur occasionally, which are typical of alcoholic hand disinfectants, such as skin irritations (e.g. reddening, dryness). Despite further use, these paraesthesiae usually disappear already after 8 – 10 days. Contact allergies can also occur. If you observe any side effects other than those listed here, please contact your physician or chemist. • **Marketing authorisation holder and manufacturer:** Schülke & Mayr GmbH, 22840 Norderstedt.

* Tested against test viruses BVDV (surrogate viruses for hepatitis C virus) and vaccinia virus. According to the current state of knowledge, the results allow the conclusion to the efficacy against other enveloped viruses, e.g. hepatitis B virus, HI virus.

Area



terralin® liquid

Alcohol based spray for fast effective cleaning and disinfection of surfaces

Our Plus

- ready-to-use
- dries rapidly, leaving no streaks
- aldehyde free
- effective against bacteria (incl. Tb), fungi and viruses (incl. HBV, HCV, adeno, rota, papova, polio)

Pack size

- 1 l bottle
- 10 l canister



antifect® N liquid

Rapid alcohol disinfection of surfaces, particularly in kitchen areas

Our plus:

- ready for use | compatible with food areas, free from dyes and perfumes
- short exposure time and comprehensive effect against bacteria, fungi and viruses
- effective against Noroviruses in 60 seconds (test virus: murine Norovirus)
- fast drying out free from any residue
- VAH/DGHM listed, tested to Euro standards

Pack size

- 1 l bottle
- 5 l canister



mikrozid® AF wipes / Jumbo wipes

Alcohol based wipes for fast effective cleaning and disinfection of surfaces

Our Plus

- dries rapidly, leaving no streaks
- aldehyde free
- effective against bacteria (incl. Tb), fungi and viruses (incl. HBV, HCV, adeno, rota, papova, polio)

Pack size

Tub 150 wipes
 Refill 150 wipes
 Plus Tub 200 large wipes
 Jumbo Refill 200 large wipes



terralin® protect

Powerful large area cleaner and disinfectant, ideal for use on all surfaces (incl. metal, plastic, rubber materials, perspex)

Our Plus

- free of aldehydes and thus especially user-friendly
- smells nicely fresh and discreet
- wide microbiological effect spectrum against bacteria (incl. Tb, MRSA*), fungi and viruses ("limited antiviral agent"* incl. HBV and HCV, rota, adeno and noro)
- delivers excellent optical characteristics
- especially convenient for odour sensitive areas and sensitive materials

Pack size

20 ml-pouch (500 x)
 2 bottle
 5 l canister
 30 l canister
 200 l barrel
 500 l container

* acc. to RKI recommendation, Federal Health Gazette 01/2004



perform®

Extensive microbiological effect spectrum against bacteria (incl. Tb), fungi, viruses as well as spores

Our Plus

- especially ecological thanks to an active agent system based on oxygen
- easily dosing thanks to one-dose portion pouches already tested to European Standards

Pack size

250 x 40 g pouch/carton
 60 x 40 g pouch/carton
 900 g can

Use disinfectants safely.
 Always read the label and product information before use.





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