

INFECTIOUS DISEASE · UK FIELD REFERENCE



PANDEMIC & OUTBREAK SURVIVAL

MASTER GUIDE

Clean Air · Good Masks · Know the Danger Signs

When a dangerous infection spreads — and doctors can't reach you.

Edition 1.0 · UK Edition

Print this guide and keep it with your medical kit. In a severe outbreak, health services may be overwhelmed and you may have to care for the sick yourself.

Compiled from UK National Risk Register · UKHSA · NHS · NICE · WHO · CDC · HSE · UK COVID-19 Inquiry ·
Resuscitation Council UK · Cochrane

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Pandemic & Outbreak Survival Master Guide

Pandemics, dangerous infections & deliberate release · **UK Edition 1.0** · Print & keep with your medical kit

COVID-19 showed how quickly a new infection can reach every town in the country, empty the shelves, close schools and overwhelm hospitals — and COVID was far from the worst case planners worry about. This guide is for a more dangerous outbreak: a new strain of flu, a virus that spreads more easily or kills more often, a disease released on purpose, or an infection that spreads silently for weeks before anyone is ill. It covers how outbreaks unfold, how infections really spread and which protections work, how to isolate a household, and — in detail — how to care for someone who is sick at home when the NHS cannot reach you, and how to recognise when an illness has become an emergency.

IMPORTANT — PLEASE READ FIRST

This is an educational preparedness reference, not a substitute for a doctor, nurse, pharmacist or official public-health instructions. If NHS 111, a GP, a pharmacy or 999 can be reached, use them. Follow UK Health Security Agency (UKHSA), NHS and government instructions first — they will know things about the specific disease that no guide can.

Medicines and doses in this guide are the standard over-the-counter doses published by the NHS. Always read the label, check for interactions and conditions that make a medicine unsafe, and get advice for babies, pregnancy, long-term illness and anyone on regular medication. This guide does **not** give doses for prescription-only medicines such as antibiotics or antivirals: they need a prescriber, and taking the wrong one does real harm.

Every disease is different. Incubation periods, symptoms, how infectious people are and how long to isolate vary between infections, and official advice changes as scientists learn more. Use this guide for the principles, and the official advice for the specifics.

The five rules of a dangerous outbreak:

1. **Act early, quietly and calmly.** Stock medicines, masks and food before the rush, and cut down close contact as soon as cases appear in the UK — not when your street is affected.
2. **Clean air matters most for airborne infections.** Ventilation and a well-fitted FFP2/FFP3 respirator beat almost everything else.
3. **Keep the sick apart, and care for them well.** One sick room, one carer, good fluids, and a written check of temperature, breathing and drinking every few hours.
4. **Know the danger signs.** Most people recover at home. The skill is spotting the few who won't, early enough to get them help.
5. **Trust official sources, check everything else.** Rumours kill in outbreaks too.

SOMEONE IS ILL NOW

Go to Danger Signs, then Caring for the Sick, Fever & Doses and Breathing.

CASES ARE SPREADING

Read The First 72 Hours, Layers of Protection and Isolating a Household.

PREPARING AHEAD

Start with The Medical Kit, Masks, Supplies and learn first aid.

Throughout the guide, **999** means call an ambulance (or get to A&E by any means if phones are down), **111** means get medical advice the same day (NHS 111, a GP or pharmacist), and **home** means it can usually be managed at home with the care described.

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How a Pandemic or Outbreak Unfolds

A pandemic is a new infection spreading across the world. An outbreak is a smaller, more local surge of cases. Both follow the same arithmetic: each infected person infects others, and if each one infects more than one, cases grow exponentially — slowly at first, then very fast. By the time a hospital is full, the infections that will fill it next week have already happened.

50%

of the UK falling ill in the government's worst-case pandemic planning

9 months+

length of the emergency stage, possibly much longer, in one or several waves

5–25%

chance of such a pandemic in any 5 years (rated "catastrophic")

~1 in 4

chance of a smaller outbreak of a new, more deadly disease in 5 years

Source: UK National Risk Register 2025 (pandemic and emerging infectious disease entries); confirmed in the 2026 edition.

The government's planning scenarios

Scenario	What planners assume (reasonable worst case)
Pandemic ("Disease X")	A new respiratory infection, spreading by an unknown route, with no assumption that vaccines or behaviour change work at first. About half the population falls ill; around 4% of those with symptoms need hospital care (about 1.34 million people); up to 840,000 deaths. The emergency lasts at least 9 months, possibly in several waves; health and care services may take years to recover. Planners also consider a new coronavirus, a new enterovirus and a new sexually transmitted infection.
Emerging infectious disease	A new virus that jumps from animals to people abroad and is brought into the UK before border controls catch it: up to 2,000 cases, with up to 1 in 4 dying, and up to 200,000 contacts to be traced and monitored, over 2–6 months. Variants include a viral haemorrhagic fever (Ebola-type) or an insect-borne disease.
Deliberate release	A biological agent released in a targeted incident or across an urban area, potentially causing large numbers of casualties. The UK has never had a large-scale chemical, biological, radiological or nuclear attack. See Deliberate release.

How it typically unfolds

Weeks 0–4

"over there"

- Reports of a cluster of unusual illness abroad; scientists sequence the germ, often within days.
- The first cases arrive in the UK with travellers. Most people still feel unaffected.
- **This is the cheapest, calmest time to prepare.**

Weeks 4–10

takeoff

- Cases double every few days. Testing and tracing can't keep up.
- Panic buying empties shelves; schools and workplaces have high absence; rules on gatherings may be introduced.
- Hospitals fill; routine care is postponed.

The peak

2–6 weeks

- Older planning assumptions: 15–20% of staff off sick at the peak (30–35% in small teams), up to half of all workers off at some point.
- Services strained: ambulances, GPs, pharmacies, deliveries, bin collections, care homes.
- This is when households most need to manage illness at home and avoid becoming infected.

Months 3–24

waves

- Cases fall, then rise again as rules relax, seasons change, or the germ mutates. In 1918 and 2020–21, the second wave was deadlier than the first.
- Vaccines and treatments arrive — in COVID-19, the first UK vaccine was given 333 days after the virus was sequenced.
- Recovery and long-term effects continue for years.

Why acting early matters so much: because infections double, a week's delay can mean several times as many cases. The UK COVID-19 Inquiry concluded that a mandatory lockdown a week earlier in March 2020 could have meant around 23,000 fewer deaths in England's first wave (a modelled estimate). Households face the same arithmetic on a small scale: reducing contacts a week before the local peak protects far more than reducing them during it.



The Threats: From Flu to Deliberate Release

"Pandemic" covers very different dangers. A new flu spreads fast through the air; an Ebola-type fever spreads through body fluids and kills a far higher proportion of those infected; a slow infection can spread silently for years. Knowing which kind you face tells you which protections matter.

Type	Examples	How it spreads	Main danger	Key protection
Pandemic respiratory virus	New influenza strains (e.g. from bird flu), new coronaviruses	Through the air, close contact, hands	Huge numbers ill at once; health services overwhelmed	Ventilation, respirators, fewer contacts, vaccines when available
Highly contagious diseases	Measles, chickenpox, norovirus	Air (measles can hang in a room for up to 2 hours); surfaces and hands (norovirus)	Up to 9 in 10 unprotected close contacts infected	Vaccination; isolation; soap and water
High-consequence infections	Ebola, Marburg, Lassa; MERS, pneumonic plague, dangerous bird flu	Body fluids (contact HCIDs) or the air (airborne HCIDs)	High death rates; risky to care for at home	Specialist NHS isolation units; strict PPE — see High-consequence infections
Food- and water-borne	Cholera, typhoid, hepatitis A, E. coli	Contaminated water and food, poor sanitation	Severe dehydration; outbreaks where water treatment fails	Safe water, hygiene, oral rehydration
Insect- and tick-borne	Lyme disease (ticks), mosquito-borne viruses	Bites	Spreading north with climate change	Cover skin, repellent, tick checks

Type	Examples	How it spreads	Main danger	Key protection
Slow but deadly	Tuberculosis, HIV, hepatitis B and C; drug-resistant bacteria	Air (TB), blood and body fluids, healthcare	Silent spread over months or years	Testing, treatment, prevention — see Slow infections
Deliberate release	A disease agent spread on purpose	Depends on the agent; many are not passed person to person	Sudden, unusual illness in a group	Official instructions; decontamination — see Deliberate release

Bird flu — the one planners watch most closely. H5N1 avian influenza has infected about 1,000 people worldwide since 2003, with nearly half of the known cases dying (the true rate is lower, because mild cases go uncounted). It has spread widely in birds and in US dairy cattle, and the UK had a human case linked to a farm in January 2025. So far it does not spread easily between people, and UKHSA rates the risk to the public as very low. The fear is that it could change to spread like seasonal flu.

Sources: WHO avian influenza situation reports (September 2026); CDC; UKHSA.

Lessons from 1918, COVID-19 and Ebola

Each pandemic teaches the same hard lessons, and each time they are partly forgotten. A household that remembers them is better protected than most official plans were in 2020.

Pandemic	What happened	Lesson for households
1918 influenza	About a third of the world infected; at least 50 million deaths, about 228,000 in the UK. Three waves; the second (autumn 1918) was by far the deadliest, and it killed healthy young adults as well as the old and very young.	The first wave isn't the worst. Don't relax after the first peak.
2009 swine flu (H1N1)	Milder than feared: 457 UK deaths. The response was judged "proportionate and effective".	Not every pandemic is severe — but you can't know at the start. Prepare anyway; it costs little.
2014–16 Ebola, West Africa	28,610 cases and 11,308 deaths. Most infections were among carers, health workers and at funerals, through contact with body fluids.	The way we care for the sick and the dead decides who gets infected. Protective equipment and safe procedures matter.
2020–23 COVID-19	Over 220,000 UK deaths with COVID-19 on the death certificate. Panic buying (grocery spending up over 20% in March 2020), rationing, PPE shortages, school closures, long-term illness.	See the lessons below.

What COVID-19 taught us

WHAT WENT WRONG — OFFICIALLY

- **"The UK prepared for the wrong pandemic"** — plans assumed flu, and a scalable test, trace and isolate system didn't exist (COVID Inquiry, 2024).
- **Too little, too late:** the Inquiry's 2025 report called February 2020 a "lost month" and found a lockdown a week earlier could have saved around 23,000 lives in England's first wave (modelled).
- **Airborne spread was underplayed** for months: early messages focused on handwashing and surfaces. WHO's guidance only fully described long-range airborne spread in late 2021.
- **Protective equipment ran out:** stockpiles were built for flu and lacked gowns; social care received a fraction of what it needed.
- **Care homes** were hit early and hard.

WHAT HOUSEHOLDS SHOULD TAKE FROM IT

- **Act on the first credible warnings**, not when your street is affected.
- **Treat new respiratory infections as airborne** from day one: ventilation and well-fitted FFP2/FFP3 respirators, not just hand gel and cloth masks.
- **Have your own protective equipment and medical basics** — don't rely on shops.
- **Protect the most vulnerable early**, especially anyone in or visiting care settings.
- **Plan for months, not weeks**, and for the harm isolation itself does.
- **Vaccines can come remarkably fast** — the first UK dose was given within a year. Surviving the first year is the goal.

Sources: CDC; The National Archives; Cabinet Office Hine review (2010); CDC Ebola outbreak history; UK COVID-19 Inquiry Module 1 (July 2024) and Module 2 (November 2025) reports; National Audit Office (2020); Kantar; WHO.



The First Signs: What to Do in the First 72 Hours

Outbreaks give warning — first news of a cluster abroad, then cases in the UK, then local spread. Each stage is a chance to act before the rush. The households that cope best are the ones that move early and calmly, while shops are full and services are working.

Stage 1

reports abroad

- ★ Check your stocks against the medical kit and supplies lists; fill the gaps gradually.
- ★ Order repeat prescriptions so you have a few weeks in hand.
- ☐ Buy respirators (FFP2/FFP3), gloves, a thermometer and a pulse oximeter while they're easy to get.
- ☐ Make sure everyone's routine vaccinations (including flu and COVID boosters if eligible) are up to date.
- ☐ Agree a household plan: who cares for whom, who shops, how you'd isolate a sick person.

Stage 2

cases in the UK

- ★ Follow official advice from UKHSA and the NHS every day — note what is known about symptoms, spread and incubation period.
- ★ Start cutting unnecessary close contact, especially indoors; ventilate; wear respirators in crowded indoor places.
- ★ Top up food and household supplies for 2–4 weeks — calmly, a bit more each shop.
- ☐ Set up the clean entry routine and decide which room would be the sick room.
- ☐ Talk to employers and schools about plans; check on elderly relatives and neighbours.

Stage 3

spreading locally

- ★ Reduce trips to essentials; one person shops; avoid crowded indoor places.
- ★ Shield the most vulnerable household members.
- ★ Check everyone for symptoms every day; isolate anyone who becomes ill straight away.
- ☐ Keep children's learning and routines going at home if schools close.
- ☐ Stay in daily contact with family, friends and vulnerable neighbours by phone.

If someone

falls ill

- ★ Isolate them in the sick room; one carer; ventilate; masks.
- ★ Start the daily check chart: temperature, breathing, oxygen, drinking, urine, alertness.
- ★ Check the danger signs several times a day and act on them immediately.
- ☐ Follow official testing and reporting instructions; tell recent contacts.
- ☐ The rest of the household quarantines as advised and watches for symptoms.

How Infections Spread — and How to Break Each Route

Germs travel by a handful of routes. Each one has a matching defence, and most infections use more than one route. Breaking the routes that matter most for a particular disease is the whole art of protection.

Route	How it works	Break it with
Through the air (airborne / aerosol)	Infected people breathe out tiny particles that float and build up in indoor air, especially in crowded, poorly ventilated rooms. They can infect people beyond conversational distance.	Fresh air, filtration, FFP2/FFP3 respirators, fewer and shorter indoor contacts, outdoors instead of indoors
Close range (droplets)	Larger particles from coughs, sneezes and speech land on the eyes, nose or mouth of people nearby (within about a metre or two).	Distance, respirators, eye protection, covering coughs
Touch (contact / surfaces)	Germs on hands, door handles, taps and shared objects reach the mouth, nose or eyes.	Handwashing, not touching the face, cleaning high-touch surfaces
Body fluids	Blood, vomit, faeces, urine, saliva or semen from an infected person enter through broken skin, mucous membranes or needles.	Gloves, aprons, eye protection, safe waste and laundry, no sharing of razors or toothbrushes
Food and water (faecal-oral)	Tiny amounts of faeces contaminate water, food or hands.	Safe water, handwashing after the toilet and before food, food hygiene
Insects and ticks	A bite passes the germ from an infected animal or person.	Covering skin, repellent, nets, tick checks, removing standing water

Incubation: how long between catching it and getting ill

Infection	Incubation	When it's contagious
Influenza	1–4 days (about 2)	From about a day before symptoms to 5–7 days after; most in the first 3 days
COVID-19	2–14 days; about 3–4 days for recent variants	Just before symptoms and the first few days; can spread without symptoms
Measles	7–21 days (usually 10–12)	4 days before the rash to 4 days after; extremely contagious
Chickenpox	10–21 days	1–2 days before the rash until all spots have crusted
Norovirus	12–48 hours	While ill and for at least 48 hours after; can spread for 2 weeks
Cholera	12 hours – 5 days	Many carriers have no symptoms
Ebola	2–21 days	Only once symptoms start — rising as illness worsens; dead bodies remain infectious
Pneumonic plague	1–7 days (can be 24 hours)	Through the air from coughing patients; treatable with antibiotics if started early
Tuberculosis	Weeks to years	Only active lung TB; latent infection isn't contagious

How contagious? The "R" number

The basic reproduction number (R_0) is how many people one infected person infects, on average, when nobody is immune and no precautions are taken. Above 1, an outbreak grows; below 1, it shrinks.

Infection	Typical R_0
Seasonal flu	about 1.3
2009 swine flu / 1918 flu	about 1.5 / 1.8
COVID-19: original / Delta / Omicron	about 2.8 / 5 / 8
Measles	often quoted as 12–18

Sources: CDC and WHO disease fact sheets; NHS England National Infection Prevention and Control Manual; WHO terminology for transmission through the air (2024); Biggerstaff et al. 2014; Liu & Rocklöv (Journal of Travel Medicine) 2020–22; Guerra et al. 2017.

 Layers of Protection: The Swiss-Cheese Approach

No single measure stops an infection. A mask leaks a little, hands get missed, a window gets closed. But each layer catches most of what gets past the one before — like slices of Swiss cheese, where the holes rarely line up. Stack enough layers and the chance of infection drops dramatically. The skill is choosing the layers that match how *this* disease spreads.



If the disease mainly spreads by...	Most important layers	Less important
The air (flu, COVID-type viruses, measles, TB)	Fewer indoor contacts, ventilation and filtration, FFP2/FFP3 respirators, isolating the sick	Wiping shopping and post
Touch and surfaces (norovirus, many gut infections, some respiratory viruses)	Handwashing with soap, cleaning shared surfaces, not touching your face, separate towels	Masks outdoors
Body fluids (Ebola-type fevers, blood-borne viruses)	No contact with the sick person's blood, vomit, faeces, urine; gloves, gown, eye protection; safe waste and laundry	Distance outdoors
Food and water (cholera, typhoid, hepatitis A)	Safe water (boil or treat), food hygiene, handwashing, toilets that keep waste contained	Masks
Insects and ticks (Lyme disease, mosquito-borne infections)	Covering skin, repellent, checking for ticks, removing standing water	Masks, distance

When you don't know yet how it spreads, assume the worst: treat it as airborne *and* spread by touch. Use every layer until official advice says which ones matter. In the early weeks of COVID-19, the emphasis was on handwashing and surfaces; it took months for the importance of airborne spread and ventilation to be widely accepted — see Lessons from history.

Your exposure budget

Risk depends on **how many** people you meet, **how close**, for **how long**, and in **how much air**. A short chat outdoors at two metres is very low risk; an hour in a small, crowded, closed room is high risk — even with masks. In a serious outbreak:

- ★ Swap indoor meetings for outdoor ones. If indoors, open windows, keep it short and keep apart.
- ★ Choose one or two "essential trip" people per household; go at quiet times; wear a respirator; get in and out.
- ★ Form a small "bubble" with one other household at most, and agree rules together.
- ☐ Avoid crowded, enclosed places entirely during peaks: public transport at rush hour, packed shops, waiting rooms, pubs.
- ☐ Keep a short written log of where you've been and whom you met — it makes warning others far easier if you fall ill.



Masks & Respirators That Actually Work

"Do masks work?" became one of the angriest questions of COVID-19. The honest answer: a **well-fitted respirator, worn properly, protects the wearer substantially**; a loose surgical or cloth mask protects much less; and policies telling whole populations to wear masks showed smaller, harder-to-measure effects, because many people wore them badly or not at all.

Type	Filters (minimum)	Leakage allowed	Use it for
FFP3 respirator (EN 149)	99%	≤ 2%	Caring for a sick person; high-risk settings; the best protection a household can buy
FFP2 respirator (EN 149)	94%	≤ 8%	Shopping, travel, any shared indoor air during an outbreak
Surgical mask (Type IIR)	—	Loose fit	For a <i>sick</i> person to wear around others (catches what they breathe out); splash protection
Cloth / fabric mask	Variable, low	Loose fit	Better than nothing; not recommended when a respirator is available

What the evidence says. A large 2023 Cochrane review of community trials found little measurable effect from *advising* people to wear medical masks — but the review's own editors warned that reading this as "masks don't work" is "inaccurate and misleading": in the main trial fewer than half of people actually wore them. Where respirators were worn consistently, the picture is clearer: on Cambridge hospital COVID wards in 2021, switching staff from surgical masks to FFP3 respirators cut ward-acquired infections dramatically. Eye protection was also linked to much lower infection rates in health workers.

Sources: Jefferson et al., Cochrane 2023 and Cochrane editorial statement; Ferris et al., eLife 2021; Chu et al., The Lancet 2020; EN 149; HSE INDG479.

Fit is everything

PUT IT ON AND CHECK THE SEAL — EVERY TIME

1. Clean hands. Hold the respirator by the edges; check it isn't damaged.
2. Cup it over nose and chin; pull the top strap over the crown of the head, the bottom one round the neck.
3. Press the metal nose clip with **two hands** to mould it to your nose — not a pinch.
4. **Seal check:** cover the front with both hands and breathe out sharply — no air should escape round the edges. Breathe in sharply — the mask should pull in slightly. If air leaks, readjust and check again.

WHAT RUINS THE SEAL

- **Beards and stubble** — respirators need to be worn on clean-shaven skin to seal properly. A day's stubble is enough to let air leak.
- The wrong size: try two or three models before an emergency and keep the one that seals.
- Glasses pushing it out of place; hair under the edge; earloop-only styles.
- Talking a lot, wet or damaged masks.
- A seal check every time is essential but isn't a substitute for a professional **fit test** (offered by many workplaces and safety suppliers).

Taking it off safely — and reusing in a shortage

REMOVAL IS WHEN PEOPLE INFECT THEMSELVES

- Don't touch the front. Remove gloves first, clean hands, then lift the bottom strap, then the top strap, from behind.
- Dispose of it in a bag, or store it for reuse (below), then clean your hands again.
- Carers: practise taking off gloves, apron, eye protection and respirator in a set order, with someone watching.

REUSE WHEN SUPPLIES RUN SHORT

- FFP respirators marked "**NR**" are designed for single use (one shift); "R" means reusable.
- In shortages, US crisis guidance allows limited reuse: **no more than about 5 times per respirator**, stored between uses in a clean paper bag, labelled with the user's name.
- Rotate several respirators so each rests a few days between uses.
- Throw it away if it is wet, dirty, damaged, contaminated with body fluids, or hard to breathe through.
- Never share respirators; don't wash or spray them with disinfectant.

Children: respirators are designed for adults' faces. Smaller sizes exist, but don't put any mask on children under 3, anyone who can't remove it themselves, or anyone with breathing difficulty. For young children, rely on ventilation, distance and handwashing.

Clean Air: Ventilation & Filtration at Home

For infections that spread through the air, the most powerful protection in a home is fresh air. Infectious particles build up in a closed room like smoke; opening windows or filtering the air clears them. COVID-19 spread most readily in crowded, poorly ventilated indoor spaces — and much less outdoors.

VENTILATE (FREE)

- Windows don't need to be open all the time: opening them fully for a few minutes at a time helps a lot.
- When anyone visits, open windows fully during the visit and for at least 10 minutes afterwards.
- **The sick room:** window slightly open, door kept closed, so air leaves the house rather than spreading inside it.
- Keep trickle vents open; run kitchen and bathroom extractor fans longer.
- **WINTER** Open windows a little, or the top sash only, and heat rooms to at least 18°C for older people and anyone with long-term conditions.

FILTER (WHEN YOU CAN'T VENTILATE)

- A **HEPA air purifier** removes particles from a room's air. It is *not* a substitute for ventilation and should never be a reason to close windows.
- Size it for the room: aim for **5 or more air changes per hour** — the purifier's clean air delivery rate (CADR) should be at least 5 times the room's volume per hour.
- Avoid ionisers, "plasma" and ozone devices: the evidence is weak and some produce harmful by-products.
- Real performance is often below the manufacturer's claim — buy bigger than you think.

Use a CO₂ monitor to check the air

People breathe out carbon dioxide, so CO₂ levels show how much "used" air is in a room. An NDIR CO₂ monitor (£30–£80) turns ventilation from guesswork into a number.

CO ₂ reading (occupied room)	Meaning	Action
Below 800 ppm	Likely well ventilated (not risk-free)	Keep going
800–1,500 ppm	Moderate	Open windows more, fewer people, shorter time
Over 1,500 ppm (sustained)	Poor ventilation or overcrowding	Ventilate now; avoid sharing the room

Outdoor air is about 400–450 ppm. CO₂ monitors don't work as a guide in rooms with an air purifier (purifiers clean particles, not CO₂). Use NDIR-type monitors — cheap "eCO₂" sensors are unreliable.

DIY filter (Corsi–Rosenthal box): four good-quality furnace-type air filters taped into a cube around a box fan make a cheap, powerful air cleaner — tests found it removed particles about as well as commercial HEPA purifiers at a fraction of the cost. It's noisy and there is no direct proof yet that it reduces infections, but it is a reasonable option when commercial purifiers sell out. Use filters rated to capture fine particles (MERV 13 in US terms, or ISO 16890 ePM1 grades), and never leave it running unattended in a way that could overheat.

Sources: UK Government ventilation guidance (2022); SAGE Environmental Modelling Group papers on CO₂ monitoring (2021) and air cleaning devices (2020); HSE; CDC "Aim for 5"; Holder et al. 2022 (US EPA); Srikrishna 2022.

Cleaning, Disinfection & Hand Hygiene

For infections spread by touch, food or body fluids, cleaning is a frontline defence. For airborne infections it matters less than ventilation — but handwashing still cuts respiratory infections, and every household needs to clean up vomit, diarrhoea and blood safely.

 **HANDWASHING — THE BASICS THAT WORK**

- Soap and water for at least 20 seconds, all surfaces, then dry with a clean towel. Good hand hygiene reduces respiratory infections by roughly 14% in studies — more for gut infections.
- **Always use soap and water, not gel**, after the toilet, after handling vomit or diarrhoea, and when norovirus or C. difficile is around: **alcohol gels don't kill norovirus**.
- Hand sanitiser needs **at least 60% alcohol**; rub until dry (about 20 seconds). It doesn't work on visibly dirty hands.
- Separate towels for the sick person.

 **CLEAN, THEN DISINFECT**

- **Cleaning** (detergent and water) removes dirt and most germs. **Disinfecting** kills what's left. Disinfectants don't work well on dirty surfaces — clean first.
- Daily in an outbreak: door handles, light switches, taps, toilet flush and seat, phones, remotes, banisters, kitchen worktops.
- In the sick room and its bathroom: clean, then disinfect at least daily.
- Ventilate while using bleach. **Never mix bleach with other cleaners** (especially acids or ammonia) — it releases toxic chlorine gas.

Mixing bleach to the right strength

Health services use two strengths of chlorine disinfectant: **1,000 ppm** for routine disinfection of surfaces and toilets, and **10,000 ppm** for spills of blood. Household bleach in the UK is usually about 3–5% sodium hypochlorite (check the label). Make up a fresh solution each day, in a labelled container.

Use	Strength	With ~4.5% bleach (most UK bleach)	Contact time
Surfaces, toilets, sick-room cleaning; vomit or diarrhoea after it has been cleaned up	1,000 ppm	about 20–25 ml bleach made up to 1 litre with cold water ($\approx$ 1 part bleach to 45 parts water)	Leave wet for at least 5 minutes, then rinse food surfaces
Blood spills	10,000 ppm	about 220 ml bleach made up to 1 litre ($\approx$ 1 part bleach to 4–5 parts water)	Cover with paper towels soaked in the solution; leave at least 3 minutes

These dilutions are calculated from health-service strengths; there is no official UK household dilution. Bleach weakens with age, heat and light — use bottles within their date, stored cool and dark. Plain (thin) bleach mixes more evenly than thick bleach. Don't pour bleach directly onto urine. Hospitals use chlorine tablets or granules, which are more reliable if you can get them.

Cleaning up vomit, diarrhoea and blood

1. Keep others away; open a window.
2. Put on gloves and an apron (plus a mask and eye protection for vomit or a large spill).
3. Cover and soak it up with paper towels (or kitchen roll, or cat litter); scoop into a bin bag.
4. Clean the area with detergent and hot water.
5. Disinfect with the right bleach strength (above) and leave for the contact time.
6. Bag everything, tie it, put it in a second bag. Remove the apron, then gloves; wash hands with soap and water.
7. **Laundry with vomit or faeces on it:** wash separately at 60°C.

Sources: NHS England National Infection Prevention and Control Manual (incl. Appendix 9); NHS (norovirus, laundry); CDC hand sanitiser and norovirus guidance; Cochrane 2023; manufacturer safety data sheets.

Isolating a Household: Shielding, Deliveries & Coming Home

In a dangerous outbreak, the safest place for most families is home, with as few outside contacts as possible. Isolating well is a set of habits: a clean entry routine, careful deliveries, a plan for the one person who has to go out, and a way to keep the most vulnerable person furthest from risk.

THE "CLEAN ENTRY" ROUTINE

1. Set up a "dirty zone" just inside the door: hooks for coats, a box for shoes, hand sanitiser, a bin, a bag for outer clothes.
2. Coming in: shoes off, coat and bag on the hook, mask removed by the straps into the bin (or a paper bag if reusing).
3. Wash hands for 20 seconds before touching anything else in the house.
4. In a severe outbreak: put outer clothes straight into the wash and shower.
5. Wipe phone, keys and glasses.

DELIVERIES & SHOPPING

- Ask for contact-free delivery to the doorstep; collect after the driver has left.
- For airborne diseases, the risk from packaging is low — handwashing after unpacking is usually enough.
- For diseases that survive on surfaces, leave non-perishables in a porch or garage for 72 hours, or wipe them, and wash fresh produce under running water.
- Don't share delivery slots or items with other households without care.

THE ONE WHO GOES OUT

- Pick one healthy, lower-risk adult to do all essential trips.
- Go at quiet times, with a list, a respirator, sanitiser and contactless payment or exact cash.
- Combine errands; make each trip count.
- That person is the household's main exposure: they should keep their distance from the most vulnerable person at home.

SHIELDING SOMEONE VULNERABLE

- Give the most vulnerable person (very old, immunosuppressed, on chemotherapy, with serious lung or heart disease) their own room and, ideally, bathroom.
- If sharing a bathroom, they use it first; others clean touched surfaces after use.
- Everyone else in the house acts as if they could be carrying the infection: keep apart, ventilate, mask when close.
- Arrange food and medicine deliveries for them; ask neighbours and volunteers to help.

Quarantine vs isolation — and how long

Term	Meaning	How long
Isolation	Keeping a person who <i>is</i> ill or infected away from others	Usually until symptoms have gone and any fever has settled — follow official advice for the specific disease
Quarantine	Keeping a person who <i>has been exposed</i> but isn't ill yet away from others, in case they become infectious	For the length of the disease's incubation period (see How infections spread)
Shielding	Extra protection for people at very high risk, who stay home and avoid almost all contact	For as long as the disease is spreading widely in the community

ISOLATION HAS COSTS

Long isolation harms mental health, children's development, fitness and finances, and lonely, frightened people make worse decisions. Plan for it: routines, daylight and exercise, contact by phone and video, and a clear picture of when it will end. See Mind & morale.

Setting Up a Sick Room at Home

When someone in the household falls ill, the aim is to look after them well while keeping everyone else from catching it. A dedicated sick room, one main carer and a few simple routines make a large difference — households that separate the sick person early have far fewer onward infections.

CHOOSE THE ROOM

- ★ A single room with a door that closes and a window that opens.
- ★ Closest to a toilet; ideally a bathroom used by the sick person only.
- ☐ Away from the most vulnerable people in the house.
- ☐ Remove clutter, rugs and soft toys that are hard to clean.
- ☐ Bed raised or propped so the person can sit up (easier breathing, easier care).

STOCK THE ROOM

- ★ Large jug of water and a cup, oral rehydration sachets
- ★ Thermometer, pulse oximeter, the daily check chart and a pen
- ★ Bucket or bowl for vomit, tissues, a lidded bin lined with a bag
- ☐ Hand sanitiser at the door; masks, gloves and aprons for the carer
- ☐ A bell or phone to call for help; a torch; extra pillows and blankets
- ☐ Bedpan or commode if the toilet is too far

Keeping the carer and the household safe

Risk	What to do
Breathing the same air	Keep the sick-room door closed and its window open a little. Open windows in the rest of the house too. The sick person wears a mask when the carer is in the room, if they can breathe comfortably with it; the carer wears a well-fitted FFP2/FFP3.
Hands and surfaces	Wash hands before and after every visit. Clean door handles, light switches, taps and the toilet daily. Gloves for anything touching body fluids, then hands washed after removing them.
Dishes and food	Separate cup, plate and cutlery, washed in hot soapy water (or a dishwasher). Carer doesn't eat in the sick room.
Laundry	Don't shake dirty linen. Carry it in a bag; wash at 60°C or the hottest the fabric allows, with detergent; dry thoroughly.
Waste	Tissues, masks and gloves into a lined bin in the room; tie the bag, put it inside a second bag, and keep it aside for 72 hours before putting it out with normal waste (unless told otherwise).

Risk	What to do
Vomit, diarrhoea, blood	Gloves and apron; absorb with paper towels; clean with detergent, then disinfect with diluted bleach (see Cleaning); bag and seal the waste.

One carer, rotating if possible. Choose one healthy adult as the main carer, ideally not someone at high risk. If the illness lasts long, arrange a second carer to take over so the first can rest — exhausted carers make mistakes and get ill. Carers should watch their own temperature and symptoms every day.

Caring for the Sick at Home: The Essentials

Good nursing saves lives. Before antibiotics or intensive care existed, careful nursing — rest, warmth, fluids, food and close watching — was the main treatment for severe infections, and it is still the foundation of care. Those basics — plus a thermometer, a pulse oximeter and a written record — are the core of caring for someone at home today.

FLUIDS FIRST

- Fever, fast breathing, vomiting and diarrhoea all drain fluid. Dehydration makes every illness worse.
- Aim for **pale straw-coloured urine**. Dark urine, or passing very little, means drink more.
- Offer small amounts often — a few sips every 10–15 minutes is easier than a full glass.
- Water, diluted juice, weak squash, soup, ice lollies, jelly; oral rehydration solution if vomiting or with diarrhoea.

REST, WARMTH & COMFORT

- Rest in bed or a chair, propped up if breathing is difficult.
- Light clothing and bedding during a fever — don't wrap up tightly or try to "sweat it out", and don't sponge with cold water.
- Change position every 2 hours if they can't move much; check heels, hips and the base of the spine for red marks (pressure sores).
- Keep the room calm and ventilated; dim light helps headaches.

FOOD

- Appetite often disappears — that's fine for a few days if they drink.
- Offer small, easy meals: soup, toast or crackers, rice, porridge, bananas, yoghurt, eggs.
- As they recover, build up protein and calories again.

HYGIENE & DIGNITY

- Mouth care: sips of water, brush teeth or wipe the mouth, lip balm — a dry mouth is miserable.
- Help with washing; change sweaty bedding and clothes.
- Help to the toilet or commode; watch for falls when they first stand.
- Talk to them, explain what you're doing, keep them company — fear makes everything worse.

The daily check chart

Write down a few simple measurements **at least every 4–6 hours** (more often if worried). Patterns matter more than single numbers: rising breathing rate, falling oxygen, less urine or increasing drowsiness are early warnings. Bring the chart if you need help.

Date / time	Temp (°C)	Breaths / min	Pulse / min	Oxygen (SpO ₂ %)	Drinks (ml)	Urine (times / colour)	Alert? Confused? Drowsy?	Medicines given (time)

The pocket guide has a full-page version of this chart to copy. Count breaths for a full minute while the person is resting and not aware you're counting (watch the chest rise). Normal resting adult breathing is roughly 12–20 breaths a minute; a resting pulse is usually 60–100.

Record medicine times. When several people look after a patient, double-dosing paracetamol is a common and dangerous mistake. Write down every dose with the time, and check the chart before giving another.



Danger Signs: When Illness Becomes an Emergency

Most people with an infection get better at home. A few become seriously ill — usually from sepsis (the body's over-reaction to infection), pneumonia, low oxygen or dehydration — and the difference between life and death is often how quickly someone notices. Check for these signs every time you do the daily check, and act at once if you see one.

● ADULTS — CALL 999 (OR GET TO A&E WITHIN THE HOUR) IF THEY HAVE ANY OF:

- **Oxygen level of 92% or less** on a pulse oximeter (retake it once straight away to check)
- Can't finish short sentences at rest; breathing suddenly worse; gasping; very fast breathing (30+ breaths a minute)
- Confusion, slurred speech, very drowsy or hard to wake, or very agitated
- Blue, grey, pale or blotchy skin, lips or tongue (on brown or black skin, check the palms, soles and inside the lips)
- Cold and sweaty with pale or mottled skin; collapse or fainting
- A rash that doesn't fade when a glass is pressed on it
- Passed no urine all day, or very little in 18 hours
- Uncontrollable shivering or severe muscle pain; coughing up blood; chest pain
- "I feel like I'm going to die" — take it seriously

● **ADULTS — GET SAME-DAY ADVICE (NHS 111, GP) IF:**

- Oxygen 93–94% (or lower than their usual if it's normally below 95%) — retake within an hour first
- Breathless, especially on standing up; new pain when breathing in
- High temperature (38°C+) that isn't improving after a few days, or comes back after getting better — a sign of a second, bacterial infection
- Not drinking enough; dark urine; dizzy on standing
- Symptoms not improving after a week, or "something just isn't right"
- They're in a higher-risk group (below) and getting worse

● **BABIES AND CHILDREN — CALL 999 IF THEY HAVE ANY OF:**

- Breathing very fast or with difficulty, grunting, the tummy sucking in under the ribs, or pauses in breathing
- Blue, grey, pale or blotchy skin, lips or tongue
- A rash that doesn't fade under a glass; a stiff neck; a fit (seizure) for the first time
- Drowsy, floppy, hard to wake, or not responding normally; a weak, high-pitched or continuous cry
- **Under 3 months with a temperature of 38°C or more;** 3–6 months with 39°C or more
- Temperature below 36°C (check twice within 10 minutes), or cold to touch
- No wee for 12 hours (under 5s); not feeding; vomiting repeatedly

● **CHILDREN — GET URGENT ADVICE (NHS 111) IF:**

- Fever lasting 5 days or more
- Not their usual self, not smiling, less active, waking only with effort
- Nostrils flaring when breathing; fast breathing (over 50 a minute aged 6–12 months, over 40 a minute over 1 year)
- Dry mouth, no tears, fewer wet nappies, poor feeding
- Oxygen 95% or less (in children, below 91% is a sign of serious illness)
- You are worried, or more worried than before — trust that instinct

Who is at higher risk of serious illness

Babies under 1, people over 75 (and over 65 with long-term conditions), pregnancy or a recent birth, miscarriage or abortion in the last 6 weeks, weakened immunity (chemotherapy, steroids, immunosuppressant medicines, HIV, sickle cell), diabetes, heart, lung, kidney or liver disease, a urinary catheter, recent surgery or wounds. Watch these people more closely and act sooner.

Older people often don't show typical signs. They may have no fever — or a low temperature — and no cough, even with pneumonia. New confusion, being off their food, falls, a "funny turn", tummy pain or sudden worsening of diabetes control can be the only warning. Sudden confusion is always a reason to call 999 or go to A&E.

Sources: NHS (sepsis; fever in adults and children; when to get urgent help for under-5s; shortness of breath); NHS England COVID-19 self-monitoring diary (2022); NICE NG143 (fever in under-5s, traffic-light system); NICE NG191; UK Sepsis Trust; NICE CKS chest infections (CRB-65).

Fever, Pain & the Right Doses

A fever is the body fighting infection — it isn't dangerous in itself, and bringing the number down doesn't cure the illness or prevent fits. Treat fever and pain to make the person **comfortable**, keep them drinking, and watch for the danger signs, which matter far more than the number on the thermometer.

TAKING A TEMPERATURE

- A high temperature is **38°C or more**.
- **Under 5s:** digital thermometer in the armpit (an infrared ear thermometer is fine from 4 weeks). Don't use mouth readings in young children, forehead strips or glass thermometers.
- **Older children and adults:** digital thermometer under the tongue until it beeps.
- Write it down with the time. A parent's feeling that a child is hot should be taken seriously.

COMFORT WITHOUT MEDICINE

- Plenty of fluids — little and often.
- Light clothing and bedding; a comfortably cool room.
- **Don't sponge with cold or tepid water**, and don't over-wrap or under-dress a child.
- Check on a feverish child during the night.

Paracetamol and ibuprofen — standard NHS doses

Always check the strength on the packet — liquid medicines for children come in different strengths. Use the oral syringe that comes with the medicine. Write down every dose and its time.

Adults (16+)	Dose	How often	Maximum
Paracetamol 500 mg tablets	1–2 tablets	At least 4 hours apart	8 tablets (4 g) in 24 hours
Ibuprofen 200 mg tablets	1–2 tablets, with or after food	Up to 3 times a day, at least 4 hours apart	6 tablets (1,200 mg) in 24 hours

Adults under 50 kg may need lower doses of paracetamol — check with a pharmacist. Don't take paracetamol with other products that contain it (many cold and flu remedies do). Don't take ibuprofen with other anti-inflammatories such as naproxen or aspirin. Adults can take paracetamol and ibuprofen together. Paracetamol for more than 3 days, or ibuprofen for more than 10, needs medical advice.

Child's age	Paracetamol infant liquid 120 mg/5 ml (up to 5 yrs) · 250 mg/5 ml "6+" liquid (6 yrs+)	Ibuprofen 100 mg/5 ml liquid
Under 2 months	Don't give — get medical advice	Don't give
2–3 months	2.5 ml (120 mg/5 ml) — only if over 4 kg and born after 37 weeks; up to 2 doses, then get advice	Don't give under 3 months
3–5 months	2.5 ml (120 mg/5 ml)	2.5 ml, up to 3 times a day — only if over 5 kg; no more than 24 hours without advice
6–11 months	5 ml (120 mg/5 ml)	2.5 ml, 3–4 times a day
1–3 years	1 yr: 5 ml · 2–3 yrs: 7.5 ml (120 mg/5 ml)	5 ml every 6–8 hours (max 3 doses in 24 h)
4–5 years	10 ml (120 mg/5 ml)	7.5 ml every 6–8 hours (max 3 doses)
6–7 years	5 ml (250 mg/5 ml)	7.5 ml (6 yrs) · 10 ml (7 yrs) every 6–8 hours (max 3)
8–9 years	7.5 ml (250 mg/5 ml)	10 ml every 6–8 hours (max 3)
10–11 years	10 ml (250 mg/5 ml)	7.5 ml of the 200 mg/5 ml liquid every 6–8 hours (max 3)
12–15 years	10–15 ml (250 mg/5 ml) or one 500 mg tablet	One or two 200 mg tablets every 6–8 hours (max 6 in 24 h), with food
How often	Up to 4 doses in 24 hours, at least 4 hours apart	As above — usually up to 3 doses in 24 hours

Doses are the NHS's published age-based doses (nhs.uk, 2025–26). Ibuprofen doses up to 9 years are for the 100 mg/5 ml liquid; from 10 years the NHS gives doses for the 200 mg/5 ml liquid or tablets. Always check your product's label. Give children medicine for more than 3 days only on medical advice.

SAFETY RULES

- **Children:** give paracetamol *or* ibuprofen, not both at the same time. Only alternate them if a doctor or nurse advises, or if the child is still distressed before the next dose is due — and write every dose down.
- **Don't give ibuprofen** to a child who is dehydrated, has chickenpox, is under 3 months or under 5 kg. It may not be suitable for anyone with asthma, kidney, liver or heart problems, stomach ulcers, or in pregnancy.
- **Pregnancy and breastfeeding:** paracetamol is the first choice. Avoid ibuprofen in pregnancy unless a doctor advises.
- **Never exceed the maximum dose.** Paracetamol overdose damages the liver without early symptoms — if too much is taken, call 111 or go to A&E even if the person feels fine.
- Never give aspirin to anyone under 16.

Sources: NHS paracetamol and ibuprofen pages for adults and children (2025–26); NICE NG143 (fever in under-5s); MHRA Drug Safety Update (September 2025).

Breathing Problems & Low Oxygen

Respiratory infections kill mainly by damaging the lungs so that not enough oxygen reaches the blood. A dangerous drop can happen before the person feels very breathless — which is why a pulse oximeter, used correctly, is one of the most useful things a household can own in a pandemic.

Using a pulse oximeter properly

HOW TO TAKE A READING

1. Rest, sitting, for at least 5 minutes first.
2. Remove nail varnish or false nails; warm the hand if it's cold.
3. Put it on the index or middle finger; rest the hand on the chest at heart level and keep still.
4. Leave it on for at least a minute, longer if the number keeps changing.
5. Record the **highest** number once it has stayed the same for 5 seconds. Don't confuse it with the pulse (heart rate) number.
6. Take a baseline when well, then at least 3 times a day when ill.

WHAT THE NUMBERS MEAN (ADULTS)

95–100%	Normal
93–94%	Get same-day advice (111) — retake within an hour first
92% or less	999 or A&E within an hour — retake once immediately first

Children: 95% or less is a warning sign; below 91% means serious illness.

Oximeters can over-read on darker skin. The UK's independent review of medical devices (2024) found extensive evidence that pulse oximeters overestimate oxygen levels in people with darker skin. Readings can also be wrong with cold hands, poor circulation, movement, nail varnish or bright light. Treat borderline numbers with extra caution, watch the *trend* over hours, and never let a "normal" reading override how the person looks and is breathing.

Watch the breathing itself

Sign	Adults	Children
Breathing rate at rest	Normal about 12–20 a minute; 30 or more is serious	Serious: over 60 (any age); warning: over 50 (6–12 months), over 40 (over 1 year)
Effort	Can't finish a sentence; using neck and shoulder muscles; can't lie flat	Grunting, nostrils flaring, skin sucking in between or under the ribs, head bobbing
Colour	Blue, grey or very pale lips, tongue or skin — on darker skin check the inside of the lips, gums, palms and soles	
Pauses and noises	Pauses in breathing, wheezing that's getting worse, noisy breathing (stridor)	

Helping someone who is breathless

- **Get help early** if any of the danger signs above appear — no home measure replaces oxygen and hospital care.
- Sit them up, leaning slightly forward, supported by pillows; avoid lying flat on the back.
- Some people breathe more easily lying on their side, or propped on their front — let them find the position that's most comfortable, and change position every couple of hours.
- Keep the room ventilated and calm; loosen tight clothing; slow, relaxed breathing out through pursed lips can help.
- Give fluids — breathless people dehydrate quickly.
- Use any prescribed inhalers as directed.

About "proning": during COVID-19, hospitals turned some patients who needed oxygen onto their front for hours a day, and trials found this reduced the need for ventilators. That evidence comes from hospital patients on oxygen with constant monitoring. No UK body advises self-proning at home as a treatment. At home, the safe advice is simply to avoid lying flat on the back and to change position for comfort — and to get help if oxygen levels fall.

SECOND INFECTIONS (SECONDARY PNEUMONIA)

After flu and other viral infections, a bacterial pneumonia can follow — it causes a large share of flu deaths. Warning signs: getting better then worse again, a fever that returns, new breathlessness, sharp chest pain when breathing in, or coughing up blood. These need urgent medical assessment, because bacterial pneumonia can be treated with antibiotics. In older people, new confusion may be the only sign.

Sources: NHS England COVID-19 self-monitoring diary (2022); MHRA pulse oximeter guidance (2021); Equity in Medical Devices Independent Review (2024); NICE NG143, NG191; NHS shortness of breath and bronchiolitis pages; Intensive Care Society proning guidance (2020); Weatherald et al., BMJ 2022; NICE CKS influenza and chest infections.

If Someone Stops Breathing or Chokes

Learn CPR on a course — reading isn't enough — but these are the steps from the Resuscitation Council UK's 2025 guidelines. The risk of catching an infection while giving CPR is low, and the risk of doing nothing is death.

ADULT CPR

1. Unresponsive? **Call 999 immediately**, phone on speaker.
2. Not breathing normally? Slow, gasping or noisy breathing counts as *not* normal.
3. Push hard and fast in the centre of the chest (lower half of the breastbone): **5–6 cm deep, 100–120 a minute**, letting the chest come back up fully.
4. If trained and willing: 30 compressions to 2 rescue breaths. Otherwise, continuous compressions — the 999 call handler will guide you.
5. Send someone for a defibrillator (AED) — anyone can use one; it talks you through it.
6. During COVID-19 the Resuscitation Council advised: don't put your face close to theirs to check breathing; lay a cloth or towel over their mouth and nose and do compression-only CPR until the AED or ambulance arrives. Use the same approach in a dangerous respiratory outbreak.

CHILD AND BABY CPR

1. Shout for help; call 999 (if alone, start CPR first, then call on speaker).
2. Give **5 rescue breaths** — breaths matter more in children. Then 30 compressions to 2 breaths (15:2 if trained in children's CPR).
3. Press down at least one third of the depth of the chest: two fingers or two thumbs for a baby, one or two hands for a child.
4. 100–120 compressions a minute. Keep going until help arrives.
5. In a pandemic, the risk of infection from a child is small compared with the risk of not acting — give breaths.

CHOKING — ADULT OR CHILD OVER 1

- Encourage them to cough.
- If the cough isn't working: up to **5 sharp back blows** between the shoulder blades.
- Then up to **5 abdominal thrusts** (hands clasped above the belly button, pull sharply in and up).
- Repeat; call 999 if it's not cleared. If they become unconscious, start CPR.

CHOKING — BABY UNDER 1

- Lay the baby face down along your forearm, head lower than the body, supporting the head.
- Up to **5 back blows**.
- Turn face up; up to **5 chest thrusts** with two fingers in the centre of the chest.
- Repeat; no blind finger sweeps. Call 999 if not cleared; CPR with 5 breaths if they become unresponsive.

Sources: Resuscitation Council UK 2025 adult and paediatric basic life support guidelines; RCUK statement on COVID-19 and CPR in community settings (2020).

Diarrhoea, Vomiting & Dehydration

Many infections — norovirus, cholera, some flu strains, Ebola-type fevers — kill through fluid loss. With cholera, prompt oral rehydration brings the death rate below 1%. Oral rehydration solution (ORS) is the single most important medicine a household can stock.

SIGNS OF DEHYDRATION

- **Adults and children:** thirst; dark, strong-smelling urine; peeing less; dizziness; tiredness; dry mouth, lips and eyes; sunken eyes.
- **Babies:** sunken soft spot on the head; few or no tears; fewer wet nappies; drowsy or irritable.
- **Emergency (999):** confusion, very drowsy, fast breathing, cold blotchy hands and feet; a child under 5 with no wee for 12 hours.

WHAT TO GIVE

- **Oral rehydration sachets** (Dioralyte, Electrolade and others) from a pharmacy, made up exactly as the packet says with safe water. Stock 20+.
- Small sips often — a teaspoon every 1–2 minutes for small children. If they vomit, wait 10 minutes and start again more slowly.
- Keep breastfeeding or formula feeding.
- Avoid fizzy drinks, fruit juice and sweet tea — too much sugar can make diarrhoea worse.
- Restart normal food as soon as they want it.

How much ORS to give after each loose stool (WHO)

Age	After each loose stool
Under 2 years	50–100 ml (a quarter to half a large cup)
2–10 years	100–200 ml (half to a whole large cup)
Older children and adults	As much as they want — at least a cup

Plus normal drinks in between. In a health service, a dehydrated child would be given about 50 ml per kg of body weight of ORS over 4 hours (NICE) — a rough guide to how much fluid is needed if they are clearly dry.

IF YOU HAVE NO SACHETS: HOME-MADE SOLUTION (LAST RESORT)

WHO's emergency recipe: **1 litre of safe (boiled and cooled) water + 6 level teaspoons of sugar + ½ level teaspoon of salt**, stirred until dissolved. Measure carefully — too much salt is dangerous, especially for babies. WHO's own manuals give slightly different salt amounts and say home-made mixes are easy to get wrong, so use proper sachets whenever you can. If you have neither, keep the person drinking anything safe while you get help.

OTHER CARE

- Don't give anti-diarrhoea medicine (loperamide) to children under 12, or to anyone with blood in their stool or a high fever.
- Strict handwashing with soap — gel doesn't kill norovirus.
- Stay off work or school until 48 hours after the last episode.
- Wash soiled bedding separately at 60°C.

GET HELP (111 OR GP) IF

- Signs of dehydration despite ORS, or can't keep any fluid down
- Blood in the stool or vomit; severe tummy pain
- Diarrhoea lasting more than 7 days, or vomiting more than 2 days
- A baby under 1 (especially under 6 months), more than 5 stools or 2 vomits in 24 hours
- Older, pregnant or immunosuppressed people, or anyone with kidney disease or diabetes

Sources: NHS (dehydration; diarrhoea and vomiting; norovirus); NICE CG84; WHO "The Treatment of Diarrhoea" (2005) and cholera Q&A; WHO cholera fact sheet.

BABIES UNDER 3 MONTHS — ALWAYS GET HELP

- A temperature of **38°C or more** in a baby under 3 months is treated as high risk — call 111 urgently or 999 if they look unwell. (A fever soon after vaccinations can be expected — check the leaflet.)
- No paracetamol under 2 months; no ibuprofen under 3 months, unless a clinician advises.
- Watch for poor feeding, fewer wet nappies, floppiness, a weak or high-pitched cry, breathing pauses or grunting.
- Keep breastfeeding: breast milk gives some protection and is the best fluid.

YOUNG CHILDREN

- Children get dehydrated faster than adults — offer fluids often.
- Use the children's danger signs and check them during the night too.
- Judge how ill a child is by how they look and behave, not just the temperature — a child who is playing and drinking with a temperature of 39°C may be less ill than a quiet, floppy child at 37.8°C.
- Don't put masks on children under 3. For older children, ventilation and handwashing matter more.
- Keep children's vaccinations up to date — measles, whooping cough and flu are dangerous on top of a pandemic.

Pregnancy

FEVER AND MEDICINES

- Get any temperature of 38°C or more checked in pregnancy — contact your GP (under 12 weeks), midwife or maternity unit.
- **Paracetamol** is the first choice for pain and fever in pregnancy — at the lowest dose that works, for the shortest time. Untreated fever can itself harm the baby. There is no good evidence that paracetamol causes autism (MHRA, 2025).
- **Avoid ibuprofen** and other anti-inflammatories unless a doctor advises.
- Pregnant women are a priority group for flu antivirals and vaccines — ask early.

PREGNANCY — GET URGENT HELP (999 / MATERNITY UNIT) FOR:

- Breathlessness that comes on suddenly, or when lying down
- Chest pain; fainting; confusion
- Bleeding; leaking fluid; severe tummy pain
- Severe headache, vision changes, sudden swelling
- **Any change in the baby's movements**
- Signs of sepsis — pregnancy and the 6 weeks after birth or miscarriage are high-risk times

Planning ahead: if you're pregnant during a pandemic, find out how your maternity unit is running, what to do if you have symptoms when labour starts, and keep your maternity notes and a hospital bag ready. Ask your midwife about vaccines recommended in pregnancy.

Sources: NICE NG143; NHS (fever in children; paracetamol and ibuprofen for children; pregnancy symptoms you need to get help for); MHRA Drug Safety Update (September 2025); NICE CKS influenza.

Older & Vulnerable People

Age was the single greatest risk factor for dying of COVID-19, and older people and those with weakened immune systems are at the top of every pandemic's risk list. They are also the people most likely to become ill without the usual warning signs.

SPOTTING ILLNESS EARLY

- Older people often have **no fever** — or a temperature that's slightly *low* (36°C or below) or just 1.5°C above their normal.
- Pneumonia may show only as confusion, drowsiness, falls, tummy discomfort or not eating — with no cough.
- **Sudden confusion** or a sudden change in behaviour needs urgent medical help.
- Know each person's normal: their usual temperature, oxygen level, breathing and how alert they are.
- Blood sugar control often goes haywire in people with diabetes when they're ill — check more often.

SHIELDING AT HOME (AS IN COVID-19)

- During COVID-19, people at highest risk (organ transplant recipients, people on chemotherapy or strong immunosuppressants, severe lung disease, some rare conditions) were advised to stay at home and avoid face-to-face contact for at least 12 weeks.
- Within the home: keep 2 metres apart, sleep separately, eat in their own room, use a separate bathroom if possible (or use it first, then others clean it), separate towels, ventilate shared areas.
- Essential carers continue — with respirators, hand hygiene and no visits when unwell.
- See Isolating a household.

PEOPLE WITH WEAKENED IMMUNITY

- May not respond fully to vaccines — the people around them getting vaccinated matters more.
- Should contact their specialist team at the first sign of infection — they may be eligible for early antiviral or antibody treatments.
- Keep a written care plan and contact numbers from their specialist team.

CARE HOMES AND HOME CARE

- Care homes were among the worst-hit settings in 2020. Ask the home about its outbreak plan, visiting arrangements and how you'll be kept informed.
- If a relative has home carers, agree a back-up plan if carers fall ill.
- Keep in touch daily — isolation and loneliness are dangerous in their own right.

Sources: NHS (sepsis; confusion); NICE CKS chest infections; UKHSA UTI diagnostic tool for over-65s (2025); archived PHE shielding guidance (March 2020); JCVI (December 2020).

Medicines: What to Stock & What Antibiotics Can't Do

In a crisis, people reach for antibiotics. But **antibiotics don't work on viruses** — flu, COVID-19 and most coughs and colds — and taking the wrong ones, at the wrong dose, for the wrong illness causes harm: side effects, C. difficile infection and drug-resistant bacteria. This guide deliberately doesn't give antibiotic or antiviral doses for self-treatment. It tells you how to get the right medicine quickly, and how to plan ahead with your GP.

Stock (over the counter):

- Paracetamol and ibuprofen — adult and children's (see doses)
- Oral rehydration sachets (20+)
- Antihistamines; indigestion remedies; loperamide (not for children under 12)
- Saline nasal spray, throat lozenges, honey (not for babies under 1)
- A month of all regular prescription medicines — ask your GP or pharmacist how to build a small buffer

DON'T:

- Take leftover or someone else's antibiotics, or buy them online without a prescription
- Take "cures" promoted on social media
- Combine several cold and flu products (many contain paracetamol)
- Stop regular medicines (blood pressure, inhalers, diabetes, mental health) because you're ill — unless a clinician advises it. Ask about "sick day rules" for diabetes and some heart and kidney medicines.

Plan ahead with your GP

If you have...	Ask about
COPD with past flare-ups	A "rescue pack" : a short course of steroid tablets and an antibiotic to keep at home, with written instructions on when to start them and a promise to tell your GP when you do (NICE NG115).
Asthma	An up-to-date asthma action plan; enough preventer and reliever inhalers; a spacer.
Diabetes	Sick-day rules; ketone testing; extra testing supplies.
Weakened immunity, or very high risk	Eligibility for early antiviral or antibody treatment, and how to get it fast.
Any regular prescription	Ordering a little early each month until you have 2–4 weeks in hand; electronic repeat prescriptions; delivery.

WHEN ANTIBIOTICS ARE NEEDED

- Bacterial pneumonia after flu or another virus (see Breathing) — getting worse after starting to recover, fever returning, chest pain on breathing, coughing blood.
- Sepsis, infected wounds, urine infections, some ear and throat infections, plague and anthrax after exposure.
- These need a clinician's assessment — phone 111 or a GP, describe the symptoms and readings from your check chart.

FLU ANTIVIRALS

- Oseltamivir (Tamiflu) and zanamivir are prescription-only medicines. In the UK they're offered when flu is circulating to people at higher risk — over 65s, pregnant women, babies, people with long-term conditions or weakened immunity — and only help if started within **48 hours** of symptoms.
- In a flu pandemic, the government stockpiles antivirals and may set up a national flu service and collection points. Find out how it works as soon as it's announced, so you can act within the 48 hours.

Sources: NHS (antibiotics); NICE NG115 (COPD), NG120 (cough), NG191; NICE CKS influenza (December 2025); BNF; DHSC Pandemic Preparedness Strategy (March 2026); UK AMR National Action Plan 2024–29.



The Home Medical Kit & Skills to Learn

A well-stocked kit and a few practised skills let you handle most illness and injury at home, and recognise when you can't. Keep it in one box, check dates twice a year, and make sure every adult knows where it is.



MONITORING

- ★ Digital thermometer (under-arm digital for children under 5; ear or digital for older children and adults)
- ★ Fingertip pulse oximeter + spare batteries
- ☐ Blood pressure monitor (if anyone has heart or kidney problems)
- ☐ Blood glucose meter and strips (if anyone has diabetes)
- ☐ Watch or phone with a seconds display (for counting breaths and pulse)



MEDICINES (OVER THE COUNTER)

- ★ Paracetamol tablets and children's liquid paracetamol
- ★ Ibuprofen tablets and children's liquid ibuprofen (if suitable)
- ★ Oral rehydration sachets (20+)
- ☐ Antihistamine tablets and liquid; hydrocortisone 1% cream
- ☐ Loperamide (not for children under 12), indigestion remedy
- ☐ Saline nasal spray, throat lozenges, honey (not for babies under 1)
- ☐ Oral syringes for measuring children's doses



FIRST AID

- ★ Sterile dressings, gauze, plasters, wound closure strips, micropore tape
- ★ Crepe and triangular bandages; safety pins; tweezers; scissors
- ★ Saline pods or clean water for wound cleaning; antiseptic wipes
- ☐ Burns dressings / cling film; instant cold packs
- ☐ Large trauma dressing; tourniquet (and training to use it)
- ☐ CPR face shield



INFECTION CONTROL

- ★ Nitrile gloves, aprons, FFP2/FFP3 respirators, eye protection
- ★ Hand sanitiser and liquid soap
- ★ Plain unscented bleach and measuring jug
- ☐ Bin bags, clinical waste-style bags, paper towels
- ☐ Vomit bowls, commode or bedpan, waterproof sheet

Wounds and tetanus: press on a bleeding wound with a clean pad and raise it; rinse with tap or bottled water (boiled and cooled if tap water isn't safe); cover with a dressing. Get urgent advice for wounds that won't stop bleeding, are large, deep, longer than about 5 cm, have dirt or soil in them after cleaning, are bites, or show infection (spreading redness, swelling, pus, fever). Five doses of tetanus vaccine give lifelong protection; if you're not sure you've had them, a dirty or puncture wound needs medical assessment for a booster.

Skills worth learning now

Skill	Why	Where
First aid and CPR (adult, child, baby)	Cardiac arrest, choking, bleeding, burns, the unconscious casualty	St John Ambulance, British Red Cross, St Andrew's First Aid (Scotland)
Taking temperature, pulse, breathing rate, oxygen	Spotting deterioration early	Practise on healthy family members now — know their normal readings
Putting on and taking off PPE	Most carer infections happen while taking PPE off	See Masks; practise with a friend checking
Giving oral rehydration, measuring children's doses	The commonest life-saving treatments at home	This guide; your pharmacist
Moving and positioning someone safely	Preventing falls, pressure sores and carer injury	Carers' organisations, NHS videos

When the NHS Is Overwhelmed

In a severe pandemic, the NHS keeps working — but phone lines are jammed, ambulances are delayed, GP surgeries change how they work, and hospitals prioritise the sickest. Knowing how the system works under pressure, and what you can safely manage at home, helps you get help to the people who need it most — including your own family.

Service	Use it for	If it's overwhelmed
999 / 112	Life-threatening emergencies: not breathing, severe breathing difficulty, unconscious, chest pain, signs of sepsis, severe bleeding, fits	Keep trying — emergency calls are prioritised and can use any network. If an ambulance will be delayed, ask the call handler whether to bring the person to A&E yourself.
NHS 111 (phone or online)	Urgent advice the same day; deciding where to go; out-of-hours prescriptions	Use the online service at 111.nhs.uk if lines are jammed. Write down symptoms, temperature, oxygen readings and medicines before you call.
GP surgery	Ongoing illness, prescriptions, long-term conditions	Expect phone or video triage first; use online forms; ask about remote monitoring.
Pharmacy	Advice on minor illness, medicines, Pharmacy First conditions (England)	Pharmacists are often easiest to reach; send someone healthy, or phone first.
Hospital A&E	Emergencies; when told to attend	Go if it's an emergency, even if it's busy. Take medicines, the check chart, a phone charger, snacks, a mask.

PREPARE BEFORE YOU NEED HELP

- For each person: a one-page summary — name, date of birth, NHS number, conditions, medicines, allergies, GP, next of kin.
- Keep the daily check chart up to date — it's exactly what a clinician will ask for.
- Know where your nearest A&E, urgent treatment centre and pharmacy are, and how you'd get there without an ambulance.
- Agree who would go to hospital with a sick child or a confused older relative.

GETTING HELP WHEN PHONES FAIL

- Go in person to the nearest hospital, GP surgery, pharmacy, fire or police station.
- Send two healthy people with a written note: patient details, symptoms, timings, readings, medicines.
- Listen to local radio for emergency medical points, testing centres and treatment centres.
- Neighbours with nursing, medical or first-aid training can be invaluable — know who they are now.

Most people who catch even a dangerous infection recover at home. Your job as a carer is good basic care — fluids, rest, fever control, hygiene, monitoring — and spotting the small number who are getting worse, early. That is what the next sections cover.

Deliberate Release & Bioterrorism

A deliberate release of a disease-causing agent is one of the scenarios the UK government plans for. It is far less likely than a natural pandemic — the government assesses that terrorists are more likely to use knives, vehicles or explosives, and the UK has never had a large-scale chemical, biological, radiological or nuclear attack — but if it happened, the first hours would matter, and the right actions are simple.

HOW A RELEASE MIGHT SHOW ITSELF

- An announced incident: a suspicious package, powder, spray or device, with emergency services on scene.
- Or no obvious event — just an **unusual pattern of illness** spotted by doctors days later: clusters of severe illness in previously healthy people, a disease not normally seen in the area, illness in an unusual age group, many people falling ill after the same event, or people and animals falling ill together.
- Many agents of concern (for example anthrax) are **not passed from person to person** — the danger is the original exposure. A few (such as plague in its lung form) can spread between people, which is why officials may ask exposed people to stay apart.

WHAT THE AUTHORITIES WILL DO

- Emergency services cordon the area, assess the hazard and may carry out **mass decontamination** of people on site.
- People who may have been exposed will be told **not to leave and travel to hospital** themselves — it can spread contamination; medical help comes to them.
- Public health teams trace and contact anyone exposed.
- The UK holds stocks of medical countermeasures; exposed people may be given preventive treatment or vaccines at local distribution centres.

If you are caught up in it: REMOVE yourself · REMOVE outer clothing · REMOVE the substance — then follow the emergency services.

Step	What to do
Remove yourself	Move away from the source, ideally upwind and out of any visible cloud or powder. Don't touch anything. Don't eat, drink or smoke.
Remove outer clothing	Take off outer clothing carefully, avoiding pulling it over your head (cut it off if needed). Official guidance says removing outer clothing can remove up to 80–90% of contamination. Bag it and leave it.
Remove the substance	Blot (don't rub) exposed skin with dry absorbent material — paper towels, tissue. For a suspected biological agent, or if skin or eyes are irritated, wash with plenty of water. Decontaminate yourself before helping others.
Stay and tell	Stay nearby for the emergency services and tell them what you saw and where you were. Don't go home to your family or to a GP surgery.
If you're not at the scene	"Go in, stay in, tune in": go indoors, close doors and windows, switch off fans and ventilation that draw air in, and follow BBC radio and official alerts. Cars and tents don't give adequate protection.

SUSPICIOUS LETTERS AND PACKAGES

- Don't open, shake, sniff or empty it.
- Put it down gently; leave the room; close the door; keep others out.
- Wash your hands with soap and water.
- Call 999 and list everyone who was in the room.
- Most turn out to be hoaxes — but treat each one as real.

Emergency Alerts: the government can send a loud, siren-like alert with instructions to every mobile phone in an affected area — even on silent — for about 10 seconds. Genuine alerts never ask for personal details or link to forms. Follow what they say.

Sources: UK National Risk Register 2025 (CBRN attacks); gov.uk "What to do in a chemical emergency" (2024) and prepare.campaign.gov.uk; JESIP Initial Operational Response (2023); gov.uk Emergency Alerts; police guidance on suspicious packages; public-health descriptions of unusual outbreak patterns.



High-Consequence Infections (Ebola-type)

A small group of infections are so dangerous that the UK treats them as **High Consequence Infectious Diseases (HCIDs)**: they often kill a high proportion of those infected, may have no reliable treatment, are hard to recognise early, and can spread in homes and hospitals. Suspected cases go to specialist NHS isolation units in London, Newcastle, Liverpool, Sheffield and a handful of other centres.

Type	Examples (UKHSA list)	How it spreads
Contact HCIDs	Ebola, Marburg, Lassa fever, Crimean-Congo haemorrhagic fever and other viral haemorrhagic fevers	Direct contact with the blood or body fluids (vomit, faeces, urine, sweat, saliva, semen) of a sick person or a body; contaminated bedding and clothing
Airborne HCIDs	MERS, SARS, pneumonic plague, Nipah, Andes hantavirus, and dangerous bird-flu strains (H5N1, H5N6, H7N7, H7N9)	Through the air and close contact

IF SOMEONE MAY HAVE AN HCID

- Typical warning: fever plus travel to (or contact with someone from) an affected area within the incubation period — up to 21 days for Ebola — or a link to a known outbreak.
- **Don't take them to a GP surgery or A&E unannounced.** Isolate them in a room, phone **999** (if seriously ill) or **NHS 111**, and say clearly that you are worried about a dangerous infection and why. They will tell you where to go and how.
- Keep everyone else out of the room. Only one person should help them, and only if they must.

Why caring for an Ebola-type infection at home is so dangerous

In the West African Ebola epidemic of 2014–16, family members caring for the sick, health workers and people preparing bodies for burial were among the most likely to be infected. Patients are most infectious when they are most ill — with vomiting, diarrhoea and bleeding — and bodies remain infectious after death. Home care should be a last resort, only when specialist care truly cannot be reached.

IF THERE IS NO ALTERNATIVE TO HOME CARE

- One carer only, who is not pregnant, elderly or unwell.
- Full protection for every contact: long-sleeved waterproof gown or apron over clothing, two pairs of gloves, FFP3 respirator, goggles or face shield, closed shoes or boots.
- Never touch body fluids with bare skin. No sharing of anything.
- Contaminated waste and linen double-bagged and kept separate; 10,000 ppm bleach for spills (see Cleaning).
- Remove protective equipment slowly, in order, washing gloved hands between steps. Most carer infections happen at this stage.
- The carer checks their own temperature twice a day for 21 days after the last contact.

ORAL REHYDRATION SAVES LIVES

For viral haemorrhagic fevers and cholera alike, much of the death toll comes from fluid loss. Specialist treatment includes intravenous fluids and, for Ebola, antibody medicines; at home, steady oral rehydration (see Dehydration) is the most important thing a carer can do while waiting for help.

Sources: UKHSA High Consequence Infectious Diseases guidance (updated January 2026); WHO Ebola disease fact sheet (2025); CDC; UK National Risk Register 2025.



Slow but Deadly: Long-Incubation Infections

Not every dangerous infection announces itself quickly. Some spread silently for months or years before anyone feels ill; some are bacteria that our antibiotics no longer kill. They rarely cause sudden emergencies, but they cause enormous harm over time — and in a long crisis, with health services stretched, they can spread further.

Infection	How it spreads	Signs	What to do
Tuberculosis (TB)	Through the air, from people with active lung TB, usually after long close contact (households, crowded rooms). About a quarter of the world carries the germ "latently"; 5–10% develop the disease.	Cough lasting over 3 weeks, fever, night sweats, weight loss, coughing blood	See a GP — TB is preventable and curable with 4–6 months of treatment. Around 5,400 cases a year in England.
Hepatitis C	Blood: shared needles or injecting kit; occasionally razors, toothbrushes	Often none for years; later liver damage	Free NHS home test (over-18s); tablet treatment for 8–12 weeks cures most people
Hepatitis B	Blood and body fluids, sex, mother to baby	Often none; jaundice, tiredness	Vaccine in the routine baby "6-in-1" and for adults at risk; testing and treatment
HIV	Blood, sex, mother to baby — <i>not</i> by kissing, hugging or sharing household items	Often none for years	Free home tests; treatment makes the virus undetectable and untransmittable; emergency PEP within 72 hours of a risky exposure
Drug-resistant bacteria	Healthcare settings, close contact, overuse of antibiotics	Infections that don't respond to the usual antibiotics	Use antibiotics only when prescribed, finish the course as directed, never share them; good hygiene

Antimicrobial resistance (AMR) — germs evolving to survive the medicines that used to kill them — is one of the biggest long-term health threats. In 2024 the UK recorded nearly 400 new antibiotic-resistant infections a week. In a pandemic, many deaths are caused by secondary bacterial infections (such as pneumonia after flu), so AMR makes pandemics deadlier. This is why the guide does not recommend stockpiling and self-prescribing antibiotics — see Medicines.

TICKS AND MOSQUITOES

- **Lyme disease** (ticks): about 1,000–1,500 lab-confirmed cases a year in the UK, many more diagnosed by the rash. A spreading "bullseye" rash 3–30 days after a bite needs a GP visit.
- Remove ticks promptly with a tick tool or fine tweezers, gripping close to the skin and pulling steadily.
- Invasive mosquitoes that can carry tropical diseases have been detected in England, but there is no established local spread. Report sightings to UKHSA's Mosquito Watch.

REDUCING LONG-TERM RISK AT HOME

- Keep vaccinations up to date for everyone (including adults' boosters and hepatitis B if at risk).
- Don't share razors, toothbrushes, needles or anything that can carry blood.
- Use gloves to deal with blood and dispose of sharps in a rigid container.
- Ventilate shared rooms and get a long cough checked.

Sources: UKHSA TB notifications (2026); WHO TB fact sheet; NHS hepatitis B, hepatitis C and HIV pages; UK AMR National Action Plan 2024–29; ESPAUR report (2025); UKHSA vector-borne disease reports (2026).

Supplies for a Long Isolation

A serious pandemic doesn't usually cut the power or water — but it can empty shops through panic buying, close them when staff fall ill, and make every trip outside a risk. The goal is to be able to stay home for **at least two weeks** without going out at all, and to stretch to a month or more with occasional, careful trips.

Use the Grid-Down guide for the full family stash. The food quantities for a family of four, gluten-free and special diets and home stash checklist apply here too. If a pandemic leads to staff shortages in power, water or transport, the rest of that guide applies as well. Below is what a pandemic adds.

PROTECTION

- ★ FFP2 or FFP3 respirators: at least 20–30 per adult (more for a carer)
- ★ Nitrile gloves (box of 100–200), disposable aprons
- ★ Eye protection: safety glasses or a face shield for the carer
- ★ Liquid soap and alcohol hand sanitiser (60%+ alcohol)
- ☐ Plain unscented bleach and a measuring jug; disinfectant wipes; spray bottles
- ☐ Heavy-duty bin bags; paper towels
- ☐ CO₂ monitor (to check ventilation); a HEPA air purifier or the parts for a DIY box-fan filter

MEDICAL (SEE MEDICAL KIT)

- ★ Digital thermometer and a pulse oximeter (plus spare batteries)
- ★ Paracetamol and ibuprofen (adult and children's), in date
- ★ Oral rehydration sachets: 20+ (diarrhoea and fever both dehydrate)
- ★ A month of all regular prescriptions
- ☐ Throat lozenges, honey, saline nasal spray, tissues
- ☐ Antihistamines, anti-diarrhoeal (adults), indigestion remedies

FOOD & HOUSEHOLD

- ★ 2–4 weeks of food you already eat, including easy foods for the sick: soups, crackers, rice, bananas, jelly, ice lollies, honey, tea
- ★ Baby formula and nappies for 4–6 weeks; pet food and medicines
- ☐ Toilet roll, washing powder, washing-up liquid, sanitary products
- ☐ Bottled water or containers, in case water treatment staffing fails
- ☐ Freezer full: cooked meals in portions for days when the carer is exhausted

INFORMATION & MORALE

- ★ Printed copy of this guide, contact list, medicines list for each person
- ★ Battery/wind-up radio; phone chargers; a working home internet connection
- ☐ Books, games, puzzles, craft materials, school books for children
- ☐ Exercise kit for indoors; seeds and compost for a windowsill or garden
- ☐ A written plan: who cares for whom if adults fall ill at the same time

Don't panic-buy. In March 2020, supermarket shelves emptied of pasta, flour, toilet roll and painkillers within days because millions bought at once, and retailers had to ration. Build your stock gradually, now, a little each shop — then, when an outbreak starts, you won't need to join the rush.

Mind & Morale in Long Isolation

Months of fear, isolation, illness and grief take a heavy toll. During COVID-19, loneliness, anxiety and depression rose sharply, and children and young people were particularly affected. Looking after minds is as important as looking after lungs — and it is something every household can do.

DAILY HABITS THAT PROTECT

- **Routine:** fixed times for getting up, meals, work or school, exercise and bed.
- **Daylight and movement:** time outdoors (garden, doorstep, a quiet walk) every day if it's safe; indoor exercise if not.
- **Connection:** daily calls or video with family and friends; check on people who live alone.
- **Limit the news:** one or two check-ins a day from reliable sources, not constant scrolling.
- **Purpose:** a project, learning something, helping a neighbour, growing food.
- **Sleep:** regular times, a dark room, screens off an hour before bed.

CHILDREN AND TEENAGERS

- Explain what's happening honestly, at their level; let them ask questions.
- Keep school routines: a timetable, a work space, breaks.
- Give them jobs and some control: planning meals, choosing activities.
- Let them stay in touch with friends.
- Watch for changes: withdrawal, sleep problems, anger, bedwetting, not eating — and talk.

WHEN TO GET HELP

If anyone talks about not wanting to live, harming themselves, or is unable to cope with daily life, get help that day: **NHS 111 — choose the mental health option**, a GP, or **Samaritans on 116 123** (free, 24 hours). In an emergency, call 999. Carers and people who are grieving need support too — don't wait until you're at breaking point.

Grief in a pandemic is often harder than usual: people may die without family present, and funerals may be restricted. Mark losses anyway — a call with family, a moment of remembrance, a letter, planting something — and plan a proper memorial for later.

Work, School, Money & Daily Life

WORK

- Ask your employer now about working from home, sick pay and what happens if you have to care for someone.
- Key workers (health, care, food, utilities, transport): plan childcare and a way to keep your household safe when you come home (see the clean entry routine).
- Don't go to work ill. "Presenteeism" spreads outbreaks.

SCHOOL

- Schools may close or switch to remote learning; keep books, paper and a device ready.
- Know who can collect your children and keep the school's list up to date.
- Children of key workers and vulnerable children may still be able to attend — ask early.

MONEY

- Build a buffer of 1–3 months' essential costs if you can.
- Check Statutory Sick Pay and benefit eligibility; government support schemes may be announced in a major outbreak.
- Keep some cash, but expect shops to prefer contactless.
- Beware scams: fake tests, cures, "vaccine appointments", fines or charity appeals — the NHS will never ask for bank details for a vaccine or test.

YOUR RIGHTS AND THE LAW

- In a major outbreak the government can use emergency powers (as with the Coronavirus Act 2020) to require isolation, close premises and restrict gatherings. Follow them.
- Rules change quickly and vary between England, Scotland, Wales and Northern Ireland — check the official site for where you live.

Information, Rumours & Official Advice

Every outbreak brings an "infodemic": a flood of information, some true, much of it wrong, spread faster than the disease itself. False cures, fake tests and conspiracy theories cost lives in COVID-19 — people

delayed getting help, took harmful substances, or refused treatments that worked. Good decisions need good information.

Trust first:

- **nhs.uk** and NHS 111 — symptoms, self-care, when to get help
- **gov.uk** and the UK Health Security Agency (UKHSA) — the official rules and public-health advice
- Your devolved government (Scotland, Wales, Northern Ireland) and local council
- BBC radio and TV — the official emergency broadcaster
- The World Health Organization (who.int) for the international picture

BE SUSPICIOUS OF:

- "Miracle" cures, supplements or remedies sold online or forwarded in group chats
- Messages that ask you to "share before it's deleted"
- Screenshots with no source, or "a friend who works in a hospital says..."
- Anything selling you something, or asking for bank details
- Claims that make you very angry or very afraid — that's what they're designed to do

A 30-second check before you act on (or share) anything

1. **Who** is saying it — a named, accountable organisation or person?
2. **Where's the evidence** — can you find it on the NHS, gov.uk or WHO website?
3. **When** was it written — advice changes as scientists learn; old advice can be wrong now.
4. **Do two independent reliable sources agree?** If not, wait.
5. **If in doubt, don't share it** — and don't act on it if it could harm you.

Science changes its mind — that's how it works. Early in an outbreak, much is unknown, and official advice will change as evidence comes in. That isn't proof that people are lying; it's what learning looks like. Follow the current advice, and expect it to be updated.



Vaccines & Treatments: What to Expect

The single biggest change between the 1918 pandemic and COVID-19 was the speed of vaccines. The goal of a household in a pandemic is to get through the months before vaccines and effective treatments arrive — and then to take them up promptly.

~11 Jan 2020

COVID-19 genetic sequence
published

8 Dec 2020

first UK vaccine dose — 333
days later

100 days

the international target for
future pandemic vaccines
(CEPI)

100m+

pandemic flu vaccine doses
pre-ordered by the UK,
made in Liverpool

WHO GETS VACCINATED FIRST

Doses go first to the people most likely to die. In COVID-19 the independent Joint Committee on Vaccination and Immunisation (JCVI) prioritised: care home residents and staff; people 80+ and frontline health and care workers; then by descending age and medical risk down to people in their 50s — groups covering about 99% of preventable deaths. The biggest single risk factor was age. Expect a similar approach, adjusted for whoever the new disease hits hardest.

TREATMENTS

- Antiviral medicines may be offered to people at high risk, usually only if started early (often within a couple of days of symptoms). Know whether you're eligible and how to get them quickly.
- Hospital treatments improve fast in a pandemic as trials report — the UK's RECOVERY trial found the first life-saving COVID-19 treatment within months.
- Beware "cures" sold online. Only use treatments recommended by the NHS.

Before a pandemic: make sure everyone's routine vaccinations are up to date (including MMR, and the flu and COVID vaccines if eligible). A household that's already protected against measles, flu and pneumonia is far less likely to be overwhelmed by a second infection on top of a new one.

Sources: virological.org (January 2020); MHRA and NHS (December 2020); CEPI 100 Days Mission; UKHSA–CSL Seqirus agreement (2023); JCVI advice (30 December 2020); RECOVERY trial.



When Someone Dies at Home

In a severe pandemic, more people die at home, and services may be slow to arrive. This is painful to think about, but knowing what to do protects the rest of the household, avoids problems later, and lets you focus on the person and your family.

Situation	Who to call
Expected death (the person was known to be seriously ill, under a GP or palliative care)	Their GP surgery during the day, or NHS 111 out of hours. You don't need to call 999.
Unexpected death , or you're not sure they have died	999 . The call handler may talk you through CPR. The police and coroner are usually involved after an unexpected death — this is routine.

PROTECTING THE HOUSEHOLD

- Try not to touch the body if the person had an infection. If you do (to say goodbye, or move them into a dignified position), wear gloves if you can and wash your hands with soap for 20 seconds afterwards.
- Open windows and move to another room while you wait.
- If the person needs to be moved, lay a cloth or mask over their mouth and nose first.
- For a suspected high-consequence infection (Ebola-type), do **not** touch, wash or prepare the body at all — the body remains highly infectious. Wait for specialist help. Many Ebola infections in West Africa were caught at funerals.
- Family rituals that involve close contact (washing, dressing) should only be done with protective equipment and advice from the funeral director.

WHAT HAPPENS NEXT

- A doctor, nurse or paramedic verifies the death.
- A doctor completes the medical certificate of cause of death, which is reviewed by a medical examiner (England and Wales); the family may be contacted.
- **Register the death** within **5 days** of the medical examiner's confirmation (England and Wales), or within **8 days** in Scotland.
- Contact a funeral director; they can collect the person from home.
- In a pandemic, rules on funerals and gatherings may change — the funeral director will know the current position.

Look after the living, too. Grief in an outbreak is often made harder by isolation and restrictions. Lean on family and friends by phone, ask for practical help, and plan a memorial for later if a funeral has to be small. Support is available from Cruse Bereavement Support and from Samaritans (116 123). See Mind & morale.

Sources: gov.uk "What to do after someone dies"; death certification reform and medical examiners (statutory from September 2024); mygov.scot; archived UKHSA/DHSC guidance on care of the deceased with suspected or confirmed infection (2020–22); WHO Ebola fact sheet.

Recovery & Long-Term Effects

AFTER THE ILLNESS

- Recovery from a serious infection can take weeks. Build activity up gradually; rest when tired.
- Eat well — protein, fruit and vegetables — to rebuild strength lost while ill.
- Keep watching for setbacks: fever returning, new breathlessness or chest pain can mean a second infection.
- Follow official advice on when you can stop isolating; protect vulnerable people for longer.

LONG-TERM EFFECTS ("LONG COVID" AND POST-VIRAL ILLNESS)

- Some people have symptoms for weeks or months: extreme tiredness, breathlessness, joint and muscle pain, "brain fog", headaches, sleep problems, changes to taste and smell, anxiety and low mood.
- Symptoms lasting over 12 weeks with no other explanation are called post-COVID syndrome (long COVID) — see your GP, who can refer you to specialist services.
- Pace yourself: be careful with exercise, and stop if it makes symptoms worse.
- **Get urgent help** for chest pain, or if your oxygen level is low or drops when you move about.

GETTING THE HOUSEHOLD BACK ON TRACK

- Replace and rotate everything you used: medicines, masks, food, ORS.
- Get vaccinated as soon as you're eligible.
- Catch up on postponed health care — screening, check-ups, dental care.
- Talk as a family about what worked and what didn't.

LOOKING AFTER EACH OTHER

- Many people feel exhausted, anxious or low after a pandemic, especially carers and the bereaved.
- Children may need time and support to settle back into school and friendships.
- If feelings don't improve, talk to a GP — NHS talking therapies can be accessed directly in England.

Sources: NHS (long-term effects of COVID-19, 2025); NICE NG188 (long COVID, 2024).



Quick Reference: One-Page Summaries

PROTECT THE HOUSEHOLD

- ★ Act early: stock masks, medicines, food before the rush
- ★ Ventilate: windows open a little, more when visitors come
- ★ FFP2/FFP3 respirators, seal-checked, in shared indoor air
- ★ Fewer contacts; outdoors not indoors; one shopper
- ★ Wash hands with soap (gel doesn't kill norovirus)
- ★ Shield the most vulnerable; clean entry routine
- ★ Isolate the sick at once: one room, one carer

KEY NUMBERS

High temperature	38°C+
Baby under 3 months	38°C+ = urgent help
Oxygen (adult)	95–100 normal · 93–94 → 111 · ≤92 → 999
Breathing (adult, resting)	12–20 normal · 30+ serious
Ventilation (CO ₂)	<800 good · >1,500 poor
Bleach, surfaces (1,000 ppm)	~22 ml per litre
Bleach, blood (10,000 ppm)	~220 ml per litre
Laundry with vomit/faeces	60°C
Flu antivirals	within 48 h of symptoms
Mental health crisis	111 (mental health option) · Samaritans 116 123
Emergency	999 / 112

999 — ADULTS

- Oxygen 92% or less; can't finish sentences
- Confused, drowsy, slurred speech
- Blue, grey or blotchy skin or lips
- Rash that doesn't fade under a glass
- No urine all day; collapse; chest pain

999 — CHILDREN

- Grunting, ribs sucking in, very fast breathing, pauses
- Blue, grey or blotchy; non-fading rash; stiff neck; fit
- Floppy, hard to wake, weak or high-pitched cry
- Under 3 months 38°C+; under 36°C
- No wee for 12 hours (under 5s)



CARING FOR THE SICK

- Fluids little and often — pale urine is the goal
- ORS for vomiting/diarrhoea; small sips
- Paracetamol or ibuprofen for comfort, by the label; write every dose down
- Check temp, breathing, oxygen, drinking, urine, alertness every 4–6 hours
- Sit up to breathe; don't lie flat on the back
- Know the danger signs; act at once



DELIBERATE RELEASE

- **Remove** yourself — away, upwind
- **Remove** outer clothing — not over your head
- **Remove** the substance — blot skin, then wash
- Stay for the emergency services; don't go home or to a GP
- Not at the scene: go in, stay in, tune in

Clean air · A good mask · Clean hands · Fewer contacts · Know the danger signs

Pandemic & Outbreak Survival Master Guide — UK Edition 1.0

Print this document and keep it with your medical kit and home supplies.

Compiled from: UK National Risk Register, UKHSA, NHS, NICE, WHO, CDC, HSE, the UK COVID-19 Inquiry, Resuscitation Council UK, Cochrane and peer-reviewed research.

Remember: clean air, a good mask, clean hands, fewer contacts — and know the danger signs. Most people who fall ill recover with good care at home.

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