FLU-PROOF

How to survive the worst cold and flu season in half a century by NANCY KALISH

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In most years, the cold and flu season comes and goes without too much fuss. Not this one. "The swine flu is dangerous and spreads much faster than the usual seasonal flu," says William Schaffner, MD, chair of the Vanderbilt University department of preventive medicine and president-elect of the National Foundation for Infectious Diseases. "It's not being overhyped, and everyone should take it seriously." (You can keep abreast of the latest flu news by checking the CDC Web site at cdc.gov/flu.)

But even as the flu season unfolds, there's much you can do to substantially lower your own risk of getting sick. First, assess your vulnerability by familiarizing yourself with the signs of impaired immunity on p. 82. Then adopt the strategies on the following pages, where you'll find all the tools you need to boost your immunity, fight off the flu (as well as the plain old cold), and keep you and your family healthy this winter and beyond.

1 FIGHT BACK WITH FOOD

Research shows that adding certain foods to an already healthful diet can increase your ability to fend off colds and flu this season. Here's what to start eating now:

**Yogurt:** Shift workers who consumed a drink containing *Lactobacillus reuteri*, a probiotic that appears to stimulate infection-fighting white blood cells, were 33% less likely to take sick days than those who took a placebo, according to an 80-day Swedish study published in Environmental Health. But beware, says Elizabeth Somer, RD, author of 10 books on nutrition: "Some companies make up probiotic names to put on their label." She suggests looking for yogurt that contains *Lactobacillus acidophilus* as well as *Bifidus* and *L. rhamnosus*. "They're even more effective when combined," she says.

**Garlic:** According to a study published in *Advances in Therapy*, subjects who swallowed a garlic capsule for 12 winter weeks were two-thirds less likely to catch a cold; those who did suffered for 3½ days less. Garlic contains allicin, a potent bacteria fighter, and other infection-fighting compounds, and Somer believes it's even more effective in food form. She suggests adding one to three cooked cloves to your food each day.

**Black tea:** Drinking 5 cups a day for 2 weeks can turn your immune system's T cells into "Hulk cells" that produce 10 times more interferon, a protein that battles cold and flu infections, according to a Harvard study. Don't like black tea? The green variety will also do the trick. If you can't stomach drinking that much, you can still get added protection with fewer cups.

**Mushrooms:** They contain more than 300 compounds that rev up immunity, in part by escalating the production of infection-fighting white blood cells and making them more aggressive. Shiitake, maitake, and reishi varieties contain the most immune-boosting chemicals, but plain old button mushrooms will also do the job.

**Fatty fish:** Salmon, mackerel, herring, and other fatty fish contain omega-3 fatty acids, which increase activity of
phagocytes—cells that fight flu by eating up bacteria—according to a study by Britain's Institute of Human Nutrition and School of Medicine. They also contain selenium, which helps white blood cells produce cytokines, proteins that help clear viruses. Other research shows that omega-3s increase airflow and protect lungs from colds and respiratory infections. In fact, says Somer, DHA and EPA (the two main forms of omega-3s) benefit the immune system at the most basic level, enabling cell membranes to efficiently absorb nutrients and remove toxins.

2 SHIELD YOURSELF FROM GERMS

The best defense against viruses is to keep them—and the people and objects they infect—at a safe remove. “Germs can lurk on most surfaces for up to 3 days,” says Charles Gerba, an environmental microbiologist at the University of Arizona and coauthor of The Germ Freak's Guide to Outwitting Colds and Flu. Here’s how to protect yourself wherever you are.

Wash often and well. “Washing your hands is the best way to fight viruses and germs—if you do it properly,” says Philip Tierno, PhD, director of clinical microbiology and immunology at New York University and author of The Secret Life of Germs: What They Are, Why We Need Them, and How We Can Protect Ourselves Against Them. Soap the top and bottom of your hands (including under your nails) for as long as it would take you to sing “Happy Birthday” twice, says Tierno. When you can’t get to a sink, a gel containing 60% or more alcohol will effectively remove cold germs, says Gerba, and helps pro-

SURPRISING SIGNS your immune system needs a boost

- **You drink water from a well.** As many as 25 million Americans drink well water that contains more than the safe levels of arsenic determined by the EPA. Arsenic has been linked to several different cancers, and affects the immune response to swine flu as well. When researchers from Dartmouth Medical School inoculated two groups of mice with the H1N1 virus, the group that had spent 5 weeks drinking arsenic-tainted water developed suppressed immune systems, and many died. The mice that didn’t drink the water got the flu but recovered completely. If your well water tests high, consider switching to bottled water or investing in a remediation system that will remove the arsenic.

- **You eat too much sugar.** A study published in the American Journal of Clinical Nutrition found that eating 100 g of sugar (think three cans of soda) significantly hampered the ability of white blood cells to kill bacteria for up to 5 hours afterward.

- **You’re obese.** Those who become most seriously ill with swine flu tend to share the same characteristic: a body mass index over 40, meaning they are morbidly obese. Excess weight can cause hormonal imbalances and inflammation that impairs...
tect against the flu by dissolving the outer layer of the virus. Hand wipes also work, but buy only those labeled disinfecting or sanitizing.

**Don't share toothpaste tubes.** Most people touch their brush to the opening, passing along germs.

**Befriend paper towels.** At home, replace bathroom and kitchen towels with disposable ones during flu season. At the office, use paper to open the office fridge and microwave, turn off a bathroom faucet, and exit the restroom.

**Deploy disinfectant.** Your phone, computer keyboard, and desktop all harbor more harmful germs than the average toilet seat does. Wipe them down at the end of each day. At the gym, disinfect free weights, yoga mats, and other equipment before using them. If you're staying at a hotel, wipe down the remote control, phone, clock radio, light switches, and door handles. The cleaning staff probably hasn't cleaned these things in months, if ever.

**Use creative barriers.** Press the elevator button with your keys, a knuckle, or

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**You have dry nasal passages.** As uncomfortable as it may be, a runny nose is actually a good defense against colds and the flu. Mucus traps viruses and clears them from the body. If your nasal passages are too dry, invaders have an easier time. If it's a temporary problem, irrigate your nasal passages with a squeeze bottle or neti pot of saline solution. A humidifier can also help. If dryness is chronic, see your doctor to determine the underlying cause.

**You're dehydrated.** Your body needs plenty of water to flush out toxins—and yes, coffee and tea are acceptable sources. How much fluid you should drink daily varies from person to person. You're drinking the right amount if your urine is pale yellow.

**You get a lot of colds.** This means your immune system isn't operating at top speed. The average adult picks up one to three colds each season that typically last 3 or 4 days. If you get more, your resistance might be low.

**You're always stressed.** According to a report by the American Psychological Association, long-term stress weakens the responses of your immune system. In addition, "if you become stressed while you have the flu, your symptoms can get worse," says Philip Tierno, PhD, director of clinical microbiology and immunology at New York University and author of The Secret Life of Germs: What They Are, Why We Need Them, and How We Can Protect Ourselves Against Them.
your elbow. When using an ATM or a ticketing machine, use gloves, or press the buttons with your ATM card.

**Observe the 5-foot rule.** Maintain at least 5 feet of distance between you and a coughing or sneezing coworker. Gravity forces the droplets that carry germs to fall rather than land much farther away. When traveling—on a train or bus—try to sit at least three rows behind someone who’s obviously sick.

**BUY SUPPLEMENTS**

Certain natural remedies can help you stay healthy this winter. Here’s what might work best for you.

**If you don’t like fish... try omega-3 fatty acids.** Get the same protection with a daily dose of purified fish oil capsules containing at least 1 g combined of EPA and DHA.

**If you don’t get enough sunlight... try vitamin D.** People who took 2,000 IU of vitamin D daily had 70% fewer colds and flu than those taking a placebo, according to a 3-year study published in *Epidemiology and Infection*. Even with fortified foods, most people don’t get enough D, which the body produces when sunlight hits the skin. The amount used in the study exceeds the DV; Somer recommends not exceeding 1,000 IU a day.

**If you feel a cold coming on... try Cold-fX.** Subjects who took two daily capsules of Cold-fX (available online), a supplement containing North American ginseng extract, caught half as many colds as a group taking a placebo, according to a study done by the Center for Immunotherapy of Cancer and Infectious Diseases at the University of Connecticut. When they did get sick, their symptoms lasted less than half as long. This particular ginseng variety contains compounds that increase white blood cells and interleukins, proteins the immune system relies on.

**If you feel a cold coming on... try zinc.** The research on this mineral has been conflicting. Still, “30 mg taken at the very start of a cold will shorten it by about half a day,” says David L. Katz, MD, MPH, director.

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**3 supplements YOU CAN SKIP**

Many people waste money on preventive measures that are all hype. Here are 3 of the most egregious:

**VITAMIN C**

A 2007 review of 30 studies found no evidence that vitamin C prevents colds in the normal population.

**Possible side effects:** Megadoses can cause kidney stones, upset stomach, and even internal bleeding in children.

**ECHINACEA**

If taken at the start of a cold, it might shorten duration and severity. But some brands do not contain the amount of echinacea listed on the label—and some formulas have none at all.

**Possible side effects:** Allergic reactions may include wheezing, rash, and diarrhea.

**AIRBORNE**

Experts say this supplement does nothing to repel germs on an airplane or anywhere else.

**Possible side effects:** It contains large amounts of vitamin A, which could be toxic if taken several times a day.
of the Yale University Prevention Research Center. But don’t overdo it. While even a slight deficiency in zinc, which is needed to produce white blood cells, can increase your risk of infection, more than 50 mg daily can suppress your immune system and block absorption of other essential minerals.

4 PLAY HARD—THEN GET SOME REST

Exercise and sleep are powerful natural immunity boosters. Here’s how to get the right amount of both.

Get moving. Moderate exercise—around 20 to 30 minutes a day—increases blood flow, speeding nutrients to your cells, and decreases stress hormones, which dampen immune response, says Katz. And according to a study published in Medicine & Science in Sports & Exercise, regular physical activity—as long as it’s not extreme—lowers your overall risk of upper-respiratory infections.

Snooze for at least 7 hours a night. “A single night of sleep deprivation can depress your immune system,” says Katz. After 153 healthy men and women were exposed to a cold virus, those who had slept more than 7 hours each night during the preceding 14 days reduced their risk of contracting the rhinovirus by up to 300%, according to a 2009 study published in Archives of Internal Medicine. And get some solid shut-eye the night before your shot. According to research published in the Journal of the American Medical Association, when healthy men were limited to 4 hours of sleep before getting a vaccination, they developed only half the normal number of antibodies.

Try tai chi. When women ages 55 to 65 practiced tai chi for an hour 4 times a week, Shanghai University of Sport researchers saw the women’s levels of two different disease-fighting cells jump by nearly 32% over 4 months. Start practicing a week before your flu shot and you can boost its effectiveness by as much as 17%, found a University of Illinois study. To get started, try Element Tai Chi for Beginners ($15; collagevideo.com).

Party on—moderately. People who are socially active get fewer colds, even when intentionally exposed to the cold virus. Researchers postulate that frequent socializers tend to be more positive and maintain high-quality emotional ties, both of which strengthen immunity.