

If You've Ever Had Oral Sex...



More and more dentists are
diagnosing an STD-related cancer.



You **Need To** Read This.

Long known to cause cervical cancer, the pervasive but often silent human papillomavirus (HPV) has been finding its way into women's mouths.

BY ALYSSA GIACOBBE

MISCHE EDDINS, 37, awoke with a head cold. Or what seemed like one anyway. Postnasal drip. Sore throat. Swollen lymph nodes. No biggie—it was the fall of 2007, and a seasonal bug was winding its way through Seattle. “I had *just* been bragging to my friends about how I’d managed to avoid getting sick,” she says. “But I was healthy, so it all passed quickly.” Everything, that is, except a swollen node on the left side of her neck, which, months later, hadn’t gone away.

Christmastime came, and the little bump was still there. Sans appointment, Mische walked into her doctor’s office and left with a script for antibiotics. No improvement. She then bounced from M.D. to M.D., and finally, six months after that seemingly innocuous head cold, she had a PET/CT scan. The results were a total shock: Mische had stage III oral cancer, and the disease had spread from her tonsil to her lymph nodes.

Within hours, her docs had scheduled a tonsillectomy and were talking about chemo and radiation. Someone suggested she prepare a will. “I was floored,” she says. “A will?” A professional singer, Mische exercised almost every day, ate a mostly organic diet, didn’t booze heavily, and never smoked as an adult. Even her doctors were stymied.

Searching for answers, one physician tested Mische’s cancer cells for human papillomavirus (HPV), the sexually transmitted infection notoriously linked to cervical cancer. Mische was taken aback; she’d spent the past 16 years in two monogamous relationships and was fastidious about getting annual Pap smears, which had never been abnormal. Why were they now testing her *mouth*? Her doctors explained the worrisome new link between oral cancer and HPV, which can be transmitted to the mouth through oral sex. And indeed, she tested positive. Her oral cancer was HPV-related.

TEN YEARS AGO, oral cancer among women was practically unheard of. Patients were nearly always male and over 50, heavy smokers or drinkers, or both. (When actor Michael Douglas, 66, was diagnosed with the illness this past summer, the media pointed to his longtime half-a-pack-a-day habit.) But according to the *Journal of Clinical Oncology*, there has been a major upswing in HPV-related oropharyngeal cancer, a deadly disease often found in the base of the tongue and the tonsils. In fact, roughly a quarter of all oral cancers are now HPV-related, according to the American

Cancer Society, and approximately 25 percent of cases occur in women—some as young as 19, says Gregory Masters, M.D., an oncologist at the Helen F. Graham Cancer Center in Newark, Delaware.

But how could HPV, a “down there” disease, be causing so many mouth problems? It’s something doctors and public-health experts have long feared, thanks to the rampant spread of the virus. You’ve likely heard the daunting stats: Approximately 20 million Americans currently have HPV, with 6 million new infections discovered each year through Pap or cervical swab tests, according to the Centers for Disease Control and Prevention. What’s more, the virus—which can have zero symptoms or bloom into a series of visible warts—will affect up to 80 percent of sexually active women at some point in their lives.

In the vast majority of cases, the body’s immune system will clear HPV on its own within two years (there is some debate over whether the same HPV infection can ever return to cause cervical lesions later, but research is still in early stages). However, a small percentage of infected women—around 11,000 per year—will not clear HPV and may develop cervical cancer. This

cancer in young female patients. “Since HPV-related oral cancers don’t affect the traditional group of those at risk for mouth cancer, a lot of these cases are missed or diagnosed late,” affirms Eric J. Moore, M.D., an otolaryngologist at the Mayo Clinic in Rochester, Minnesota. “Usually, the patient is healthy, exercises regularly, and eats right. She doesn’t fit the profile.”

LYDIA MINER definitely didn’t fit the profile. She, too, ate well, worked out, and didn’t smoke or drink much. But she had a strange sensation in the back of her throat that felt like a half-swallowed pill, stuck midway. Or maybe, she thought, it was a patch of skin irritated by one of the many times she’d hurriedly choked down lunch during her hectic job as an environmental consultant in Anchorage, Alaska. “For a while I thought I was just imagining it,” says Lydia, now in her forties. But after two months, she knew better.

Like Mische, she got a scan, which showed something alarming. “The doctor stared at the results, then turned to me and said, ‘I’ve got to tell you, I think you have oral cancer,’” she recalls. Her small malignant tumor, which was later surgically removed, tested positive for HPV.

Between 1999 and 2007, rates of HPV-related oropharyngeal cancer rose 28 percent. **They continue to rise at a rate of about 3 percent every year.**

has prompted the federal government to recommend, somewhat controversially, that all girls be vaccinated for HPV by age 12. (See “The HPV Vaccine: Risks vs. Rewards” on page 152.)

To date, safe-sex campaigns have typically blamed the spread of HPV on unprotected vaginal intercourse. But it’s now clear that the disease can be contracted orally too. And that’s where things got dangerous for Mische Eddins and thousands of other women. Their mouths were infected with HPV-16, the particular type that most doctors believe is responsible for the majority of cases of HPV-related oral cancer.

Just how long HPV-16 lingers in the mouth before turning into cancer is uncertain. But what is evident is that more than 14 percent of cases aren’t caught until very late stages, possibly because some physicians are slow to consider the

Lydia was incredulous. She hadn’t thought about the virus in more than a decade.

In her twenties, she’d had a series of abnormal Pap smears; however, by her thirties, her Paps continuously came back normal, and she’d forgotten all about any irregularities. But HPV is nothing if not sneaky; it can lie dormant and undetectable in the body for years, making it incredibly difficult to know if you’re infected and unknowingly passing it along to others. This can also make it nearly impossible to pinpoint the partner responsible for giving it to you. (Meaning, that one-night stand you had in your teens or even the guy you dated seriously in college can come back to haunt you well into your thirties and beyond.) Though between 40 and 60 percent of guys have HPV at any given time, less than 1 percent will have visible symptoms, and there are currently no FDA-approved HPV tests for men. What all this



Painful sores. Any sore or lesion inside the mouth that lasts longer than two weeks should be checked out by a doctor, says Eduardo Mendez, M.D., a head and neck surgeon at the Fred Hutchinson Cancer Research Center in Seattle.

Changes in your voice or ability to swallow

Long-term hoarseness or an unexplained persistent cough

Pain or swelling in the lymph nodes or neck that lasts longer than two weeks

A persistent sore throat. "Don't ignore a sore throat that goes on longer than two weeks or any lump in your neck that's present for more than a few days," says Eric J. Moore, M.D., an otolaryngologist at the Mayo Clinic.

Watch Your Mouth!

Oral cancer can show up as tumors, cracks, or lesions on your throat, voice box, tonsils, or tongue. Nearly 40,000 Americans will be diagnosed this year, and because 14 percent of oral cancers are caught too late, only two-thirds of those patients will survive longer than five years. Radiation and chemotherapy are the most common courses of action, though surgery can be done if the tumors are small and accessible (treatment side effects can include loss of taste buds, vocal-cord damage, trouble swallowing, and scarring).

Because the cancer is so tricky to catch, it's important to pay close attention to any changes in your mouth and throat. Check for the early warning signs detailed above.

MODELS USED FOR ILLUSTRATIVE PURPOSES ONLY. PREVIOUS SPREAD: MARK ANDREW; JONATHAN KANTOR (DENTAL TOOL); THIS PAGE: MARK ANDREW

means is that oral sex—once considered a safer alternative to vaginal sex—might not be so harmless after all.

The most obvious HPV-related oral-cancer risk factors, as you might imagine, have to do with the kind of sex you have, how often you have it, and the number of partners you've tangled sheets with. According to a study in the *New England Journal of Medicine*, people who have had six or more sex partners are more than twice as likely to develop oral cancer. But those who've had six or more oral sex partners increase their chances by a whopping 340 percent. As such, says Masters, HPV-related oropharyngeal cancer should be considered a sexually communicable disease. "From cases I see, I get the sense that many younger people don't think oral sex counts as sex," he says. "But oral sex has risks too."

As is the case with most STDs, the best way to protect yourself from HPV-related oral cancer is abstinence, which isn't

realistic for most people. Complete honesty about your sexual history and frequent HPV testing can help, and the HPV vaccine might work too, says Francis Worden, M.D., a clinical associate professor of medicine at the University of Michigan and a leading researcher of HPV-related oral cancers. (Though, Worden notes, the vaccine's efficacy is an assumption at this point: "There's no data just yet.") Using condoms for any sexual contact—yes, including oral sex and even with a committed partner—can also help thwart the genital-to-mouth spread of HPV, though Moore concedes it's naive to think couples will commit to a lifetime of wrapped-up oral sex. (For their part, men can get oral HPV by performing oral sex on a woman with vaginal HPV, with or without using a dental dam, says Worden. Michael Douglas reportedly tested positive for HPV, and while there's no concrete link between his particular cancer and the STD, cases of HPV-related oral cancer are also rising among men.)

If this advice sounds thin, that's because it is. The fact is, a lot of HPV research still needs to be done—if it can be done at all. For one thing, determining how sexually transmitted diseases spread depends in large part on the truthfulness of patients and test subjects. "It's particularly tough to get figures on sexual habits, because you're relying on people's memories and forthrightness," says Masters.

THE GOOD NEWS you've been waiting for: If detected early, this type of cancer is highly treatable. Compared with other forms of mouth malignancies, HPV-related oropharyngeal cancers have significantly higher survival rates, especially among nonsmokers. "For reasons we're not entirely sure of, HPV-related cancers respond better to chemotherapy and radiation," says Masters. "The majority of patients are cured not only because they are generally younger and more tolerant of treatment but also because the cancer

The HPV Vaccine: Risks vs. Rewards

Billed as an antidote to cervical cancer—not to mention the widespread STD—the controversial shot could also help curb oral cancer. But is getting it a good idea?

THE EQUATION SOUNDS STRAIGHTFORWARD ENOUGH: THREE QUICK PRICKS OVER THE COURSE OF SIX MONTHS EQUALS IMMUNITY FROM THE HUMAN PAPILLOMAVIRUS, WHICH, IN TURN, EQUALS PROTECTION FROM CERVICAL CANCER, THE THIRD MOST COMMON WOMEN'S CANCER.

IF ONLY THE MATH WERE THAT SIMPLE.

IN FACT, GARDASIL, THE HPV VACCINE THAT SCORED FDA APPROVAL FOUR YEARS AGO FOR GIRLS AGES 9 TO 26, AND

CERVARIX, WHICH RECENTLY HIT THE MARKET FOR THOSE AGES 10 TO 25, HAVE CREATED SO MUCH CONTROVERSY THAT MANY WOMEN DON'T KNOW WHETHER TO ROLL UP THEIR SLEEVES OR RUN FOR THE HILLS WHEN THEIR DOCS OFFER TO STICK 'EM. HERE ARE THE HARD FACTS, SO YOU CAN MAKE UP YOUR OWN MIND. (WHATEVER YOU DECIDE, THOUGH, IT'S STILL CRUCIAL TO ALWAYS VISIT YOUR M.D. FOR REGULAR PAP SMEAR SCREENINGS.)

More than 100 strains of HPV exist, and 30 of them are associated with below-the-belt cancer. Gardasil and Cervarix target two types—numbers 16 and 18—that are thought to be major root causes of cervical cancer, says vaccine developer Diane M. Harper, M.D. Indeed, research shows the shots provide complete protection from both 16 and 18, and Cervarix offers extra protection against three other cancer-related versions. There also may be hope for women already diagnosed with precancerous cells: A new therapeutic vaccine that would zap those—in lieu of any surgery—is in clinical trials and could be available in five years.

HPV often triggers an abnormal Pap result, so being vaccinated can lower your chances of suffering through a post-screening scare by up to 20 percent.

And that's a huge plus, says Marjorie Greenfield, M.D., a professor of obstetrics and gynecology at Case Western Reserve University School of Medicine. "So many patients who have abnormal Paps then go through noxious, uncomfortable, and scary diagnostic procedures," she explains. These can involve the removal of cervical tissue, which can later affect a woman's ability to carry a baby to term. People with sketchy Pap results also have to deal with the anxiety of learning they might have an STD, adds Greenfield.

The vaccination could be beneficial even if you've already been infected with HPV. Here's the logic: Because women aren't tested for specific types of the virus, an HPV-positive test result doesn't necessarily mean you have the 16 or 18

types. So a post-diagnosis shot could still help ward off those versions. This is the reasoning that led Lena Chen, a freelance writer in Boston, to opt for Gardasil while at Harvard University, even though she'd had a previous HPV scare. "I thought it was a good investment in my future health," she says. "I wish I'd done it sooner."

But how much immunity-boosting staying power the vaccines have is (almost) a shot in the dark. Early research shows Gardasil and Cervarix are both effective for up to five years (the latter after just one dose). But slow-growing cervical cancer takes ages to develop, so a vaccine would need to be 100 percent effective for at least 15 years to truly prevent a tumor. In the absence of long-term studies, scientists can't say whether women who've received

actually behaves differently.” The key, of course, is to catch it early—in most cases, this means spotting a lesion or a change in mouth tissue color or texture. It also means seeing your dentist regularly.

Tests using rinses, dyes, and different types of light are being developed to allow dentists to administer comprehensive oral-cancer screenings, but many dentists are already actively peering into patients’ mouths, on red alert for cancerous signs. (While all dentists are educated in cancer screenings, not all perform them, so it’s crucial to ask.) John Comisi, D.D.S., a dentist in Ithaca, New York, says he has caught dozens of lesions on female patients, many in their thirties. “Some don’t turn out to be much of anything,” he says. “Others turn out to be abnormal cells that over time would surely become cancerous.”

“Women are really good about going for their annual Pap smears, but I don’t know one gynecologist who will look in your mouth,” adds Gigi Meinecke, D.M.D.,

a dentist in Potomac, Maryland, who performs a thorough oral exam on all of her patients. “The only place you’re going to get that is at your dental office.”

A good oral-cancer screening, says Meinecke, includes a comprehensive head, neck, and lower-jaw examination, as well as superficial checks of the lymph nodes, the front of the ears (where tumors can also develop), and the back of the neck. And your tongue should be thoroughly examined from every angle. “Basically, what we’re looking for are subtle changes in coloration,” she says.

Dental screenings aren’t 100 percent fail-safe. “The biggest problem with these types of cancers is that people typically don’t have a lot of symptoms, and if you can’t see it or feel it, your dentist might not either,” says Moore. But enlisting an extra set of trained eyes is still a worthwhile protective measure. “In my opinion, any oral abnormality should be investigated,” says Comisi. “You just can’t be too sure.” ■



the shots will need to be poked again later. If a second round is warranted, remembering to re-up could be a problem for some, while cost could be an issue for others. (Some plans cover both Gardasil and Cervarix, but if you’re not insured, the \$300-plus price tag might be a sticking point.)

Cervical cancer is preventable without the vaccine. Because it takes so long for HPV to develop into full-blown cancer, there’s plenty of time to head it off with regular Pap tests. According to the American Cancer Society, the five-year survival rate for cervical cancer that’s caught early is about 92 percent; when precancerous lesions are removed, a complete cure becomes a sure thing. What’s most important, says Harper, is always being vigilant about your checkups, shot or no shot. “No one who’s had the vaccine should feel as if she’s totally protected,” she explains. “Less common HPVs—ones that are not targeted by the vaccine—can also cause cancer. Being vaccinated just means you’ve taken more steps toward prevention.”

There may be side effects. Serious ones. Many Gardasil recipients experience normal vaccine aftermath like redness, soreness, and fainting. (“Any vaccine is associated with fainting,” says Michael

Lamacchia, M.D., an infectious disease specialist at St. Joseph’s Children’s Hospital in Paterson, New Jersey. As such, many docs want patients to stay in the office and rest for 15 to 20 minutes after a Gardasil shot.)

But thousands of women have also reported more worrisome issues, including crippling fatigue, paralysis, blindness, or autoimmune complications, and some have even died, according to CDC and FDA data. “I was 19 when I got the first shot, but my arm hurt so badly for the next three months that I didn’t go back for the second,” says a 21-year-old who asked not to be identified. “Even now my arm is considerably weak, and I have vertigo and other health problems. I used to run almost four miles a day. Now I spend a lot of time seeing doctors.”

While researchers aren’t certain that grievances like these stem from direct Gardasil side effects (Cervarix hasn’t been around long enough to amass complaints), “it’s critical to note that more than 70 healthy young girls have died from a neurological reaction that occurred soon after getting Gardasil,” says Harper. (The FDA is not required to act in response to any side effect that occurs in fewer than one in 10,000 people.) So if you’re really concerned, she says, “you can avoid the risks by opting for a lifetime of Pap smear screening rather than vaccination.”

—Maura Rhodes

Contraction Reaction

Nearly all cases of HPV-related oral cancer have been linked to one particular type of the virus: HPV-16. Although there’s still research to be done, scientists have determined its general path:

