

GLOBAL HEALTH | STEPHANIE NOLEN

To Fight H.I.V., Health Experts Embrace Pleasure

Safer-sex campaigns that recognize joy can make them more effective, a study found.

EFFORTS TO MAKE sex safer almost always focus on the bad stuff: what to do to avoid a terrible infection or potentially deadly virus. They rarely acknowledge the good stuff: usually the reason people have sex in the first place.

And that's why safe sex campaigns throughout the world aren't as effective as they could be.

Research shows that when safe sex campaigns acknowledge pleasure — by talking about sex as something that makes life good, or showing how condoms can be erotic — more people use a condom the next time they have sex.

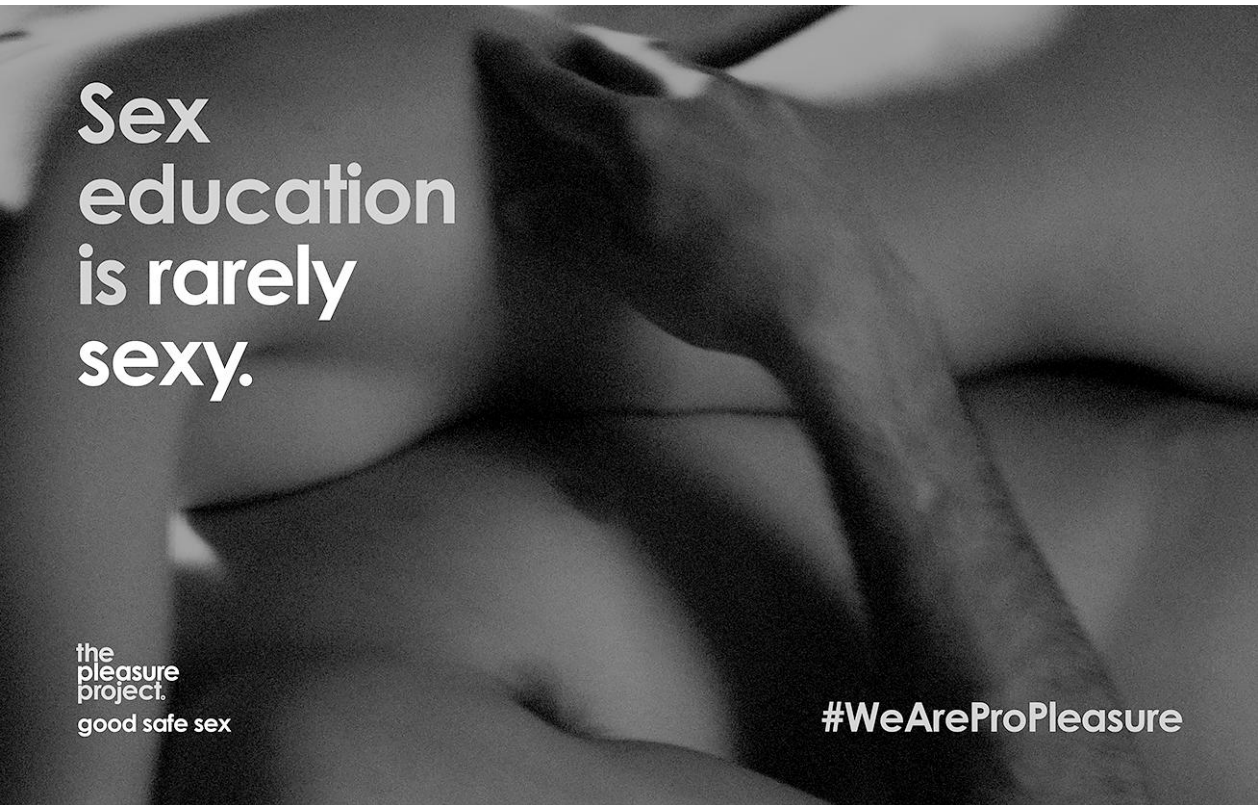
That is what the World Health Organization and a small nongovernmental organization, the Pleasure Project, found when they reviewed the results of safer-sex trials and experiments over the past 15 years. They assessed more than 7,000 interventions for their treatment of pleasure (and lack thereof). The peer-reviewed findings were published in the journal PLOS One.

“Sexual health education and services have traditionally promoted safer sex practices by focusing on risk reduction and preventing disease, without acknowledging how safer sex can also promote intimacy, pleasure, consent and well-being,” said Lianne Gonsalves, a co-author of the paper and an epidemiologist who researches sexual health with the W.H.O. “This review provides a simple message: Programs which better reflect the reasons people have sex, including for pleasure, see better health outcomes.”

The stakes are high. Sexually transmitted infections are at record levels in the United States and rising around the world since Covid-19 pandemic closures set back testing and treatment. Globally, 1.5 million people were diagnosed with H.I.V. in 2021, a rate of new infections that has hardly budged in the last four years. Taking a daily pill known as PrEP, or pre-exposure prophylaxis, offers the promise of preventing some infections, but condoms remain a simple and surefire way to do it.

When people use them.

The Pleasure Project has for years maintained that recognizing the role of pleasure would have a major impact on condom use, reducing not only sexually transmitted infections but also unwanted pregnancies. Still, Anne Philpott, a British public health specialist who founded the initiative in 2004, said the strength of the results of the analysis came as a surprise even to her.



THE PLEASURE PROJECT

“If you had a pill or a vaccine where you could show this kind of effect, everybody would be talking about it, it would have all the headlines,” she said. “Now we have evidence: Ignoring this blind spot, all the way through the AIDS pandemic, has led to less condom use, and deaths we could have prevented.”

But the pleasure message, she noted, is a comparatively cheap and easy addition for programs. It's a change in conversation, rather than a new drug or device that needs regulatory approval and infrastructure to be delivered to far-flung places.

I've been crossing paths with Ms. Philpott at global gatherings on AIDS for nearly two decades. But her message is only slowly taking root in the vast sexual and reproductive health community that delivers safer-sex messages and technologies in much of the world.

There is some progress. In September, the International Planned Parenthood Federation, the largest sexual and reproductive health organization in the world, endorsed what are called the Pleasure Principles, guidelines for centering enjoyment in healthy sex. It was the first move by a global sexual health organization to embrace the P-word explicitly in delivering its services.

There are scattered programs around the

world taking this approach — projects such as Phénix, in Montreal, which taught “erotic skills” to men who have sex with men, using videos that made condoms sexy and fun.

The best demonstration of the pleasure message I've seen comes from Arushi Singh, a co-director of the Pleasure Project. To convey what it means to eroticize safer sex, she pulls a little blue pouch out of her bag. “This is a sex toy I was introduced to by sex workers at an AIDS conference in Bangkok,” she says in the tone of a friend with a delightful discovery to share.

“It's small, convenient, you can carry it in your bag, insert it by yourself, or your partner can help,” she explains. “It's nicely lubricated. It comes with two rings — one anchors against the cervix. And this outer ring is the secret: When a penis or a dildo goes into your vagina, the outer ring is pressing against the clitoris.”

She gives a little shimmy. “That's what does it.”

The toy Ms. Singh is demonstrating is, in fact, a female condom. And that, she says, is how you flip the narrative and make a conversation about disease prevention first about having a good time.

So why, given the millions of dollars spent globally every year to change how people have sex, is the actual point of sex mostly

The Pleasure Project, a small nongovernmental organization, has for years maintained that recognizing the role of pleasure would help increase condom use. A study in the journal PLOS One supports that idea.

Doomed Sea Creatures Were Victims of a Theft

Long ago, bony fish scooped up the phosphate that brachiopods needed for shells and survival.

By NATALIE ANGIER

In the Cambrian Period, 500 million years ago, the armored set ruled the seas. Soft-bodied animals secreted a mineral paste that hardened into protective shells of immense strength and deco beauty, some shaped like rams' heads or eagles' wings, others like champagne flutes studded with dagger-sharp spines.

But by the Devonian Period some 70 million years later, most of these brachiopods, briopods and related well-shelled mariners had gone extinct, victims of theft and their own extravagant ways.

As researchers recently proposed in the journal Trends in Ecology and Evolution, the collapse of the brachiopod empire exemplifies a struggle that has defined life from the start: the quest for phosphorus. Scientists have long known that the element phosphorus is essential on many fronts, here holding the DNA molecule together, there powering the cell's every move. The new report emphasizes yet another way that phosphate — the biochemically useful form of phosphorus — has shaped the course of evolution as an arbiter of nature's hard parts, its shells and teeth and bones.

“Phosphorus was stolen by the vertebrates, the bony fishes,” said Petr Kraft, a paleontologist at Charles University in the Czech Republic and an author of the new report. “And once this happened, they diversified quickly and took over.” Dr. Kraft collaborated with Michal Mergl of the University of West Bohemia.

The research is part of a renaissance of phosphate studies, an enterprise that spans disciplines and time frames. Chemists are exploring how phosphates managed to season the prebiotic broth that gave rise to life in the first place, while materials scientists are manipulating the element into startling new colors and forms.

“If you heat phosphorus under different conditions, different temperatures, different pressures, strange things start to happen,” Andrea Sella, a professor of inorganic chemistry at University College London, said. “You get red fibrous forms, metallic black forms, purple forms.” You can also stack up layers of phosphorus atoms and then pull them apart into ultrathin and flexible sheets called phosphorenes, all with the goal of controlling the flow of electrons and light particles on which technology depends. “We've only scratched the surface of what this element can do,” Dr. Sella said.

Phosphorus was discovered in the late 17th century by a Hamburg alchemist, Hennig Brand, who inadvertently isolated it while seeking the storied “philosophers' stone” that would transform ordinary met-

als into gold. Experimenting doughtily with large quantities of the golden liquid he knew best — human urine — Brand emerged with an eerie substance that lacked any Midas touch but did glow in the dark, prompting Brand to christen it phosphorus, Greek for “bringer of light.”

This pure form of the element, called white phosphorus, turned out to be toxic and flammable and so has been used in warfare, to make tracer bullets, smoke screens and the Allied fire bombs that destroyed Brand's hometown during World War II.

White phosphorus also won grim Dickensian fame in the 19th century, when it was added to the tips of matchsticks to produce “strike anywhere” matches. The girls and women who toiled in poorly ventilated factories churning out the enormously popular product were sometimes exposed to so much phosphorus vapor that they contracted “phossy jaw,” a horrifying condition in which their gums receded, their teeth fell out and their jawbones dissolved. According to the historian Louise Raw, matchstick



U.S. ARMY SIGNAL CORPS, VIA LIBRARY OF CONGRESS

makers' struggle for safer working conditions helped galvanize the modern trade union movement.

Pure phosphorus does not exist in nature, but instead is bound up with oxygen, as phosphate, and this molecular trade union, the phosphorus-oxygen bond, “is central to why biology works,” Matthew Powner, an organic chemist at University College London, said. The body stores and burns energy by perpetually making and breaking the phosphate bonds found in the cell's little cash machines, its adenosine triphosphate molecules, better known as ATP. The phosphate recycling operation is so relentless, Dr. Powner said, “you basically turn over your body weight in ATP every day.”

Phosphate conjoins with sugar to form the backbone of DNA, holding in meaning-



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ful order the letters of genetic information that would otherwise collapse into alphabet soup. Phosphate colludes with lipid molecules to encase every cell in an ever vigilant membrane that dictates what gets in and what must be kept out. Proteins send messages to one another by exchanging phosphate parcels.

Behind phosphate's spectacular, jack-of-all-trades utility is a negative charge that prevents unwanted leakage. “You can put energy in and only take it out when you want to,” Dr. Powner said. “It won't leach into the environment.” By contrast, he said, the equivalent carbon-based molecule, called carbonate, dissolves readily in water: “If you were to stitch DNA together with carbonate rather than phosphate it would all fall apart.” Dr. Powner has joked that we should consider life phosphate-based rather than carbon-based.

Yet unlike the other major ingredients of life — carbon, nitrogen, oxygen, hydrogen — phosphate molecules do not have a gas phase. “They're too big to fly,” Dr. Sella said. Phosphates jump into the game of life through the erosion of rocks, the breakdown of living organisms, or waste products like urine or guano. Understanding the impact of phosphate fluxes over time is a major research endeavor.

One lingering mystery is how early life got hold of phosphate initially. Given how essential phosphate is to every aspect of biology, the primordial watery setting in which the first cells arose must have been rich in phosphate. “Yet most natural waters on Earth today are pretty lean in terms of phosphate,” Nicholas Tosca, a geochemist at Cambridge University, said. “We had expected the same to be true of the early Earth.” Iron, he explained, was thought to sequester the phosphates away.

left off the agenda?

Ms. Philpott has a theory. “People who work in sexual health often come from a biomedical background, and they focus on death, danger and disease,” she said. “They're not encouraged to think of themselves as sexual beings.”

That most sexual and reproductive health programs are delivered by big aid agencies doesn't help, she added. “There's an international development narrative that historically comes from a very sex-negative place or a Christian colonial perspective aimed at saving the ‘poor unfortunate.’”

Sonali Silva, who until recently did advocacy work for the Pleasure Project in Sri Lanka, told me that during the years she worked on sexual health-related issues, including abortion rights and H.I.V., with big international organizations such as the W.H.O., she kept running into the same phenomenon.

“The big elephant in the room that nobody wants to make eye contact with is why people have sex in the first place,” she said. “We're all just going to act like it's only for reproduction. As long as people have been alive, they've been having sex for pleasure, but the world of international development is not having that conversation.”

Mahmoud Garga, who leads strategic communications in the Africa office of the International Planned Parenthood Federation, recently started a social media campaign called “Treasure Your Pleasure,” which I love. It was designed for East Africa, but he and his colleagues have been asked to expand it to Southeast Asia.

The campaign features words for orgasm in different African languages, emphasizing that pleasure is not an imported idea.

“We want to debunk that myth that sexual pleasure is a Western theme that is pushed on other cultures,” Mr. Garga said. “It's simply not true. I'm Egyptian, so I'm familiar with Arab literature, and there was just this history of erotic poetry.”

Mr. Garga told me that the topic was never part of sexual health education when he was growing up in Egypt, and that even in progressive environments like Planned Parenthood, sexual health typically means “contraception, sexually transmitted infections, and unwanted pregnancies, going to clinics and consulting with doctors. That, I mean, I don't find that sexy at all.”

“But when you shift the narrative from that fear-based framing,” he said, “when you talk about sexual pleasure as a big component of sex and your sex life, then you turn it into something that needs to be talked about.”

“Using a condom,” he added, “frees up your mind to feel pleasure.”