

AIDS 2022 spotlights a game-changing tool to prevent sexually transmitted infections and key advances in HIV cure research

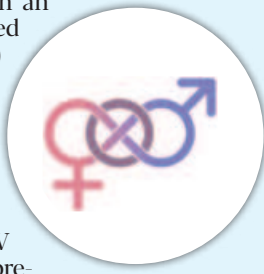
Doxycycline significantly reduces risk of STIs after condomless sex by 65%

STAR HEALTH REPORT

The DoxyPEP study found that taking 200 mg of doxycycline within 72 hours of condomless sex significantly reduces the risk of gonorrhoea, chlamydia and syphilis among men who have sex with men and trans women. In addition, among those randomised to take doxycycline, 65% fewer were diagnosed with an sexually transmitted infection (STI) each quarter than those not taking doxycycline.

Participants in the study were of male sex at birth, living with HIV or taking HIV pre-exposure prophylaxis (PrEP) and had a history of an STI and condomless sex with a male partner within the past year. They were randomised 2:1 to take open-label doxycycline after condomless sex versus continued standard of care without doxycycline. Among the 327 participants taking PrEP, there was a 66% reduction in new STIs per quarter. Of the 174 participants living with HIV, there was a 62% reduction per quarter with doxycycline.

Participants reported taking doxycycline 87% of the time after condomless sex; 54% reported taking fewer than 10 doses per month, 30% took 10-20 doses per month, and 16% took more than 20 doses per month. No serious or more than Grade 2 adverse events were attributed to doxycycline.



An insight into peripheral artery disease

STAR HEALTH DESK

Peripheral artery disease (PAD) causes blood vessels to narrow due to plaque formation. This slows blood flow to limbs. PAD most commonly affects your legs.

The most common symptom is walking leg pain (claudication). Your legs are heavy, numb, weak, or exhausted. The ache eases with rest. You may have no or minor symptoms until your arteries are more than halfway restricted by plaque. As the illness worsens, you may experience scorching or agony even during rest. Your feet may be chilly, glossy, or change colour. Leg hair growth may halt. Feet or toe sores may not heal.

Men with PAD may develop erectile dysfunction (ED). Leg cramps or tired, heavy legs are often misdiagnosed. Your doctor may diagnose your discomfort as arthritis, general muscular aches, or ageing.

PAD is typically missed until symptoms worsen. Atherosclerosis (a build-up of fat inside arteries) is the leading cause. Plaque formed from fatty deposits can restrict arteries. This hinders blood flow to your legs.

Less prevalent PAD causes include blood vessel inflammation, limb trauma, and radiation exposure.

Some manageable factors increase PAD risk. These include smoking, obesity, hypertension, cholesterol, and diabetes. You cannot control other risks. They include being over 60, kidney illness, a family history of heart disease, and high homocysteine levels.

PAD might worsen if neglected. A foot sore can cause gangrene and limb loss. PAD causes plaque build-up in other arteries. This raises the chance of heart attack, stroke, transient ischemic attack or kidney difficulties.

A diagnosis begins with a physical exam, blood testing, and assessment of symptoms, such as walking pain or foot sores. Leg arteries have a weaker pulse than arms. Ultrasounds can detect constricted or obstructed lower-limb arteries. An ankle-brachial index (ABI) cuff compares leg and arm blood pressure. Angiography injects dye into your arteries with a catheter tube. Doctors scan your blood flow with X-rays or CT scans.

PAD can be treated to prevent

worsening. Your doctor may recommend medicine to decrease cholesterol or blood pressure or control diabetes. Daily aspirin or clopidogrel can prevent blood clots and increase blood flow. Your doctor may prescribe drugs to alleviate the intermittent leg pain caused by PAD. These medications dilate narrowed blood arteries, allowing you to accomplish more activities. If drugs do not work, your doctor may suggest surgery.

Angioplasty widens arteries using a small balloon. These vessels can be held open using a stent. Bypass surgery unblocks arteries. Doctors can remove obstructions and dissolve blood clots. Healthy habits manage PAD. Do not smoke, watch your weight, exercise, and eat low-fat fruits and veggies. Clean and dry your feet to prevent sores. Avoid cold drugs with pseudoephedrine, which narrows arteries.

Controllable PAD risk factors include many. Follow your treatment plans- if you smoke, quit, lose weight, and have high cholesterol, diabetes, or high blood pressure. Workouts are crucial. Create an activity plan with your doctor.

HAVE A NICE DAY The most important subject of today

DR RUBARUL MURSHED



Behavioral sciences are the most inscrutable and misunderstood by students and the general public. There are some confusions between behavioural scientist and psychologist, psychiatrist and psychologist, and neuroscience. They're symbiotic and need each other.

This highly flammable 20th century and the first quarter of the 21st century was a mix of wars, huge socio-economic disparity, new philosophies, and the 'Global theory of Justice'. Most importantly, it redefined 'morality factors'; all moral issues became elitist and worldly. Today, social scientists and some policymakers realise we must first understand ourselves. With this insight, psychology can help people improve decision-making, stress management, and understanding-based behaviour.

Educational psychology can help students and teachers. This is a topic of behavioural and mental research. It was a branch of philosophy in ancient



Egypt, Iraq, and Greece. In the 1870s, it became a separate science. Top researchers always find new discoveries and applications for psychology, making psychological studies more relevant and respected than ever. Behavioral Science is useful for any job requiring interaction or understanding of human behaviour and development, from business to healthcare. Many rarely-used terms were defined decades ago.

Recently, we have faced new challenges, including demographic changes (shifting economisation and commercialisation to ageing populations), changing lifestyles, etc. Most people criticise doctors' "distance" and "coolness."

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Glycemic targets for older adults with type 2 diabetes

Clinicians have not adapted to looser glycosylated haemoglobin targets. Older people are more prone to antidiabetes drug side effects and have less time to benefit from glycemic management.

American Diabetes Association (ADA) lowered glycemic targets for older patients. Glycosylated haemoglobin (HbA1c) Hbc goals include 7.5% for generally healthy older people, 8 % for those with multiple chronic conditions, and symptomatic hyperglycemia (but no precise target) for those in poor health.



To determine whether clinical practice fit with developing guidelines between 2001 and 2018, researchers analysed diabetes management in 3500 older U.S. individuals (age 65). Each HbA1c measurement was

compared to the ADA's glycemic objectives in that year, based on the patient's health state. From 2001 to 2018, the percentage of patients with HbA1c ≥1% below goal climbed from 16% to 43%. Half of the hypoglycemic patients took hypoglycemic medicines. More than half of poor-health diabetics with HbA1c ≥1% below aim.

Poor health patients were most likely to have HbA1c considerably below goal and use hypoglycemic medications, indicating a gap between guidelines and clinical practice.

Millions of women worldwide have unmet contraception needs

STAR HEALTH REPORT

The most comprehensive assessment of worldwide contraceptive need and use, published recently in The Lancet journal, estimated that over 160 million women and adolescents with need to prevent childbearing remained without contraception in 2019 - despite major increases in global use since 1970.

Expanding access to contraception is a key goal of international initiatives and a Sustainable Development Goal (SDG) indicator. It is linked to women's social and economic empowerment and better health outcomes. Preventing unintended pregnancies reduces maternal and neonatal mortality. Contraception allows women to plan childbearing, stay in school, work, and gain social and economic empowerment.

Based on 1,162 self-reported representative surveys on women's contraceptive use, the authors used modelling to produce national estimates of various family planning indicators, including the proportion of women of reproductive age (15-49) using any contraceptive method, the proportion of women of reproductive age using modern methods, the types of contraceptives

in use, demand satisfied with modern methods, and unmet need for any contraceptive method.

Women needed contraception if they were married, unmarried, sexually active, able to get pregnant, and did not want a child within two years, or if they were pregnant or had just given birth and wanted to delay or prevent pregnancy.

Globally, 48% of reproductive-age women use modern



contraception, up from 28% in 1970. From 1970 to 2019, demand was satisfied by 79%. Despite the increases, 163 million women without contraception needed it in 2019. Contraceptive availability in 2019 varied widely by region and country.

Southeast Asia, East Asia and Oceania had the highest use of modern contraceptives (65%) and demand satisfied (90%); whereas sub-Saharan Africa had the lowest use of modern contraceptives (24%) and demand satisfied (52%). Between countries, levels of modern contraceptive use ranged from 2% in South Sudan to 88% in Norway (See table 1 for further country-level estimates). Unmet need was highest in South Sudan (35%), Central African Republic (29%) and Vanuatu (28%) in 2019.

The Family Planning 2020 Initiative (FP2020) aims to increase modern contraception use by 120 million women in 69 priority countries by 2020. The number of women using contraception in these countries (excluding Western Sahara) increased by 69 million between 2012 and 2019, leaving the initiative 51 million short of its goal if these levels remained unchanged in 2020.

The study finds that women and 15-19 and 20-24-year-olds have the lowest demand satisfaction rates globally, at 65% and 72%, respectively. Ages 15-24 account for 16% of total needs but 27% of unmet needs, or 43 million young women and adolescents worldwide in 2019.

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