

World AIDS Day 2018

Why the HIV epidemic is not over

STAR HEALTH DESK

1 December 2018 marks the 30th anniversary of World AIDS Day – a day created to raise awareness about HIV and the resulting AIDS epidemics. Since the beginning of the epidemic, more than 70 million people have acquired the infection, and about 35 million people have died. Today, around 37 million worldwide live with HIV, of whom 22 million are on treatment. This December is the 30th anniversary of World AIDS Day, with the theme: "Know Your Status".

When World AIDS Day was first established in 1988, the world looked very different to how it is today. Now, we have easily accessible testing, treatment, a range of prevention options, including pre-exposure prophylaxis, and services that can reach vulnerable communities.

The effort to develop effective treatment for HIV is remarkable in its speed and success. Clinical trials of antiretrovirals (ARVs) began in 1985 – the same year that the first HIV test was approved – and the first ARV was approved for use in 1987. However, a single drug was found to have only short-term benefits. By 1995, ARVs were being prescribed in various combinations. A breakthrough in the HIV response was announced to the world at the 11th International AIDS Conference in Vancouver when the success of "highly active antiretroviral treatment" (HAART) – a combination of three ARVs



reported to reduce AIDS-related deaths by between 60% and 80%.

Because of the high cost of ARVs, most low- and middle-income countries could not afford to provide treatment through their public programmes. World Health Organisation (WHO) announced the '3 by 5' initiative with the aim of providing HIV treatment to 3 million people in low- and middle-income countries by 2005. The '3

by 5' initiative was the most ambitious public health programme ever launched, which would increase 15-fold the number of people receiving life-saving treatment in some of the poorest countries of the world, in just three years. In 2015, WHO recommended the use of ARVs to prevent HIV acquisition – pre-exposure prophylaxis or PrEP – for people who do not have HIV but are at substantial risk.

HIV is not an easy virus to defeat. Nearly a million people still die every year from the virus because they do not know they have HIV and are not on treatment, or they start treatment late. This is despite WHO guidelines in 2015 recommending that all people living with HIV should receive antiretroviral treatment, regardless of their immune status and stage of infection, and as soon as possible after their diagnosis.

One of the biggest challenges in the HIV response has remained unchanged for 30 years: HIV disproportionately affects people in vulnerable populations that are often highly marginalised and stigmatised. Thus, most new HIV infections and deaths are seen in places where certain higher-risk groups remain unaware, underserved or neglected.

The theme of this World AIDS Day – Know Your Status – is important. One in four people with HIV do not know that they have HIV. To bridge some critical gaps in the availability of HIV tests, WHO recommends the use of self-tests for HIV. WHO first recommended HIV self-testing in 2016, and now more than 50 countries have developed policies on self-testing. This World AIDS Day, WHO and the International Labour Organisation also announced new guidance to support companies and organisations to offer HIV self-tests in workplace.

Source: World Health Organisation

DIARRHOEA

Green banana in treating diarrhoea

PROF M KARIM KHAN

Diarrhoea is a common condition in our children. Approximately 3-4 episodes of diarrhoea annually are a common event in children under 5. To prevent diarrhoea, handwashing, eating safe food, drinking clean water and safe disposal of excreta is important.

Many studies have been done to see the effect of green or unripe banana in treating diarrhoea. Bananas are often described as the ideal food. They have no fat, cholesterol or sodium, but are full of fibre, vitamin B6 and C, potassium and complex carbohydrates.

Raw, green bananas contain pectin - a fibre that absorbs excess water from the intestines and firms up the stool, and oligofructans that nourish the good gut bacteria which aid in nutrient absorption. The pectin also stimulates the production of mucus in the colon and small bowel, which serves as a barrier between the stomach lining and the acidic gastric substances that may trigger a stomach upset.

A study found that babies with diarrhoea, when given cooked raw banana, started showing improvements about 24 hours after the treatment began. By the fifth day, almost all the babies who were given raw bananas had completely recovered while those in the control group, who did not have raw banana in their diet, continued to suffer from diarrhoea for up to 10 days.

Cook a couple of unripe bananas in boiling water with their skin on for 7 to 10 minutes. Remove the skin, mash them, add a bit of salt and mustard oil and have this twice a day with soft steamed rice. About 180 - 200 grams of cooked green bananas (about one and a half banana) per day seems to be effective for children.

As it is effective, easily available, less costly and preparation is easy, we all can recommend the mothers to feed green bananas to their children in case of diarrhoea.

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HEALTH bulletin

Colistin: the last weapon

SADIA TASNIM TUBA

Antibiotic is the most loyal weapon against the disease caused by bacterial infection. Each antibiotic has their own way to fight off bacteria. They are made in such a way that certain bacteria can be defeated by taking its infection map in antibiotic's grip. But this simple phenomenon leaves us in a complete bewilderment when even an antibiotic struggle itself in the battlefield of immunity. The last hope, an antibiotic named 'Colistin' is such a kind, which has already lost the realm and at last surrendered to some bacterial species.

To know the sum-up chronicle of this war between colistin and bacteria, at first let us have some idea about the mechanism how colistin works. The bacterial cell membrane is the initial site of action for colistin. Colistin binds to lipopolysaccharide and phospholipids in the outer cell membrane of Gram-negative bacteria. It competitively displaces divalent ions (Ca²⁺ and Mg²⁺) from the phosphate groups of membrane lipids, which leads to disruption of the outer cell membrane, leakage of intracellular contents and bacterial death.

Some multi-drug resistant bacteria namely *Klebsiella pneumoniae*, *Acinetobacter baumannii*, *Pseudomonas aeruginosa* etc. have already shown resistance to colistin. Colistin was first discovered in 1970 though doctors never liked to recommend this antibiotic for its adverse side effect on health. In that case, another strong antibi-



otic named carbapenem was used by doctors to treat such bacterial infection that was impervious to other antibiotics. But the immunity war between antibiotic and germs turn to an unprecedented event; Irony favours to some certain tiny inferior bugs and at last they expose themselves as superior.

Now, the most important question is what earth inhabitants are doing to stop the war or are they trying to extract a sustainable solution from this burning issue? In 2015, colistin resistant gene named MRC1 was found both in humans and animals. They isolated the gene from the bacteria named *Klebsiella pneumoniae* and *E. coli*. Their research towards this last shot of antibiotic was very convincing. Later in 2016, the same resistant gene was found in *E. coli* in a urinary tract infection (UTI) patient. The world has now reached a high concern level about this and they believe victory is very near. Such a positive step is apply-

ing a synergic method of using antibiotics on the superbug. Recently, scientists in Canada have used colistin in combination with other antibiotics to kill multi-drug resistant bacteria. This method has been proved to be very efficient on the super-germs as in the combination with other antibiotic, the toxic colistin is even fully functional in a very low concentration. Therefore, the chance of having an adverse effect is also low.

Three years have already been passed after the last resort antibiotic became a burning issue. Bangladesh is still lagging behind in this issue. Recently, a few enthusiastic groups are showing interest in this research. Though they are just at the beginner level of this antibiotic resistance research, they possess a very positive hope to know more and find a way to end this antibiotic apocalypse.

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Factoring family history into screening for colorectal cancer

People with family histories of colorectal cancer (CRC) are at increased risk for CRC; the magnitude of the risk depends on the age of the person, age of the affected relative(s), number of affected relatives, and degree of relation. Several professional organisations have published screening guidelines, but these are inconsistent and based on relatively sparse literature. This new guideline provides recommendations on CRC screening in this population, using systematic reviews and the Grading of Recommendation Assessment Development and Evaluation approach to assess the quality of evidence.

Key points

- For people who have at least one first-degree relative (FDR) with CRC or advanced adenoma, screening is strongly recommended over no screening.
- For people who have one FDR with CRC, colonoscopy is the preferred screening modality, and fecal immunochemical testing (FIT) is second-line.
- For people who have one FDR with CRC or documented advanced adenoma, screening is suggested starting at age 40-50 or 10 years younger than the FDR's age at diagnosis, whichever is earlier, with screening intervals of 5-10 years for colonoscopy and 1-2 years for FIT.
- For people who have two or more FDRs with CRC, colonoscopy is the preferred test, starting at age 40 or 10 years younger than the earliest affected FDR and repeated at 5-year intervals.
- People who have one or more FDR with non-advanced adenoma, or second-degree relative with CRC, can be screened according to average-risk guidelines.

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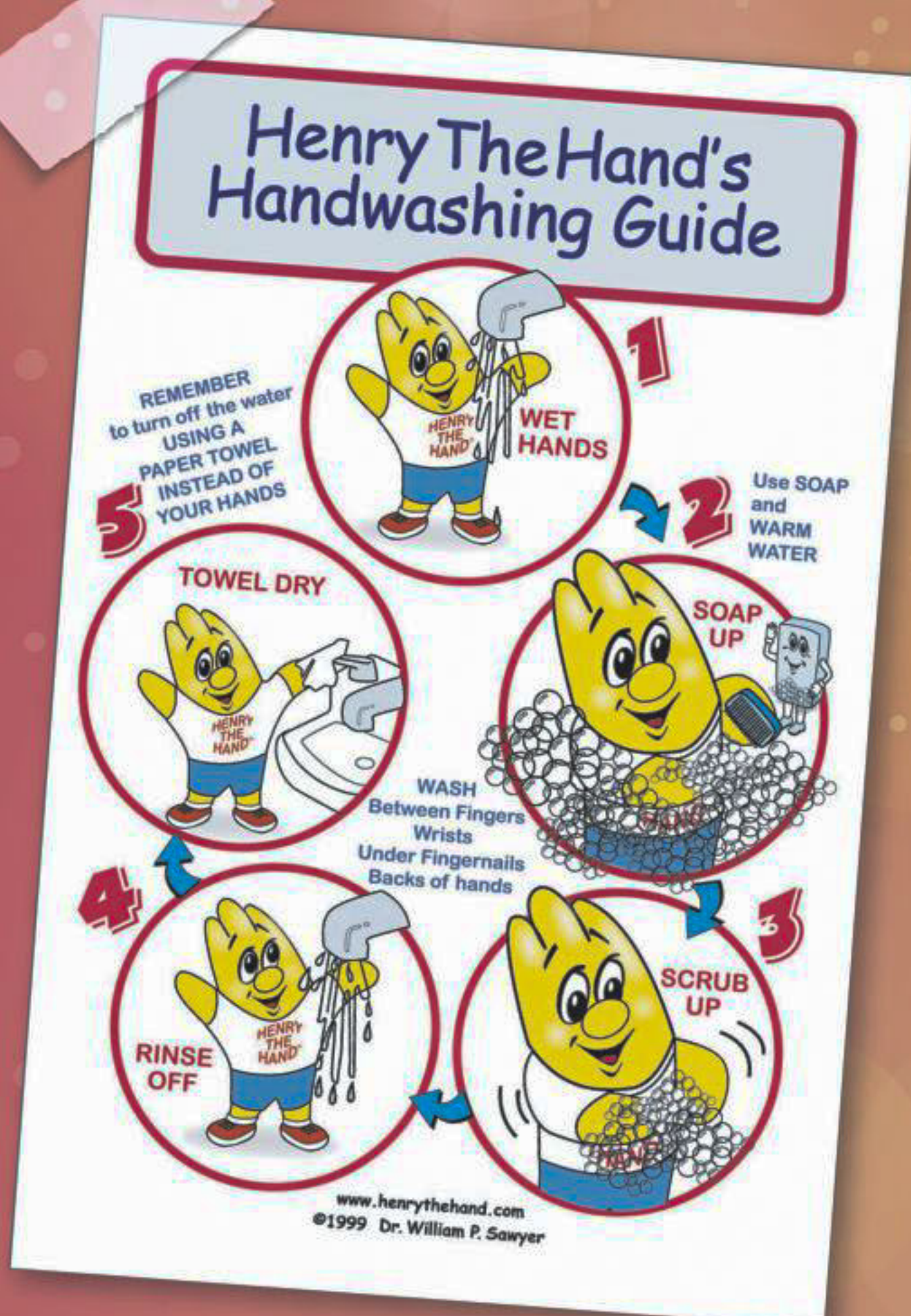
Hypnotherapy could help relieve irritable bowel syndrome symptoms

Hypnotherapy might help relieve irritable bowel syndrome (IBS) complaints for some patients for as long as 9 months after the end of treatment, according to study published in The Lancet Gastroenterology and Hepatology journal.

The findings suggest that group hypnotherapy is as effective as individual sessions, which could enable many more patients with IBS to be treated at reduced cost.

The study found that IBS patients undergoing hypnotherapy reported a greater overall improvement in their condition and were more able to cope with, and were less troubled by, their symptoms compared with those who received educational supportive therapy. However, hypnotherapy did not appear to reduce the severity of symptoms.

While the findings are promising, the authors conclude that more research will be needed to test the optimum number of hypnotherapy sessions, the effect that patient expectations may have on treatment outcome, and the extent to which hypnotherapy outcomes are influenced by the magnitude of the psychological complaints of the patient.



National Handwashing Awareness Week 2018, December 2-8

The 4 Principles of Hand Awareness were endorsed by the American Medical Association and American Academy of Family Physicians in 2001.

1. Wash your hands when they are dirty and before eating.
2. Do not cough into hands.
3. Do not sneeze into hands.
4. Above all, do not put your fingers in your eyes, nose or mouth!



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