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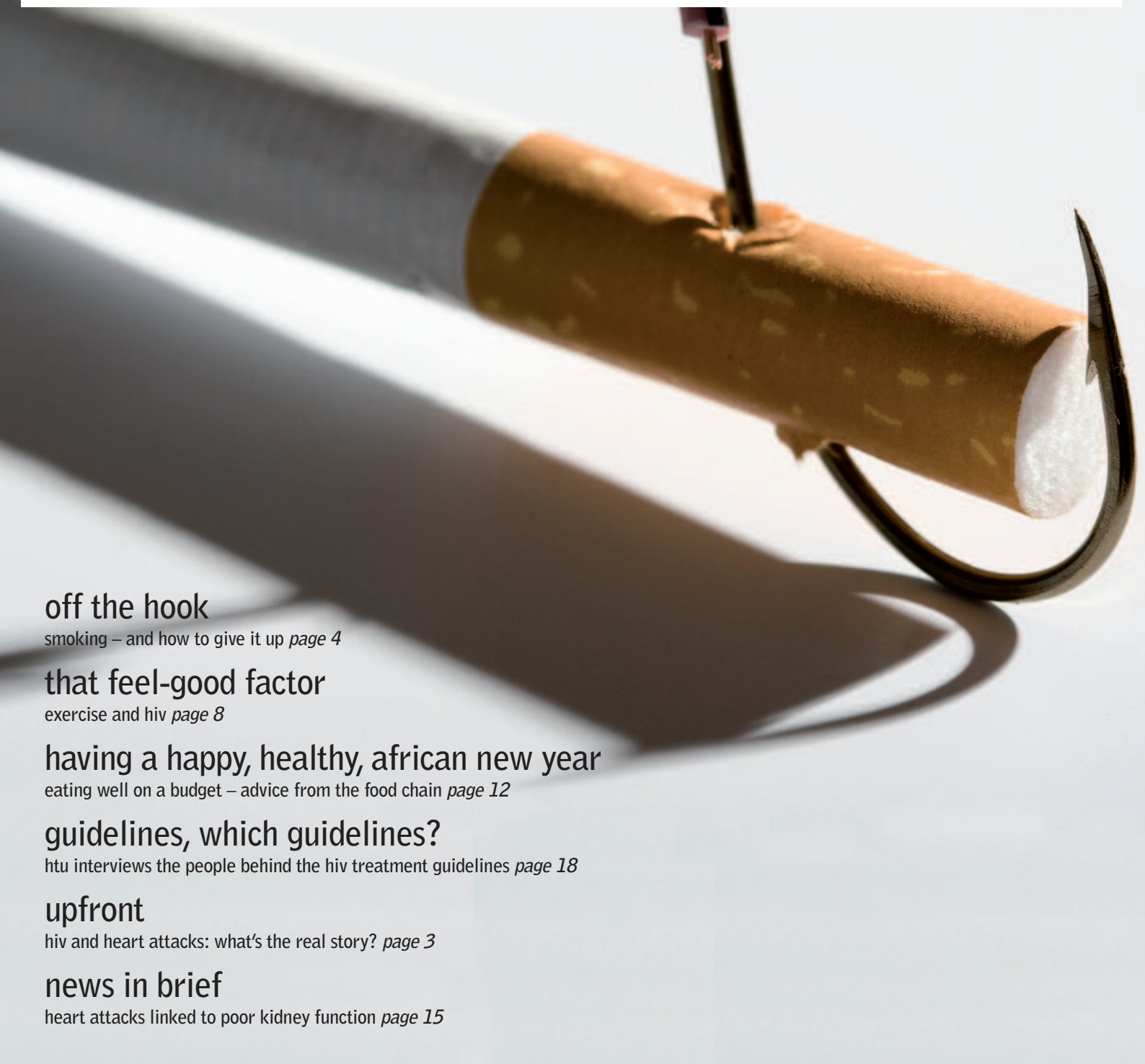
hiv treatment update



Gus Cairns

in this issue

By the time you read this, we'll already be nearly two months into 2010, so it's a bit late to call this the New Year issue. If you made any New Year's resolutions they've either got lost in the January snow, or have become a habit.

So we'll just steal a line from the magazine that the woman next to me is reading on my train: *It's never too late to be the new you.*

Most of the pieces in this issue have some relationship to becoming healthier: giving up smoking (page 4); exercise (page 8); eating well (page 12); and even avoiding heart attacks (opposite).

Even the piece on the UK and European HIV treatment guidelines (page 18) might, to stretch a point, be entitled *How to make your pills work for you.*

Other lines from my travel companion's magazine offer gain without pain: *Five-minute moves that really work*; *The expert plan anyone can do*; *Results in just four weeks.*

If 'anyone' could develop a god-like body in four weeks with five-minute exercises, 'everyone' would. They don't work, of course, but we're still suckers for fitness routines that promise instant results. We don't like to think of all the effort, the loss of guilty pleasures, and the sheer willpower that self-improvement requires.

We want to **be** the 'new us' straight away and skip over the nasty business of **becoming** it.

I discovered this myself, when in the process of researching *Off the hook* (page 4). I discovered that being a non-smoker may be easy, but being an ex-smoker is bloody difficult, and is still a state I fail to maintain regularly...

So how do you get through the first few weeks of not smoking, or on your diet or starting your gym regime? There are no magic answers, but there are some things common to success.

Firstly, you have to be unsparingly honest with yourself. Do you really want to change? Or are you trying to change because you feel you should? I think I didn't so much want to give up smoking as want to be the kind of person who could.

Secondly, you have to replace the thing you want to stop with something that at least stands a chance of being just as enjoyable: no hair shirts here. Find something you actually like to do, then call it your exercise regime.

And last, you have to forgive yourself. The more you hate yourself for doing something, the less you'll feel like someone who can stop doing it. If you can manage to let go of your perfect expectations of yourself, you may manage some smaller triumphs. Have fun trying.

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upfront

HIV drugs and heart attacks: what's the real story?

The 'Data Collection on Adverse Events of Anti-HIV Drugs' study (a large study known as D:A:D, which is monitoring the effects of HIV drugs) continues to find that if you are currently taking, or have recently taken, either abacavir (*Ziagen* – also in *Kivexa* and *Trizivir*) or ddI (didanosine, *Videx*) you're respectively 70% and 30% more likely to have a heart attack.[1]

This risk is raised regardless of other conditions that might cause heart attacks like cholesterol, diabetes and high blood pressure. The risk was raised even in the three-quarters of patients who weren't at high risk of a heart attack – and a quarter of heart attacks were in this low-risk majority.

However it's important to note that these increases are relative to your current risk of having a heart attack and if you're at low risk, low risk plus 70% still means quite low risk. Heart attacks were still quite uncommon; in the eight years now covered by the study, there were 580 heart attacks in over 33,000 patients, or one per 308 patients per year.

D:A:D also reported an 8 to 9% increase in heart attack risk for every year spent taking the protease inhibitor (PI) drugs lopinavir/ritonavir (*Kaletra*) and indinavir (*Crixivan* – whether or not it was taken with ritonavir). For the first time, D:A:D also reported a similar cumulative risk with abacavir too: the risk of heart attacks increased by 7% for each year of exposure.

The reason for distinguishing between current and cumulative exposure is that it distinguishes between a rise in a health risk that increases as soon as a patient starts taking a drug, but stops when they stop, and a chronic side-effect which may only become apparent after several years, and may persist after the drug is stopped.

For instance, this would imply that with abacavir, when you started the drug your risk of a heart attack would rise by 70% compared to non-abacavir users; after two years it would be 84% higher; and if you then stopped taking it and switched to a drug with a neutral effect it would remain raised, relative to people who had never taken abacavir, by 14%.

No increased heart attack risk was found with any other HIV drug studied, including tenofovir (*Viread*: also in *Truvada* and *Atripla*), though in this case only three years' data have been collected so far, resulting in a wide margin of uncertainty. D:A:D hasn't yet been able to evaluate the risk for the newer PIs like atazanavir and darunavir, or other new classes.

But we're clear about abacavir at least? Not necessarily. Since these findings were initially presented at the Conference on Retroviruses and Opportunistic Infections (CROI) last February,[2] a nearly-as-large US study of army veterans failed to find a link between abacavir and heart attack: current use only raised the risk by 17%, rather than 70%, and this could have been due to chance.[3]

Why the difference? The D:A:D researchers tell readers that their findings "cannot be assumed to reflect causal associations and must be interpreted cautiously because of the potential for unmeasured confounding".

The weakness of cohort studies is that a so-called 'confounder' — an unrecorded or unlooked-for characteristic of the patients — might have caused the effect seen. Because studies like D:A:D are so big, they can only select a very limited range of things they want to find out about patients. They can miss something crucial.

In the case of the US veterans' study, the researchers think they may have found their confounder in the shape of kidney disease. Because this may be exacerbated by tenofovir use, the argument goes, patients with it are more likely to be prescribed abacavir instead ... and HIV patients with kidney disease were four times more likely to have a heart attack. More recently a French study found the same association (see page 15).

The D:A:D study does not collect kidney disease data (or hasn't done so far). But there was very little difference between patients on tenofovir and ones on abacavir in terms of the cardiovascular risk data they did collect, such as blood pressure and cholesterol levels.

One theory is that the studies that show an association between abacavir and heart attacks largely feature patients who were already on HIV drugs, while ones that show no association featured patients new to treatment. Having untreated HIV infection raises the risk of a heart attack at least as much as abacavir does. The argument is that any increase in risk due to abacavir was counterbalanced by the decrease in risk due to bringing HIV viral load under control.[4]

So the question over abacavir and heart attacks remains unsettled. Until the question is settled – and it will be if studies like D:A:D accumulate enough data – all that guidelines like those published by the British HIV Association can say is that "Patients currently on abacavir-containing regimens should be carefully reviewed to see whether other options are available".[5]

off the hook

smoking – and how to give it up

Gus Cairns investigates the fatal attraction between people with HIV and cigarettes – and tries to kick the habit himself.

I had this great idea last year. I was going to give up smoking – and use this article to do it.

An on-off smoking habit I'd had since my student days had spiralled into 20 Marlboro Reds a day. I was sick and tired of smelling like an ashtray, of not being able to taste my food, and of colds prolonging into chesty coughs. Having survived AIDS, it seemed perverse to have a habit that would hasten my death. Besides which, I was ashamed of being controlled by an addiction.

So, I thought, I'll go on a stop-smoking course, and write up my experience as a reborn non-smoker as an article. So I signed up for the once-a-week stop-smoking course run by the gay men's health charity GMFA. It was going to be easy.

After a couple of evenings bonding as a group and being given the kind of data on smoking that will follow in this piece, our 'Stop Smoking Day' happened in the third week. Participants recite a pledge that they will, from then on, be a non-smoker.

For the next four weeks we were supported in staying off, assisted by whatever medication we chose to use (some use none). Every week we took a 'breathalyser' test that measures the amount of carbon monoxide in the body (see opposite); it can tell if you've had a cigarette in the last 24 hours.

One way we prepared to stop was to look at our smoking 'triggers': what makes us light up. Smokers tend to be one of three types:

- The physically addicted smokers, who need a regular cigarette to top up their nicotine
- The social smokers, who start because their friends do and find social situations, pubs and clubs are their danger points
- The stress smokers, who grab a cigarette after a row with the boss or 'reward' themselves with a cigarette after a long day.

I'm the third type. I don't smoke regularly, but when I do I binge. Apparently my type finds it hard to stop because we're psychologically, rather than physically, addicted. I could cheat the breathalyser because I don't smoke every day.

You know what's coming – going 'cold turkey' didn't work. After seven weeks of the course, I was smoking more than ever, though at least I had the bottle to go back and admit it. Having tried and failed my first attempt, I went off to the doctor for a prescription for an anti-smoking pill called *Champix* (varenicline).

This helped. My consumption has gone way down and I managed a three-week period without a single puff. But it's far from being an unqualified success. I still smoke, though less often.

I probably needed to be reminded at first hand of exactly why it has proved so hard to reduce what the US Centers for Disease Control call "the single most important preventable cause of death in our society".[1]

Why tobacco is addictive...

Nicotine is the addictive substance in tobacco. An oft-quoted survey periodically asks addiction experts to rate various drugs in terms of their addictiveness, and nicotine has consistently come top – ahead of crystal meth, cocaine and heroin.[2]

Nicotine is only moderately physically addictive: but it's fiercely *behaviourally* addictive, due to a unique combination of effects.

Firstly, nicotine is a stimulant drug. It causes the release of the neurotransmitter dopamine, also associated with cocaine and crystal meth, which creates a sensation of confidence and alertness.[3]

Secondly, and unlike other stimulants, it increases the brain's sensitivity to another neurotransmitter, glutamate.[4] Glutamate improves alertness and concentration.

Thirdly, when you burn nicotine you create a substance called harman,[5] which is an antidepressant drug.

Fourthly, most addictive drugs induce tolerance: habitual users need more to have the same effect. But with nicotine the brain cells develop more nicotine receptors as time goes by, which means the 'hit' keeps on getting better.[6] This increased number of receptors persists for months or even years after people quit smoking, prolonging cravings and 'priming' ex-smokers to relapse.

And lastly, there's the way you take it. Because they can have control over

how much drug they inhale, smokers can achieve the optimum balance between reward and side-effects. As users of nicotine replacement therapies know, other delivery methods don't feel so good.

...and why it's so bad for you

Nicotine itself has harmful effects. The dopamine it creates causes your system to flood with adrenaline, which increases heartbeat and blood pressure and raises the amount of cholesterol in the blood.[7] It also increases the amount of clotting agents, making thrombosis more likely.[8]

Nicotine also raises blood sugar (which is why it suppresses appetite) and decreases insulin production.[9] It causes sexual dysfunction: a study in Chinese men (China has one of the world's highest smoking rates in men, and is predicted to suffer an epidemic of lung cancer in the next 20 years) found that smoking raised the risk of erectile dysfunction by 65%.[10]

However it's not the nicotine that causes the majority of harm: if it did, the health service wouldn't prescribe nicotine patches. The most harm is caused by two other chemicals.

Firstly, tobacco smoke is full of carbon monoxide, a killer gas that stops your blood cells being able to take up oxygen. Heavy smokers have about ten times as much carbon monoxide in their blood as a non-smoker living in a city, and will be deficient in oxygen for eight hours after their last cigarette. This makes the heart work harder and damages blood vessels.[11] Carbon monoxide is also the most important pollutant affecting passive smokers, who may inhale 25% of active smokers' intake of the gas.[12]

In pregnant women, carbon monoxide from smoking, or from passive smoke, also restricts the oxygen supply to the baby, which can affect its development in the womb and result in premature birth and low birth weight. Smokers are also more likely to experience complications during their pregnancy and during the birth, including eclampsia and placental abruption.[13]

Secondly, smoking causes the formation of tar, and tobacco tar contains at least 20 of the most potent carcinogens (cancer-causing chemicals) known.[14]

Lung and other cancers are not the only diseases caused by these carcinogens: the cellular disruption causes inflammation, leading to chronic obstructive pulmonary disease (COPD; i.e. bronchitis and emphysema).[15]

Cigarette smoke also includes a whole number of other toxic chemicals, including formaldehyde, cyanide, ammonia and arsenic.

Health effects and the general public

Imagine three jumbo jets crashing every day, 365 days a year, killing everyone on board. That's the number of deaths

caused by tobacco in the USA alone. Each cigarette shortens the average smoker's life by eleven minutes.[16]

The seminal studies on tobacco and mortality were conducted in the UK in the 1950s by the pioneering epidemiologist Sir Richard Doll.

His first study [17] was stimulated by a 15-fold increase in lung cancer in the UK, between 1920 and 1940. This had been preceded 20 years earlier by a quadrupling in smoking.

Knowing that tar causes cancer, Doll first thought that the increase in tarred roads was to blame for the epidemic. But instead he found that 90% of lung cancer cases occurred in smokers, and heavy smokers (25+ cigarettes a day) were 50 times more likely to develop lung cancer than non-smokers.

At this point Doll was a smoker himself. "I gave up two-thirds of the way through the study", he later remarked.

He followed this with a study of 35,000 male British doctors. Starting in 1951, this assessed their smoking habits, then monitored their deaths for half a century.[18]

Doll found that the smokers died, on average, ten years younger than non-smokers, were three times more likely to die before they were 70 and were at least 15 times more likely to die from lung cancer, 14 times more likely to die of COPD, and 50% more likely to die from heart disease or a stroke.

If they'd stopped smoking before 30, they avoided all the extra risk of dying, and stopping at 50 halved it.

At the time of Doll's original study, half the men in the UK smoked. Smoking rates declined to 24% by 1990, but then seemed to get stuck. However, due to a comprehensive national tobacco control programme, which included legislation like banning smoking in public places and support for smokers to quit, it started declining further in 1998 and now stands at 19% in the general population.

However, it has not declined in a number of vulnerable groups, such as people with psychiatric diagnoses, and 40% of UK teenagers have smoked. Although deaths due to smoking have declined, it still caused 18% of all deaths in England and Wales and 24% of those in Scotland in 2000.[19]

Smoking and people with HIV

One group in which smoking remains at high levels is people with HIV. A study from the HIV clinic at London's Royal Free Hospital in 2004 found that 45% of its patients smoked an average of 15 cigarettes a day and that two-thirds had smoked at some point.[20]

The majority of the survey respondents were gay men, and the smoking rate among gay men is, at 38%, higher than in the general population. Smoking among Africans has historically been lower, at about a third of the rate of people born in the UK, but rates in Africa have increased faster than anywhere else since 1990, as has the incidence of COPD.[21]

Why do so many people with HIV smoke? According to Barrie Dwyer, who runs the GMFA stop-smoking courses, for gay men it's largely a question of lifestyle.

"Gay culture is more accepting of behaviours like smoking, recreational drugs, open relationships and so on. Starting to smoke may be part of socialisation, becoming accepted in the group. And there's that eternal pick-up line – 'Can I offer you a light?'"

He's less keen to automatically attribute psychological factors like stress to gay, HIV-positive smokers – "Not everyone who smokes a lot is gay" – but acknowledges that "messages directed at us are internalised and may result in stress and low expectations of ourselves".

Carolina Herberts is the smoking cessation worker at the Royal Free Hospital. She advises and helps everyone from patients hospitalised with COPD to HIV clinic attendees and even hospital staff who want to stop.

"I think the stress of dealing with HIV may certainly be a factor," she says. "So is stigma: people may blame themselves for poor health choices generally, as well as HIV, and may feel they have no control over giving up. That's why it's so important to acknowledge how hard it is to stop and not to nag people."

Imagine three jumbo jets crashing every day, killing everyone on board. That's the number of deaths caused by tobacco in the USA alone.

Health effects in people with HIV

What is clear is that having HIV exacerbates the harm smoking can do, and vice versa.

HIV increases the risk of lung and other smoking-related cancers. Studies have found that between 2.6 and 5.3 times as many cases of lung cancer occur in HIV-positive smokers than in their HIV-negative counterparts.[22,23]

A 2003 survey from London's Chelsea and Westminster Hospital found that the annual incidence of lung cancer in their patients rose from one in 12,500 patients a year before 1996 to one in 1500 a year after 1996.[24] So it's still relatively rare: but if you do get it, you only have a 33% chance of surviving a year.

In terms of cardiovascular disease, a study has found that HIV infection and smoking both roughly contribute equal amounts to the risk of hardening of the arteries and to heart attacks – doubling an already increased risk.[25]

People also worry about the cardiovascular effects of HIV drugs, but these raise the risk less than uncontrolled HIV infection: one study found their contribution was the equivalent of smoking about one to four cigarettes a day, so even if you are a smoker, it's better to be on HIV treatment than not.[26]

The bottom line is that if you have HIV, smoking could double your risk of premature death. A study in HIV-

positive women in 2006 found that smokers had a 53% increased chance of dying during the study period:[27] and one in US army veterans (mainly men) in 2005 found that it raised the risk by 99%.[28]

Giving up

However, it is possible to come off, and stay off, cigarettes. A French study of 233 smokers with HIV found that about 7% stopped within the next two years.

This quit rate is approximately what Carolina Herberts sees at the Royal Free.

"We know that about 3% of patients a year, who simply decide to stop and have no other help, manage to quit permanently after any one attempt.

"If they also use medication such as nicotine replacement therapy or the anti-smoking drugs *Zyban* (bupropion) or *Champix*, the one-year success rate is 7%. But if they get medication and support, such as an anti-smoking course, the success rate is 20%."

Short-term success is much greater: a month after stopping smoking 60% of smokers have still stopped. But, as I found, the addictiveness of nicotine means that there's a high relapse rate.

Vince knows about relapse. He's 64, has had HIV for 23 years, and used to smoke 30 a day. A tough proposition for a stop-smoking course.

"I started smoking at 17, and was smoking for 38 years before I stopped in 2000," he says. "I managed to stay smoke-free till last year when I was having a bad time.

"I started again in June and was soon up to 30 a day. I was coughing again within a month. A friend said: 'You're already sounding like you did ten years ago'."

The first time round he had attended a stop-smoking course at the Royal London Hospital. He initially tried nicotine replacement therapy but, finding it didn't work, started taking *Zyban*.

It's still not clear exactly how *Zyban* works. It has tended to become less popular over time – in favour of *Champix* – because a lot of people complain of side-effects, including Vince. "I felt really spaced out, like I was unpleasantly drunk and had a woolly mind. However they halved the dose and I then felt much better."

This may have been because anti-HIV drugs, including both protease inhibitors and non-nucleoside (NNRTI) drugs, increase the amount of *Zyban* in the body.

This time round he tried the GMFA stop-smoking course and *Champix*. This is the first drug specifically designed as an anti-smoking medication. It works by blocking the nicotine receptors on nerve cells, so smokers experience fewer cravings when they stop. It doesn't interact with HIV drugs.

The most common side-effect is mild nausea in the first couple of weeks. Vince also experienced disturbing dreams and disrupted sleep, though he says "it was hard to tell if it was part of the mental process of giving up." And he says it has not entirely abolished cravings. But at the time I interviewed him, five weeks after the stop-smoking course, he only admitted to once having a puff on a tobacco-free marijuana joint.

Only a minority take an anti-smoking pill; the most popular choice is still to use nicotine replacement therapy (NRT), which gives you a hit of nicotine without filling you full of the tar and carbon monoxide you would get from smoking a cigarette.

NRT comes in a variety of different guises, tailored to smokers' individual habits. Habitual smokers who light up first thing in the morning might use patches, which deliver a regular supply of nicotine. Occasional smokers might benefit more from gum, fast-acting lozenges, or a nicotine nasal spray to tackle cravings.

Milo is another GMFA course graduate. He's 35 and HIV-negative and saw his cigarette consumption increase to about 15 a day since he started smoking eleven years ago. He had tried to give up three times before he decided to try a course.

"I think the course really helped; sharing experiences, going through something similar to everyone else. If you relapse you're letting others down as well as yourself – though I liked the honesty of it too, and people feeling able to admit their slip-ups. It's the first group therapy thing I've ever done."

Most smokers need a lot of attempts before they quit successfully. If it doesn't work this time, come back!
Barrie Dwyer
GMFA

Vince chose the GMFA course because "courses are the only thing that have ever worked for me. It's the ego thing, being able to come back the following few weeks and tell people you're smoke-free."

He wants to stay a non-smoker "because it's the one thing in my life I *can* control. I need meds for my HIV, and I take antidepressants too. At least I can bloody well stop cigarettes. And I want to stay alive for my partner Ray."

Barrie Dwyer emphasises there is no disgrace in relapse. "Most smokers need a lot of attempts before they quit successfully. If it doesn't work this time, come back!"

I'm already thinking of it... ■

- For the GMFA stop-smoking course, go to www.gmfa.org.uk/quitsmoking or call 020 7738 3712.
- In Manchester the Lesbian and Gay Foundation also offers help with quitting – see www.lgf.org.uk /queer-as-smoke
- Most NHS trusts offer individual and group support to stop smoking; ask your GP for further information, phone the NHS Stop Smoking Helpline on 0800 022 4 332 or visit the NHS website www.smokefree.nhs.uk.

that feel-good factor:

Derek Thaczuk gets off the couch and finds out about exercise and HIV.

Does anyone really need to be told that it's healthy to exercise? Probably not. Yet that knowledge often doesn't translate into actual sweat and pounding hearts. Despite – or perhaps *because* of – a thriving gym culture, many people still view exercise as yet another onerous duty ("I suppose I should"), rather than something to look forward to and enjoy.

Does what's 'good for us' have to be at odds with what we enjoy? Not so, says Garry Brough, former co-ordinator of the Positive Health Programme at the central London YMCA – a fitness programme developed specifically for people with HIV. At Positive Health, says Brough, even those who came in with reservations tended to leave happy and to come back for more.

"Many people didn't really expect much from the programme. They didn't come in with optimism and were sure they wouldn't enjoy a gym environment. But once they got the hang of it, once they were actually there and getting a bit of a buzz from the exercise, they realised it made them feel good and wanted to do it again."

Many 'graduates' went on to volunteer or teach at the YMCA, and at least five or six actually became personal trainers themselves.

Much of the Positive Health Programme's success may have stemmed from the wide range of activities available to choose from, from weightlifting to yoga, as well as the personal attention and HIV focus. However, not having an HIV-tailored programme to guide and welcome you should be no deterrent to reaping the benefits of physical activity. "It's not all about the gym," Brough says. "If you don't have access to a good facility, just do something active – gardening, playing frisbee, walking the dogs. Just as long as it's something you enjoy and that doesn't feel like a chore."

And if you're a driven desk-jockey who 'hasn't the time'? Then run or cycle at least some of the way to work instead of taking the train.

Choosing your goals

What to do, of course, depends not just on personal preferences, but on what you

exercise and HIV

are trying to accomplish. Many joggers and gym goers would cite losing weight as their top goal. Some HIV-positive people need to lose weight too (*I do* – ed.). For others, widespread lipodystrophy and HIV-related metabolic problems are causing unhealthy fat gain.

Other HIV-positive people, though, most decidedly do not. Ongoing HIV infection causes many people to lose weight (particularly lean body mass: that is, muscle) involuntarily. This condition, called *wasting*, can be very serious if not addressed.

Exercise can help, whether you aim to lose or gain – but it's important to choose the right kind or you may even make matters worse. A person experiencing involuntary weight loss probably shouldn't be training for marathons. Equally, a person who needs to lose weight may be risking their health if all they concentrate on is resistance training.

There are three main components to exercise: resistance training, aerobics, and flexibility training.

Flexibility training should be part of any routine: stretching and loosening your muscles and joints protects them against injury, especially before and after weight lifting or other heavy-duty forms of exercise. It also makes you supple. A number of complementary health disciplines concentrate on flexibility, both active (most forms of yoga) and passive (shiatsu or Thai massage).

Resistance training means putting your muscles to work against weights or weight machines. This form of training builds muscle mass and muscle strength, and is often recommended for people with HIV who have difficulty maintaining enough body weight. Studies have found that properly designed resistance training routines safely help HIV-positive people build strength and lean body mass.[1,2] Note that when trying to build muscle, it's crucial to have an adequate, healthy diet: your body needs enough protein and other essential nutrients from which to build new muscle.

Aerobic exercise is the sweaty stuff that gets your heart and lungs going: cycling, running, spinning and the like. Aerobic exercise can accomplish two things: it burns off calories, helping you to lose extra body fat. It also forces your heart and lungs to work harder, keeping them healthier, hence its other name, 'cardio'. Although HIV-specific studies are relatively scarce, there is a great deal of evidence that regular exercise reduces the risk of adult onset diabetes, high blood pressure (hypertension), and coronary artery disease in the population at large and in those with other chronic illnesses.[3, 4]

Improving cardiovascular health is especially important for people at risk of heart disease. This includes people with HIV, especially with other risks such as high cholesterol levels. People at risk of heart disease are encouraged to get regular, moderate amounts of aerobic exercise. Aerobics can lower the levels of 'bad' LDL cholesterol and increase 'good' HDL cholesterol levels in the blood and it's having a high HDL-to-LDL cholesterol ratio that's the key to reducing heart disease risk. While you may not be able to change your genetics (cardiac risk tends to run in families), you *can* change how much you exercise.

Beating the blues

Exercise has many other rewards – some of which may feel more immediately rewarding than the somewhat abstract notion of cardiac risk. Exercise can reduce **anxiety**, **stress** and **depression**, no matter what your HIV status. Getting sweaty has direct effects on stress-related hormones, and many people simply find it invigorating to physically release pent-up stress and tension.

Studies have shown that aerobic exercise can measurably improve mood and reduce depressive symptoms – both in the population at large and specifically in people with HIV[6] – and aerobics and resistance training have both been found to decrease anxiety.[7]

It can also help you get more restful **sleep**, but make sure you schedule your exercise in the morning or afternoon, as exercising later at night can actually interfere with getting a good night's sleep.

Exercise and CD4s

Does exercise actually strengthen your immune system, as often claimed? Well, some studies have shown temporary upswings in CD4 counts immediately after exercise. However, these increases don't persist, and may reflect a temporary redistribution rather than an actual increase in the total number of CD4 cells. More to the point, essentially all studies have found exercise does not *lower* CD4 cell counts in HIV-positive people. In other words, while exercise may not help your CD4 count, it won't hurt it either.

Putting the plan into action

How, then, to make your exercise regime happen, rather than allow it to fade away like a typical new year's resolution? There's no single answer or button to push that will suddenly turn you from sloth to athlete. But many experts suggest the following tips:

- Do something you enjoy: exercise should be a reward, not a punishment or a grim duty.
- Before you start, get advice from your doctor and a qualified trainer. Garry Brough says: "HIV in itself doesn't preclude exercise in any way, so there is never any need to disclose your HIV status unless you want to do so. You should, however, disclose any conditions that may occur as a result of your infection and have a bearing on exercise, such as high cholesterol. But there is no need

to tell anybody why you have those conditions."

- Find out about proper technique and possible risks.
- Set reasonable goals. It's easy to set yourself up for failure by reaching for the moon on your first day. Start slow and stay steady.
- When in doubt, moderation is best. High-intensity exercise may be safe for many otherwise fit and healthy HIV-positive people, but is best avoided by anyone with active symptoms. There is plenty of evidence that moderate exercise is safe and beneficial for nearly everyone with HIV.

Don't do it all alone

Finally, as the Positive Health Programme has seen, doing exercise with others – in a yoga or kickboxing class, for instance – adds a social aspect to exercise and a bit of pressure to turn up. More solitary activities such as jogging or weight training can be made less so by doing them with a buddy. Some people prefer exercise as a kind of solitary meditation and a break from stress, but others welcome the chance to 'get physical' with others and get positive feedback on how they're doing.

It's easy enough to find activities to suit all but the most confirmed couch potato. Nearly all fitness centres offer sports facilities, exercise equipment, classes and programmes. Nor are such facilities limited to the gym – think complementary health centres, bike trails, and outdoor running tracks. Trying new activities can lead to pleasant surprises, as people discover things they never thought they'd like. I barely lasted through one boxing class. But I was pleasantly shocked to discover I love running! ■

Special cases

According to your personal health and preferences, various specific kinds of exercise may be more or less appropriate, or best avoided altogether. Be sure to discuss any planned new activities with your doctor, and preferably also with a fitness expert who is familiar with that activity.

Among people with HIV, a few conditions warrant particular attention.

Thinning bones

People with HIV are at risk of osteopenia and osteoporosis – conditions in which the bones become spongier and more easily broken. Exercise can help maintain and build bone density, so it is actually recommended for people with these conditions. However, it's important to choose the right kind.[8]

DO: so-called weight-bearing exercises, in which you are working against gravity. These include weight training, walking and jogging, stair climbing, and low-impact aerobics – also skipping and trampolining. Swimming and cycling, while good for your heart, do not help combat thinning bones. Get expert advice about your exercise routine.

AVOID: high-impact activities like boxing, and movements that involve a lot of flexing or twisting of the spine. These types of activities can stress the bones and run the risk of breakage.

Cardiac risk

People at risk of heart disease are encouraged to get moderate amounts of aerobic exercise regularly. However, if you are not used to exercising and are already at risk of heart disease, sudden, vigorous exercise is not advisable – too much sudden stress can actually trigger a heart attack or stroke.

DO: plan your routine with a medical expert, start off slowly, and increase the intensity of your workouts gradually.

AVOID: sudden bursts of intense activity that you are not accustomed to.

Lipodystrophy

Unfortunately, since resistance training builds lean body mass (muscle), not fat, it can do little to correct HIV-related fat loss (lipoatrophy); studies have shown that exercise can indeed cause fat loss in people with 'lipo'.[9]

However aerobic exercise may help fight the unwanted fat accumulation (lipohypertrophy) often seen in people with HIV. The fat that comes with lipodystrophy is typically much denser and more deeply rooted than the type seen in 'normal' obesity but small studies have shown that aerobic exercise can help burn it off.[10]

having a happy, healthy African new year

Christmas is traditionally a time of overeating, and New Year a time to think about healthy eating! HTU asked Nutrition Volunteer *Tom Dunn* and Public Health Nutritionist *Anna Denny*, of *The Food Chain*, to write a piece for African people with HIV new to Britain, or in Britain and new to HIV, who may be struggling to eat well on a budget.

Healthy eating is for everyone and January is the time to kick-start those healthy eating habits! In this article we look at African foods and healthy eating, how to find UK alternatives to African foods and eating well on a budget.

Adapting to European or 'western' foods

Visiting or moving to a new country often brings challenges and difficulties but it can also be a great opportunity to try new things. Many people find they enjoy mixing new dishes and ingredients with their more traditional diet, replacing some ingredients with more readily available local alternatives.

'Western' food is often based around convenience so be careful about the type of foods you choose. Many of the foods available that are quick to prepare, appealingly packaged, or cheap, are high in fat, salt and sugar.

Try to cook using fresh ingredients or those that are processed when fresh (most tinned or frozen foods are fine), rather than pre-cooked ones like microwave ready-meals (though these may have a place when you are ill), and check food labels to see the amount of fat, salt and sugar in foods.

Healthy eating

The following is a basic guide to the balance of foods we should be eating to stay healthy:

Starchy foods: Bread, rice, potatoes, pasta and other starchy foods

These foods should make up about one third of what we eat. They are a good source of energy and provide us with fibre, calcium, iron and B vitamins. They are also low in fat (though be careful how much fat you add when cooking them!). Starchy foods include rice, cassava, sweet potato, plantain, millet, potatoes, maize meal (ugali), fufu, banku, gari, chapattis, pasta and bread.

Top tip: Choose wholegrain varieties when you can (such as wholemeal chapattis, brown rice and wholewheat pasta) because they provide more fibre.

Fruit and vegetables

Try to eat at least five portions of fruit and vegetables a day. This food group includes sweet bananas (but not plantain or green bananas), pumpkin, mango, avocado, pineapple, papaya, tomatoes, greens (e.g. spinach, callaloo), carrots, apples, broccoli and many other types of fruits and vegetables. A portion of fruit or veg is about the amount that fits into the palm of your hand. (see www.5aday.nhs.uk/WhatCounts/PortionSizes.aspx).

To make it easy to get your 5-a-day, try adding extra veg to stews, snacking on fruit instead of sweet treats and making the most of frozen veg and dried fruit.

Protein: Meat, fish, eggs, beans etc.

Aim to eat three portions of protein foods each day (one at each meal including breakfast). This could be chicken, mutton, goat, fish, lamb, pork or seafood, or vegetarian sources of protein such as beans, lentils, eggs and nuts.

Milk and dairy foods

Try to eat three portions of lower-fat dairy foods a day: cow's and goat's milk (check it's pasteurised), lower-fat cheeses and low-fat yoghurts. Lower-fat dairy foods are better for your heart, but you may want to choose full-fat varieties if you're trying to gain weight. If you find that dairy products give you a bad tummy, eat live natural yoghurt, and try hard cheeses such as cheddar, edam and emmental, which contain very little lactose. If you can afford fresh milk it's a better choice than powdered milk or tinned/UHT milk because it contains more vitamins.

Top tip: If you're not familiar with UK dairy foods, why not try low-fat soft cheese, cottage cheese, goat's cheese and ricotta. These are all low in 'bad' saturated fat!

Fats and oils

These should only be used in small amounts. Unless you are underweight, try to use only one teaspoon of oil per person when you are cooking. Try to use less palm oil, coconut cream and butter (as these are high in saturated fat, which can give us high cholesterol) and try to cook with rapeseed oil, olive oil and coconut milk instead.

Sugary foods and drinks

These foods contain a lot of extra energy (calories) that most of us don't need and they're bad for our teeth – gum disease is especially common in people with HIV. Even so-called 'diet' drinks are acidic, which is bad for your teeth. Try to cut back on fizzy drinks, cola and malt drinks, chocolate, biscuits, sweets, cakes and pastries. Better to eat more slow-release carbohydrates instead such as rice, sweet potato and wholemeal chapattis, especially if you have diabetes.

Salty foods

Salt and salty foods can lead to high blood pressure, if eaten in large amounts, and this can increase the possibility of having a stroke. Reduce the amount of salt you use in cooking (by using more spices, garlic and lemon to add flavour), and remove the salt shaker from your table. Try to eat less salted fish and meat.

African foods in the UK

African foods tend to be naturally nutritious and healthy, because they are high in fibre and low in 'bad' saturated fat. But if you're living in the UK, you may find that a lack of available African foods, the high cost of foods, and unfamiliarity with British foods can make it difficult for you to eat a healthy, balanced diet.

In inner-city London and other large UK cities it is relatively easy to find at least some African food shops, but in smaller cities it can be more difficult to find familiar foods. It's worth knowing about some good substitutes for African foods that you can find easily in the UK – and how to adapt to the UK diet.

UK alternatives to African foods

If you can, ask people in your local community about nearby shops that stock foods you're familiar with. Remember that buying African foods in the UK can be expensive, and often foods are not as fresh as foods that are grown here. For this reason it's a good idea to find some UK substitutes for African foods.

You may be able to find yams, millet, plantain, cassava and sweet potato. These are a healthy choice because they are high in fibre and low in fat. If you cannot find them, butternut squash, pumpkin, swede and parsnips are good alternatives – cook them in the same way as yam or sweet potato. Because these foods grow readily in the UK in the winter, they are often cheaper than African starchy foods. They do not contain many vitamins and minerals so it's important to eat lots of brightly coloured fruits and vegetables as well (try to eat a 'rainbow' of colours of fruit and vegetables!). How about growing greens or tomatoes in a window box or bin or finding out about allotments?

You may find fufu flour in some shops but, if not, a similar food can be made from rice flour or powdered instant potato, which are more readily available in the UK. Garri or eba can also be made using powdered potato flakes, if you can't find cassava flour. Most UK supermarkets sell semolina, corn meal (polenta), rice, sweet potato and tapioca (cassava flour) more cheaply than

African stores. Sadza, ugali, nshima, sima and banku can all be made from corn meal (polenta) but be aware that 'cornflour' sold in UK shops is not the same as corn meal so look out for 'fine polenta'!

African fruits such as mango, pineapple, guava and papaya (paw-paw) are a great source of vitamins but they are expensive in the UK. British fruits such as apples, pears, blackberries and (in summer) strawberries and raspberries provide just as many vitamins and may be fresher. Fresh or frozen spinach makes a good alternative to greens or callaloo and the UK courgette or marrow is fairly similar to cho cho.

Fish such as tilapia and red snapper can be expensive so try cooking with pollack or coley. If you don't know what these fish look like, ask the fishmonger in the supermarket to help you. Sardines, mackerel (fresh or canned) and canned salmon are cheap varieties of fish and contain healthy 'omega 3' – a type of 'good' fat that we need for our hearts and brain.

Goat meat can be difficult to buy in the UK but beef, lamb, mutton, chicken and pork are easily found. More and more butchers and supermarkets now offer Halal meat. Game birds such as guinea fowl are seasonal and expensive in the UK but chicken and turkey are cheap, nutritious alternatives. Groundnuts are a good source of protein – these are called peanuts or monkey nuts in the UK so look out for peanut butter/oil in the shops rather than groundnut paste/oil.

Finally, remember that some ingredients are widely available in the UK but are called a different name – eggplant is known as aubergine, ochroes/green fingers as okra, and cilantro/gilantro as coriander so keep your eye out for what looks familiar.

Living on a budget

Lidl, Aldi, Netto and Asda are often the supermarkets with the largest range of more affordable products, though they do not always stock a lot of African foods. Other supermarkets, such as Tesco and Sainsbury's, have 'value' ranges to help reduce the cost of regular items used every day. Many of these supermarkets offer large packs of foods that keep a long time (e.g. rice) for less money per kilo than the smaller packets cost. This can save you a lot of money in the long term. Try buying larger bags of rice and flour and splitting them with a friend or neighbour.

Small shops and convenience stores are generally more expensive than larger supermarkets so try to only use these to top up your food stores in an emergency. But beware of offers in supermarkets that might make things you don't really need appear much cheaper than they actually are. Also, try not to go shopping when you are hungry!

Kitchen items

If you have just arrived in the UK it might be hard to find accommodation with a kitchen or cooking facilities. Some of the following things should help make it possible for you to cook for yourself and prepare at least some foods from scratch:

- Get hold of a tin opener, a sharp knife, a chopping board and, if you have a cooker, a saucepan. You can often find these items cheaply in charity shops or supermarkets.
- Try to get access to a portable hob, cooking rings or microwave and if you can, a fridge.
- Ask if there's a sink with hot water you can use and buy some washing up liquid. If not, a plastic bowl with a kettle to heat water makes a good alternative.
- Remember to wash your hands, equipment and surfaces when you're preparing food to reduce the chances of getting ill, especially if you're sharing a kitchen with other people.
- If it is not possible to get access to a fridge, try to buy dried or canned food and always cook and eat meat or fish on the day you buy it. ■

For more information on eating well when you're living with HIV contact *The Food Chain* on 020 7354 0333, visit www.foodchain.org.uk or email info@foodchain.org.uk. The Food Chain also runs free healthy eating and practical cookery classes for people living with HIV in London, where you can learn how to cook some of the UK alternatives to African foods mentioned in this article. To register for classes call 020 7354 0333 or email info@foodchain.org.uk.

For a free copy of NAM's *Nutrition* booklet, written for people living with HIV, contact NAM on 020 7840 0050 or email info@nam.org.uk. It is also available on our website: www.aidsmap.com.

news in brief

Prevention

Microbicide disappointment – and controversy

The largest study yet of a microbicide to prevent HIV infection in women has ended in disappointment after it was found that women who used the microbicide were just as likely to acquire HIV as ones who used a placebo.

The MDP (Microbicides Development Partnership) 301 study recruited 9385 women in Zambia, Tanzania, South Africa and Uganda. The trial volunteers were instructed to use either the microbicide PRO2000 (polynaphthalene sulphonate) or an inert placebo gel every time they had sex.

An earlier trial of PRO2000 in 3099 women, the HPTN 035 study, produced a result that looked promising last year when it was found that women who used the microbicide were 30% less likely to acquire HIV than ones who used placebo.

But in the MDP 301 study the women who used microbicide were actually 5% more likely to acquire HIV than ones who did not, with 130 infections in microbicide users and 123 in placebo users. This difference was not statistically significant.

PRO2000 is the last in the generation of microbicides that did not have a specifically anti-HIV effect; large clinical trials are likely to focus exclusively on microbicides containing anti-HIV drugs in the next few years.

Chief Investigator Dr Sheena McCormack of the UK's Medical Research Council (MRC) said: "This result is disheartening. Nevertheless we know this is an important result and it shows clearly the need to undertake trials which are large enough to provide definitive evidence for whether or not a product works."

The trial was a collaboration between the MRC and local researchers in Africa. One trial participant commented that "Even though the gel proved not to be effective...we learnt a lot about caring for ourselves, such as using condoms. We also learnt to encourage others to test for HIV."

Nonetheless there has been some misunderstanding and controversy in the wake of the trial. In Zambia, a traditional leader, Chief Mwanachingwala of Mazabuka, said that the MDP should be forbidden from conducting further trials in his area.

The Chief said it was wrong for the MDP to continue conducting clinical trials when the drugs were not helping in blocking HIV transmission. He maintained that a trial could increase HIV incidence if women thought they were using a drug that would help to prevent HIV.

Kidneys

Heart attacks linked to poor kidney function

A French study[1] has found that patients who had heart attacks or strokes were four times more likely than other patients to have impaired kidney function.

This study will add to the debate about whether the drug abacavir (*Ziagen*, also in the combination pills *Trizivir* and *Kivexa*) causes heart attacks, or whether the observed excess of heart attacks in abacavir patients is due to their being more likely to have kidney disease (see *Upfront* on page 3).

The study compared kidney function in 63 people with HIV who had had a heart attack or stroke, and 252 who had not. It measured proteinuria (protein in the urine), which indicates poor kidney function; the waste product creatinine, high levels of which indicate poor function; and the estimated glomerular filtration rate (GFR), a direct measure of how much blood the kidneys are able to process per minute.

The average GFR was 68 millilitres per minute per 1.73 square metres (ml/m) in patients who had strokes or heart attacks compared with a near-normal 103 ml/m in patients who did not, and patients with a GFR under 60 ml/m were 6.4 times more likely to have a major cardiovascular event. Each decline in GFR of ten ml/m raised the risk of heart attack or stroke by 20%.

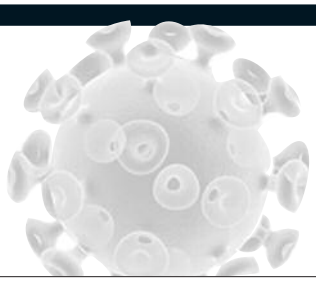
Heart attacks were twice as common in patients with a CD4 count under 200 cells/mm^3 or a viral load over 50,000 copies/ml.

A GFR of 60 ml/m does not always cause obvious symptoms, so without testing patients would not necessarily know if they have kidney problems.

Another study of 1647 patients from the USA[2] reinforced the link between tenofovir (*Viread*, also in the combination pills *Truvada* and *Atripla*) use and kidney malfunction, and recommended the "strategic" use of tenofovir in patients with kidney malfunction. One in 20 patients taking tenofovir had at least a 50% decline in GFR from baseline compared to one in 30 taking other drugs. After a year in the study patients taking tenofovir were 60% more likely to develop the particular kind of kidney malfunction associated with tenofovir and this increased with longer duration of treatment.

The researchers comment: "Given the current commitment to long-term, even life-long antiretroviral therapy, incremental small annual declines in kidney function could eventually lead to kidney failure and increased mortality."

Visit **www.aidsmap.com/croi2010** for breaking news from the 17th Conference on Retroviruses and Opportunistic Infections.



Thrombocytopenia

Bleeding condition is common consequence of stopping treatment

Thrombocytopenia is a shortage of platelets, the cell fragments in the blood that clump together to form clots, normally when injuries occur. It can be a serious condition, causing internal bleeding, nosebleeds and bruising.

It was common in people with HIV in pre-treatment days, with some degree of thrombocytopenia present in 40% of people with AIDS.

It is still quite common in HIV infection, with a 3% annual incidence rate. It is more common in people with liver disease – see below.

A French study[1] has now established that thrombocytopenia is much more common in people who interrupt HIV treatment than in people who stay on it.

The French WINDOW trial was a study of treatment interruption that concluded in 2005. Approximately 400 patients were randomised either to stay on antiretrovirals or to take them on an eight-weeks-on, eight-weeks-off basis. The initial average CD4 count was 741 cells/mm^3 and the researchers compared the proportion of patients in either arm whose counts fell below 300 cells/mm^3.

A quarter of patients interrupting treatment over a two-year period developed thrombocytopenia compared with 10% of patients on continuous treatment, and it developed much faster – an average of nine weeks after the start of the study compared with 40 weeks in continuous treatment. Further analysis showed that people who interrupted treatment were four times as likely to develop thrombocytopenia.

Severe thrombocytopenia, likely to cause clinical symptoms, occurred in 5% of people interrupting treatment compared with 1% on continuous therapy.

The researchers write that treatment interruptions should be "strictly forbidden" for patients who already have low platelet counts or a history of thrombocytopenia.

A second study, from the USA, has found that patients with thrombocytopenia were 24 times more likely to have hepatitis C than patients who did not. In patients without hepatitis C, only those with a detectable HIV viral load had thrombocytopenia.[2]

Anti-HIV drugs

Disappointment for CCR5 inhibitor

The drug company Merck has announced that it will not proceed further with the development of their experimental drug vicriviroc in treatment-experienced patients.

In a statement on their website, Merck announced that "In two Phase III studies in this patient population, vicriviroc did not meet the primary efficacy endpoint."

Merck is still pressing ahead with trials of the drug in treatment-naive patients. In partnership with another company, Bristol-Myers Squibb, it is evaluating vicriviroc as part of an innovative entry inhibitor/protease inhibitor first-line regimen, combining it with BMS's drug atazanavir (*Reyataz*).

No further information was communicated by Merck as to the reasons for vicriviroc's failure: more data will be presented at the Conference on Retroviruses and Opportunistic Infections (CROI) this month.

According to the news agency Reuters, a high proportion of patients in the trials had HIV that was sensitive to at least three other antiretroviral drugs. This may indicate why adding vicriviroc to these regimens did not result in greater rates of viral suppression.

Vicriviroc is a CCR5 inhibitor, and this class of HIV drug has so far produced disappointing results. One drug, maraviroc (*Celsentri*), has been approved for use in both treatment-experienced and -naive patients, but clinical uptake has been slow. This is partly because CCR5 inhibitors do not work against a type of HIV, T-cell- or X4-tropic virus, that tends to develop in later infection. The test needed to establish whether patients had this type was initially expensive and not very sensitive. A much simpler genetic test has now been developed, and maraviroc use is increasing.

Gay men

Asian gay men's survey finds significant HIV risk

A large internet survey of 8000 gay men and other men who have sex with men (MSM) in Asia, the second-largest of its kind in the world after the UK Gay Men's Sex Survey (GMSS), has found that gay men in the region, in the main, have very similar risk behaviours to gay men in the UK.

The survey, conducted by the Singapore-based gay men's website fridae.com, found that 45% of respondents who had anal sex with casual partners had not used a condom on at least one occasion last year, a figure which was 60% among men who had anal sex with regular partners.

These rates are almost identical to those found in the GMSS. Other HIV risk behaviours were slightly lower: for

instance 25% of respondents had not had anal sex, compared with 12% in the GMSS. Similarly the proportion with high numbers of partners was smaller.

More men in the Fridae survey had taken an HIV test than in the GMSS (75% versus 65%), though the proportion who had tested in the last year was slightly lower (51% versus 54%).

HIV rates in the survey sample were considerably lower than those in the GMSS: 5% of those who had tested for HIV had a positive result compared with nearly 12% in the UK. Of those who knew they had HIV, 62% were taking antiretroviral medication and 51% had an undetectable viral load.

These results need to be interpreted with some caution, as 20% of trial respondents were from the three non-Asian countries of the USA, Australia and the UK.

HIV rates vary considerably over the region. Prevalence in gay men/MSM is still low in Korea and Japan, and has been around 3 to 4% in urban surveys in China. But HIV prevalence in Bangkok and Yangon has been found in recent surveys to be around 25 to 28%.

The success of the fridae.com study, which was only available in an English-language version, has led to a larger 2010 study, the 2010 Asia Internet MSM Sex Survey, being conducted in nine Asian languages plus English. This runs until February 28 – see www.2010aimss.com.

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guidelines, which guidelines?

HTU editor *Gus Cairns* investigates HIV treatment guidelines.

Last issue we reported on new treatment guidelines published by the European AIDS Clinical Society (EACS). This succinct 80-page booklet contains guidance not only on treatment for HIV, but also how to treat TB, hepatitis, cancers, high blood pressure, diabetes and other conditions in people with HIV.

Earlier in the year, the British HIV Association (BHIVA), distributed updated versions of six of its guidelines, running to 292 A4 pages. Areas covered included treating HIV, vaccines, pregnancy, common cancers and sexual health.

Comparing these guidelines reveals subtle differences of emphasis on some common and important decisions, such as when to start treatment.

It's worth noting that the panel writing the recent US guidelines, published by the Department of Health and Human Services (DHHS), could not agree on this point, with half the doctors recommending treatment for virtually all patients, including those with CD4 counts over 500, and 45% recommending most patients wait until their CD4 count is below 350 cells/mm^3. This is because a US study and a European study came to different conclusions on the benefits of HIV treatment in patients with high CD4 counts.[1,2]

I interviewed Professor Jens Lundgren of the University of Copenhagen[3] and Professor Brian Gazzard of London's Chelsea and Westminster Hospital. They chair the panels that, respectively, write the EACS guidelines on HIV complications and the BHIVA ones on HIV treatment.

HTU: *How prescriptive are your guidelines? Do you want physicians to regard them as gospel?*

Jens Lundgren (JL): It's understood that there is room for discussion and reflection. Ideally, I'd like people to add in their own stuff: I'd be delighted to see a copy with notes in saying "I don't agree with this recommendation."

Brian Gazzard (BG): They are couched in terms of 'this is guidance', not 'this is what you need to do'. Guidelines do say, first, that here are some standards below which you should not fall.

However they also review the literature in cases where the evidence is not clear. Take protease inhibitor monotherapy – the evidence for its efficacy and who it might work best for is incomplete. So it's good to summarise the literature and go into the pros and cons in a fair amount of detail.

Having said that, my feeling is that the main BHIVA guidelines are too long. I'd like to see them shortened, but with reference to appendices that explain why we've said what we've said.

HTU: *What if it's the patients who take them as gospel? If they read them and walk into their next appointment saying "Here, you're not doing this"?*

JL: Guidelines are advice, not rules. I'd feel terrible if patients used them to accuse their doctors of doing a bad job. They're only as good as the knowledge people had when they were written.

I think in the long run the single, simple recommendations may disappear. We have enough drugs now to provide quite a wide choice and the job of guidelines in that field should be to specify which populations you should *not* use specific drugs for.

BG: For some patients it's good to know what should be done because there are still a lot of doctors around not practising good medicine. I don't mind if they're directive if the evidence is clear: for instance we now say "efavirenz should be considered as first line in all patients" and "boosted protease inhibitors (PIs) should ordinarily be reserved for specific groups of patients". Note we say NNRTIs [non-nucleosides, including efavirenz] should come first, not that using PIs is wrong. The EACS guidelines can't be as specific as this because they cover countries where boosted PIs have been the favoured first-line treatment. All sorts of politically sensitive decisions go into guidelines. What CD4 count to start at is one of those.

HTU: *Do you think we'll get to the point where CD4 count becomes less important and we'll just say "treat everyone as soon as they're ready", though obviously with more urgency for low counts?*

JL: I think CD4 count still matters. I don't think it's yet settled if HIV drugs have more benefit than harm in asymptomatic patients with CD4 counts over 350. If we start patients on treatment above this level it's not to

prevent AIDS, it's to prevent serious non-AIDS-related conditions such as certain cancers; although we know treatment *may* reduce the rate at which these occur, we don't know if it *will*. We also don't know the really long-term effects of staying on antiretrovirals and if someone has a CD4 count of 800, they may be able to stay off them for a decade or more.

The START trial will address this. It will compare treatment outcomes in 2000 patients who start treatment at CD4 counts over 500 with 2000 who start below 350. It won't report till 2015, if completed as intended, but I think it'd be really sad if we missed the window to recruit enough people to it. If a patient asks if they should start treatment early, refer them to the START trial.

BG: Yes, START is a very valid study. It's still not clear what the benefits of early treatment are and whether the weariness of taking tablets for even five to six unnecessary years will outweigh them. The next set of BHIVA guidelines will have a more in-depth discussion on when to start.

HTU: *To what extent is cost something you have to take into account? I'm thinking of the fact that boosted PIs are more expensive than NNRTIs, as well as the cost of starting early.*

JL: At the moment not at all. More than 40 countries use our guidelines and what drugs are available and what they cost varies widely. We will have to continue to think about this, though: what happens when a reasonable choice of cheaper generic drugs appears?

BG: Here we've had to steer a course between pure clinical evidence with no mention of cost and some acknowledgement of it. NICE (the National Institute for Health and Clinical Excellence) authorises non-HIV treatments on cost-effectiveness grounds and acknowledging cost is an important part of making sure NICE continue to look elsewhere. I think if NICE got involved in guidelines you'd find regimen choice very constrained.

HTU: *What about the guidance on other conditions? Are you trying to get HIV doctors to treat conditions they should be leaving to other specialists?*

JL: In some ways it's there to remind HIV physicians what they learned in medical school, but it's not about getting them to be experts on everything. It's about what to think about when you encounter a particular problem in a patient and it's about referral. This has to be a collaborative process. On the one hand the HIV physician is recognising the limits of their expertise and saying "Can you please take on the management of this patient's diabetes" or whatever it is. On the other hand they know that in many conditions there is a component specifically caused by HIV, or its treatment, which the other specialist may not know about. It would be great if the guidelines could be disseminated through other specialities as well as through HIV medicine.

BG: The model of care for patients with these co-morbidities [concurrent diseases] is quite complex. I'd refer a patient with kidney failure to a nephrologist, but I wouldn't let go of clinical responsibility. At the Chelsea and Westminster we've had a joint dermatology clinic for years and we're getting together a clinic for ageing patients, which will include everything from bone specialists for people with osteoporosis to social workers and volunteers for people with social isolation.

HTU: *So what should patients do if they come across different recommendations between guidelines?*

BG: Guidelines need to come with the warning that as soon as we deviate from proven fact readers need to beware, but at the same time that's where you'll find the most valuable bits of evidence. You don't need guidelines for what everyone knows.

JL: The EACS guidelines certainly aren't intended to supersede national guidelines. A lot of it's about semantic difference. Where one guideline says abacavir is an 'alternative' rather than 'recommended' regimen while another says it's recommended but calls for 'caution', you're essentially saying the same thing. You should expect difference: guidelines will reflect the time they are written. ■

Guidelines

BHIVA guidelines:
www.bhiva.org/TreatmentofHIV1_2008.aspx

EACS guidelines:
www.europeanaidsclinicalsociety.org/guidelines.asp

US DHHS guidelines:
http://aidsinfo.nih.gov/contentfiles/AdultandAdolescentGL.pdf

(l-r): Jens Lundgren has overseen the expansion of the European HIV guidelines to cover complications and Brian Gazzard chairs the BHIVA Guidelines Committee.

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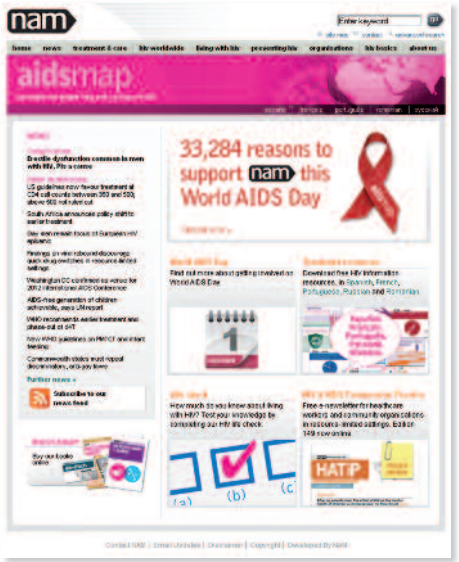

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