

# aids treatment update

## diet and cholesterol

This month in *ATU* we return to the lipodystrophy syndrome – specifically to the metabolic abnormalities which are a problematic side-effect for some people taking anti-HIV treatment. Following earlier coverage of cardiovascular disease risk factors, and quitting smoking, this time our focus is food, and how what we eat may influence levels of cholesterol in the body.

There's also something completely different, in the form of a personal perspective from an *ATU* reader and contributor on the changes – both good and bad – which modern HIV treatments have introduced into his life. If you identify with Michael's experiences, or would like to share some of your own, we hope you'll be in a position to log on to the online discussion forums at NAM's website [aidsmap.com](http://aidsmap.com). If you can access the internet, taking part is simple and your contributions can be made in complete confidence.

diet and cholesterol 2

life on HAART 6

news in brief 10

# diet and cholesterol

## 2 what dietary changes should you consider if you're concerned about increased levels of cholesterol in your blood? by anna poppa

Despite HAART's effectiveness in reducing illness and death in HIV infection, some HIV drugs cause significant side-effects in a proportion of people who take them, amongst them increases in levels of fats in the blood known as lipids. Excess levels of one of these, cholesterol, are associated with the development of coronary heart disease in the general population, and are therefore the target of a range of interventions designed to lower levels to a safer range. A recent article in *ATU* (issue 108) reviewed the use of cholesterol-lowering drugs in people with HIV. This article considers the role of what we eat in raising and reducing levels of blood cholesterol.

### Cholesterol and heart disease

Cholesterol is a fatty substance made by the liver, and used in the structure and functioning of cell walls. Cholesterol is made from the saturated fats which we consume as part of our diet. Eating too much saturated fat, which is present in foods such as butter, hard cheese and animal fats, increases the amount of cholesterol leaving the liver and entering the circulation. Excess cholesterol is then deposited on artery walls causing them to narrow, and restricting blood flow to the heart. Unchecked, this process – known as atherosclerosis – can cause a heart attack.

Aside from this very simple overview of the relationship between cholesterol and heart disease, it's important also to understand a little about the main types of cholesterol and their respective functions:

- LDL (low density lipoprotein) cholesterol

transports cholesterol from the liver to cell walls. LDL cholesterol is popularly termed 'bad' cholesterol because it is high levels of this type of cholesterol which raise the risk of heart disease.

- HDL (high density lipoprotein) cholesterol removes excess cholesterol from the circulation and returns it to the liver. This type of cholesterol is termed 'good' cholesterol because high levels of HDL reduce the risk of heart disease.
- The relationship between cholesterol and heart disease is therefore a product of the relative levels of the 'bad' LDL and the 'good' HDL cholesterol. Ideally, LDL levels should be low and HDL levels high.

Levels of LDL and HDL cholesterol are themselves influenced by our diet. Saturated fats raise LDL levels, whilst unsaturated fats tend to lower LDL levels. One element of a conventional 'heart healthy' diet is therefore to eat less fat, but particularly to eat unsaturated fats rather than saturated ones.

A further player in the LDL:HDL ratio is our genetic make-up. Some of us, about one in five hundred Britons, inherit a condition from our parents whereby LDL is removed from the circulation at a reduced rate. This is called familial hypercholesterolaemia, (the prefix hyper- means high).

In addition to cholesterol levels, several other factors raise the risk of heart disease; the main ones being smoking, having high blood pressure

**Table 1: Dietary fats**

Saturated fats	Unsaturated fats		
	Polyunsaturated fats	Monounsaturated fats	Omega-3 fats*
Butter, hard cheese, lard, dripping, coconut oil, palm oil.	Cornflower oil, sunflower oil, soya oil, fish oil, some margarines.	Olive oil, walnut oil, rapeseed oil, avocado, some margarines.	Fish oil, oily fish such as herring, kippers, mackerel, pilchards, sardines, salmon, fresh tuna, trout, and anchovies.

\*Omega-3 fats are a type of polyunsaturated fat, which help blood clotting, and help reduce levels of another blood fat called triglycerides. Triglycerides may be raised as a side-effect of some anti-HIV drugs.

and being physically inactive. People who have a number of these major risk factors are at the greatest risk of heart attack. (See *ATU* issues 108 and 95 for more on these risks in people with HIV).

**What is a normal cholesterol level?**

On a population level, cholesterol levels vary geographically according to the dietary habits which predominate. Unsurprisingly therefore because of our diet, the average blood cholesterol level in the UK is relatively high; according to the British Heart Foundation it was 5.8mmol/L in 1999<sup>1</sup>. (Cholesterol levels are measured in units called millimoles per litre of blood, abbreviated to mmol/L). A recent major US study reported on the prevalence of metabolic abnormalities in the general American adult population during the period between 1998 and 1994<sup>2</sup>. Low levels of the protective ‘good’ HDL cholesterol were found to be common – seen in 37% of the 8,814 person sample overall. (Low levels were defined as below 1.04mmol/L in men, and below 1.29mmol/L in women).

Given the link between some anti-HIV drugs and raised blood cholesterol, it has become more common for people with HIV to have their cholesterol levels screened. This should be done on a regular basis to give a clearer picture, rather than placing too much emphasis on one-off measurements. Fasting levels provide more useful information than those recorded following food, and taking a ‘baseline’ measurement at the time of starting a new anti-HIV drug combination is now recommended to compare later results against.

Cholesterol is measured either by screening a blood sample taken from a vein, or from a finger prick. *Table 2* over the page shows suggested target levels.

**Diet & cholesterol in the general population**

Evaluating the relationship between dietary habits and blood cholesterol levels is somewhat challenged by the fact that dietary advice is not always followed, i.e. participants in research studies may be non-compliant with the advice they are given once they return home to the kitchen. Studies which take place in hospital wards, on the other hand, include a more captive audience, whose compliance to a particular diet is more easily controlled.

A meta-analysis of such ‘metabolic ward studies’ was published in the *British Medical Journal* in 1997<sup>3</sup>. Meta-analysis is a method of statistical analysis where data from several clinical trials evaluating the same thing are combined together to produce an overall result. This example involved 395 published reports of the effects of dietary lipids on blood cholesterol. The intention of the analysis was to assess this relationship in ‘healthy volunteers’, and so people with metabolic abnormalities such as diabetes or dyslipidaemia were excluded. People in receipt of additional, and potentially confounding interventions, e.g. exercise or weight reduction, were also excluded. The main findings are described below. (See *Table 1: Dietary fats* on this page for key to different types of dietary fats).

- Increased saturated fat intake was associated with increased total and LDL

**glossary**

- body mass index** A measure derived by dividing one’s body mass in kg by one’s standing height in metres squared.
  - cardiovascular** Pertaining to the heart and blood vessels.
  - cholesterol** A waxy substance, mostly made by the body and used to produce steroid hormones.
  - clinical trial** A research study with people, usually to find out how well a new drug or treatment works and how safe it is.
  - diabetes** A condition characterised by raised concentration of sugar in the blood, due to problems with the production or action of insulin.
  - HAART** Highly Active Antiretroviral Therapy, term used to describe anti-HIV combination therapy with three or more drugs.
  - lipid** A general term for fats in the blood.
  - lipodystrophy** A disruption to the way the body produces, uses and distributes fat.
- continued on page 5

## diet and cholesterol continued

**Table 2: Suggested target levels of blood cholesterol**

Cholesterol type	Target level	Level at which intervention may be considered
Total cholesterol	Below 5.2mmol/L	Above 6.5mmol/L
LDL cholesterol	Below 3.4mmol/L	When the ratio of LDL:HDL is above 4:1, or when LDL is above 3.4mmol/L. These are associated with increased risk of heart disease.
HDL cholesterol	Above 0.9mmol/L	

cholesterol, and a smaller increase in HDL cholesterol.

- Increased polyunsaturated fat intake was associated with decreased total and LDL cholesterol, and increased HDL cholesterol.
- Monounsaturated fat intake did not affect total or LDL cholesterol, but increased HDL cholesterol.
- In someone following an average British diet, replacing 60% of saturated fats with unsaturated fats, and reducing dietary cholesterol by 60%, would reduce total blood cholesterol by about 0.8mmol/L, or about 10-15%. Four fifths of this reduction would be in LDL cholesterol.

### Dietary change & heart disease

But do these reductions in cholesterol levels translate into a reduction in cardiovascular events such as heart attacks? A recent systematic review of randomised controlled trials assessing the role of dietary fat intake in the prevention of cardiovascular disease, included over 30,000 person years of observation, 1,430 deaths and 1,216 cardiovascular events<sup>4</sup>. The study found:

- The average baseline cholesterol level was 5.8mmol/L, and the average fall observed was 0.64mmol/L (11%).
- Altering dietary fat intake reduced the number of cardiovascular events by 16%, and cardiovascular deaths by 9%, but had little effect on mortality overall.
- The protective effect was similar regardless of whether baseline cardiovascular risk was high or low, and was not affected by the method of dietary change (i.e. whether by dietary advice, advice plus supplement, or diet provided), nor by baseline dietary fat intake.
- Few of the trials analysed included events in women, and so the authors suggest that these results may not be applicable to women.

### Are these effects seen in people with HIV?

In comparison to the very large datasets noted above, there are far fewer data on the effects of dietary changes in people with HIV.

Last year, a group from Harvard Medical School described the relationship between

dietary intake and a range of metabolic parameters in a group of 85 HIV-positive people (62 men and 23 women) with fat redistribution<sup>5</sup>. These individuals were compared with seventeen HIV-positive men without fat redistribution, and with an age- and body mass index-matched control group of 35 HIV-negative men. Participants' dietary intake was assessed by recall over the previous month. The study's key findings follow:

- Dietary fat intake did not predict LDL cholesterol level, but alcohol consumption did.
- HDL cholesterol level was predicted by alcohol consumption, body mass index and female sex.
- Those whose diet included a greater proportion of polyunsaturated compared to saturated fats, and who ate less fibre, had greater insulin resistance, another metabolic parameter which is disrupted in people with the lipodystrophy syndrome. Insulin resistance is associated with increased abdominal fat.
- People with fat loss (lipoatrophy) tended to consume higher levels of calories than people with other patterns of fat changes.

Discussing this study for the online medical educational resource Medscape.com<sup>6</sup>, Dr Graeme Moyle said "[These data] underline the conflicting needs of persons with HIV and metabolic and morphologic changes. Increased

caloric intake may be needed to maintain weight while fats and sugars need to be reduced and empty-calorie high-fibre foods need to be increased."

This can be challenging as calorie-rich foods are often those with *high* fat and sugar content. A further issue for some individuals will be the need to consume fatty food alongside their HIV medication; the absorption of several protease inhibitors is improved by the presence of fat. These conflicting needs can be addressed by enlisting the help of an HIV dietician. Dr Moyle continues: "Dietary advice needs to be considered relative to age, gender, and social and culture-specific setting, and it must be individualized and reinforced over time."

Dr Moyle led a team from the Chelsea and Westminster Hospital in assessing the role of dietary advice, with or without a lipid-lowering drug called pravastatin, in reducing raised cholesterol levels in people taking protease inhibitors<sup>7</sup>. Thirty-one men took part in this randomised study. Those who received dietary advice alone reduced their total cholesterol level by 4.0%, and their LDL level by 5.5%. The reductions in these levels were greater in those who received pravastatin as well as dietary advice. Interestingly, the consumption of saturated fats and sugar was greater in those who received pravastatin plus dietary advice rather than dietary advice alone, suggesting there was a tendency to 'try less hard' to make dietary changes where medications were prescribed.

## key conclusions

- Cholesterol is a type of fat made by the liver, and used in cellular functioning.
- Cholesterol levels relate to the amount of dietary fat we consume. Excess levels are a risk factor for heart disease.
- Some anti-HIV drugs cause cholesterol levels to rise in some people. The long-term effects of these changes are not known, and nor is the most appropriate intervention.
- Dietary changes can reduce cholesterol levels in the general population. People with HIV may have different requirements, and so dietary advice must be individualised.
- Many HIV clinics provide access to an HIV dietician, who can offer expert help in these circumstances.

## glossary continued from page 3

**metabolism** The mechanisms which sustain life, turning sugar and fat into energy.

**protease inhibitors** Family of antiretrovirals which includes lopinavir, indinavir, nelfinavir, ritonavir, saquinavir.

**randomisation** The process of selecting by chance the treatment that a clinical trial participant will receive.

**triglycerides** The basic 'building blocks' from which fats are formed.

## references

- 1 British Heart Foundation. Reducing your blood cholesterol. Published 1999.
- 2 Ford ES et al. JAMA 2002;287:356-359.
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- 4 Hooper L et al. BMJ 2002;322:757-763.
- 5 Hadigan C et al. Clinical Infectious Diseases 2001;33:710-717.
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- 7 Moyle G et al. AIDS 2001,15:1503-1508.

# life on HAART

6 by michael carter

For the past four years I have been taking antiretroviral therapy. I've seen my CD4 count quadruple and my viral load fall from the high hundred thousands to below 50. It would therefore be easy to conclude that for me treatments have been a success. Not least because it is now well over ten years since I was diagnosed with HIV, and nine years since my first AIDS-defining illness. Quite simply, without my anti-HIV drugs I expect I would be dead by now, or in the last stages of advanced HIV disease.

However, even though my treatments have proved, according to my blood tests at least, a success, I am still very much aware of how serious a condition HIV is and the extent to which it impacts on my life and is likely to do so for the foreseeable future. I am still very medicalised. For a start, there are visits to the clinic every eight weeks for blood tests to

monitor the success of my treatments, and their impact on my metabolism. This means that I'm seeing my consultant at least as often as I did in the days before I started taking my combination. What's more, my visits to the clinic last at least as long as they used to. But on top of that, treatments, combined with the length of time I have had HIV, mean that there are other medical issues which require me to visit the hospital.

In one week in late January this year, even though my CD4 count was over 600 and my viral load undetectable, I had to attend three separate outpatient clinics, none of them specifically HIV focused, to see specialists for the monitoring or treatment of conditions which have developed either as a consequence of my treatments, or as a consequence of having a potentially life-threatening illness for well over a decade.

## editor's note

If this article raises questions or concerns for you, or someone you know, an online discussion forum at NAM's website [aidsmap.com](http://aidsmap.com) is available. Log on and go to **discussions** from the [aidsmap](http://aidsmap.com) homepage. See page 9 for more on registration.

Living with HIV has started to impact on my mental health; just as my lab results started to indicate that its damage to my immune system was being controlled, my mental health declined. I have had two major depressions since I started treatments, each of them as debilitating as any physical illness which HIV has caused. My consultant and the specialist HIV psychiatrist who he referred me to, have assured me that I am far from alone in experiencing mental health problems since starting treatments. For some people these problems have been the direct side-effect of their medication – depression, psychosis and vivid dreams are all recognised side-effects of efavirenz. For me the causation has been more indirect. I've been corroded by living with HIV for all these years. I've grown pessimistic, and the renewed hope of a future which treatments have provided me with has been compromised by the side-effects and uncertainty which accompanies them.

Fortunately, I've been spared any of the disfiguring body changes (lipodystrophy) which are caused by treatments, even though I've many of the factors which seem to be associated with it, particularly chronic infection with HIV and many years of antiretroviral therapy. A friend, however has not been so lucky, and as he put it: "It's the ultimate irony, you're spared dying of AIDS only to look like you are". Not surprisingly, another friend, who recently started his first combination, has been anxiously monitoring his body shape, fatalistically attributing changes in weight, or post-Christmas thickening of his gut, to early signs of lipodystrophy.

I've had my fair share of side-effects too, including the diarrhoea which accompanied my first year on nelfinavir and felt like a tap being turned on in my bowel. Then there was the peripheral neuropathy in my feet and lower legs – the worst pain I've ever been in, and which still hasn't resolved three years after stopping the drug which caused it. And most recently I've been required to see a cardiologist after developing an irregular heart beat. As I neither smoke nor drink, eat a low fat, high fibre diet, rarely take drugs, have taken regular vigorous exercise since my teens, and currently run at

least five times a week, this would seem to be without obvious cause. That's if I wasn't taking antiretroviral medication which has been shown to raise levels of fats in the blood (a risk factor for heart disease), particularly in people like me, with a family history of cardiovascular illness. So far the signs look good – I may well have bradycardia, a benign condition seen in people with low resting heart rates (particularly runners), but it's required numerous visits to the hospital and a heart rate-raising degree of worrying uncertainty just to get to this potentially hopeful diagnosis.

It is the uncertainty such as this which has become such an unsettling feature of my life on treatments. I am uncertain how long my current drug regimen will continue to work for. Indefinitely I hoped, until last week, when I was told that after years of being undetectable, my viral load was 125. Admittedly modest, but does it mean that I'm becoming resistant to my current combination? It may well only be a 'blip', but only more visits to the clinic and more tests will determine this.

Even though my treatments have caused problems, I have found a way of living with them. They're easy to take; twice daily with food (which I've realised can be something as easy to eat as a chocolate bar), and no longer cause any nausea or bowel problems. I don't relish the prospect of having to change to a new regimen. I can well remember the bewildering array of choices between different drugs and combinations which my doctor presented to me in the Spring of 1998 when I started my first regimen. Similarly fresh is the memory of the fretful decision I was asked to make a year later when it was clear that the d4T-related peripheral neuropathy was becoming unbearable, and I'd have to stop the drug despite having good lab results, and choose between AZT and abacavir. Neither of them appeared particularly attractive, well aware as I was of their respective side-effect profiles. In the end I went for abacavir, half expecting to experience the potentially life-threatening (though rare) allergic reaction.

Then there is uncertainty about how long the body can tolerate infection with a chronic viral

## **glossary**

**see also pages 3 and 5**

**allergy** An immune response to a substance which the body is very sensitive to.

**antiretroviral A** substance which acts against retroviruses such as HIV.

**cardiologist** A specialist in treatment of the heart.

**CD4** A molecule on the surface of some cells onto which HIV can bind. The CD4 cell count roughly reflects the state of the immune system.

**neuropathy** Damage to the nerves.

**psychosis** A type of mental disorder.

**regimen** A drug or treatment combination and the way it is taken.

**resistance** A drug-resistant HIV strain is one which is less susceptible to the effects of one or more anti-HIV drugs because of its genotype.

**undetectable viral load** A level of viral load that is too low to be picked up the particular viral load test being used.

**viral load** Measurement of the amount of virus in a sample. HIV viral load indicates the extent to which HIV is reproducing in the body.

## life on HAART continued

infection and potent drugs to control it. Rates of cancer in people with HIV are being carefully monitored after some research suggested that non AIDS-related tumours were more commonly seen in people with long-term HIV infection. As my consultant said to me: "It's another set of worries for you. First of all there was opportunistic infections. Then there was treatment choices, then side-effects, and now the possibility of other fatal illnesses".

Coupled with the medical uncertainty is a lack of security, particularly as regards employment and money. I've been in and out of work for the past decade, meaning that my CV has many gaping black holes. My experiences with work have taught me that for me at least, having HIV does pose very real limitations on my employment opportunities. I have been severely ill, with both physical illnesses and depression, meaning that I have been forced to leave jobs. And even sustained periods of employment and good health have involved regular visits to the clinic, accommodated as far as possible outside the working day, but often at times of the day and with a frequency which even a sympathetic employer found hard to accommodate. Now in my mid-30s, I'm facing the possibility of a future of financial insecurity as life with a chronic and demanding illness leaves me ill-suited to a fast moving and competitive jobs market. With the safety net of benefits which accompanied the chronic illness of HIV disease long since removed, this could mean that chronic poverty may well become another unwelcome side-effect of my life on treatments.

It's also necessary to inject a bit of perspective here. The terrorists attacks in New York and Washington last year made many people feel less secure and worry about their employment prospects. In addition, it's become easy to blame HIV and treatment side-effects for just

about every medical condition which raises its head. For example, I'd noticed some lines developing down my cheeks recently, and my instinct was to attribute it to treatment-associated fat loss, rather than look for a less sinister explanation, like ageing – which is in fact the case.

With treatments has also come a redefinition of the way I perceive myself, and I think, the way others look at me. Although I have just written at length about some of the issues I have faced, there is no denying that I am likely to live for many more years, possibly as many as my HIV-negative peers. I'm to expect things from life, not least enjoyment and fulfilment and a determination to make the most of the years of life which treatments are hopefully offering me. I'm no longer prepared to accept the poor quality of life issues which accompany the day to day drudge of living with HIV. On the whole I've become a lot more open about my health. When asked in polite dinner-party chit-chat how I managed to get a housing association flat in central London I didn't try and dodge the question, or hedge the answer, but said simply "I've got AIDS". It killed further envious questioning. Similarly, I've become much more explicit about taking my medication in public, and now either honestly respond to inquiring glances about the handful of pills I'm downing, or simply ignore them, rather than apologetically lying about "vitamins" or scurrying off to the bathroom to take my medication in secret.

There are still limitations to my openness and honesty, not least that I've never told my parents I have HIV, maintaining elaborate fictions for their (or is it my own?) benefit about crucial aspects of my life. This is not because I fear that they'll reject me – I'm fortunate in knowing that they love me

unconditionally – but because in some way I’m ashamed of having HIV. Luckily I’ve never had a bad reaction from a person who I’ve either told I’m positive or has guessed. But, the popular prejudice about the disease has, despite my best efforts at rational thought, penetrated deep into my consciousness. And this popular prejudice isn’t only found amongst uninformed *Daily Mail* readers. Some recent correspondence to the gay weekly *Boyz* showed that there’s an unhealthy amount of prejudice directed towards people with HIV within the group most affected by HIV in the UK, gay men.

Having said that, because of treatments, and their success for me, I no longer feel I have the right to the sympathy and the allowances which people made before. I’m very aware of how hard it was for many of my friends and

particularly my partner of ten years, to support me through what looked like it was going to be a terminal illness. To an extent, the problems I now face aren’t as serious, and are more generic – lots of people live with serious illness which can be controlled with medication which causes nasty side-effects.

I want to make the most of the fact that treatments mean that very possibly I am alive when I expected to be dead. But to do this, I need to be honest. I’ve found living with antiretrovirals hard, often harder than life before treatments. But, like HIV, they’re something which has become part of my life. I hope that at least some readers will identify with what I’ve written as they too, find a way of coping with, and making the most of, what life with treatments means.

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# discussion forums @

aidsmap discussion forums allow you to post emails and read replies on subjects that interest you  
questions about treatment? is a forum for anyone to ask questions about HIV treatment and exchange information with others  
registration is simple see sidebar to find out more

# aidsmap.com

## **aidsmap.com discussion forums registration**

To reply to messages or start a new topic of discussion, you don’t have to register. If you do register, you will get an email alert whenever someone replies to a discussion topic that you have started.

Similarly, if you would like to receive an email summary of recent messages, you will need to register. This is a quick and simple process. You will receive an email with your password within minutes. You can then change that password to one you will remember in the Profile section.

## **confidentiality**

Although we ask for your email address, this will not be displayed when you post to the site. This standard feature of the bulletin board software has been switched off. You can choose whatever screen name you want.

## Tenofovir approved in UK and Europe

Tenofovir DF, a new type of anti-HIV drug from a class known as nucleotide analogues, is now available on prescription in the UK, and in other European Union Member States. Trade marked *Viread*<sup>TM</sup>, and produced by Gilead Sciences, tenofovir has been approved for use in people with HIV who have previously taken other anti-HIV drugs. For more information, see the recent review of tenofovir and other new HIV drugs, in *AIDS Treatment Update* issue 109.

## London syphilis outbreak: over half of gay men HIV-positive

Last summer in *AIDS Treatment Update* we reported on the re-emergence of syphilis in London, following earlier outbreaks previously reported in Brighton and Manchester (see issue 103). Preliminary findings from the first six months of a surveillance exercise conducted by the UK's Public Health Laboratory Service (PHLS) were published in February.

Between April and December 2001, there were 207 reports of infectious syphilis from genitourinary medicine clinics in London. The overwhelming majority of cases (73%) were among gay or bisexual men, with the remaining 56 cases occurring among heterosexuals, twenty of which were in women. Just over half of the gay men (54%) were known also to be HIV-positive. Among heterosexuals, only 2% were known to co-infected with HIV.

Reference: Preliminary results of enhanced surveillance for infectious syphilis in London. CDR Weekly 31 January 2002. Online at <http://www.phls.co.uk>

## HCV/HIV co-infection: information events planned for UK

The Haemophilia Society is hosting a number of HIV/HCV co-infection information evenings around the country. These evenings are open to anyone living with or affected by HIV/HCV co-infection, health professionals and local voluntary organisations. However priority will be given to people living with haemophilia and HIV/HCV co-infection.

Coventry: 21 March 2002, 6.30 - 9.30pm.  
Speakers: Dr Clifford Leen, Consultant physician, Edinburgh. Robert James, formerly of Mainliners, Chair of Birchgrove.

Wakefield: 17 July 2002, 6.30 - 9.00pm.  
Speakers: Dr Matthias Schmid, Consultant physician, Newcastle. Robert James, formerly of Mainliners, Chair of Birchgrove.

For further information please contact Babs Evans, HIV/HCV Worker:  
babs@haemophilia.org.uk. To book a place contact Helen Courtney:  
helen@haemophilia.org.uk or telephone 020 7380 0600.

## New NAM report on diagnostics

*Developments in Diagnostics* is a report on the NAM/European AIDS Treatment Group symposium on developments in drug resistance testing and drug level monitoring, which took place in London late last year. This 32 page report includes discussion of:

- Genotypic resistance testing and inter-laboratory variation.
- Interpretation algorithms for genotypic tests.
- Phenotypic tests.
- Development of resistance in non-B HIV subtypes.
- Drug level monitoring.

The report is available from NAM by calling 020 7627 3200, or can be downloaded from [aidsmap.com](http://www.aidsmap.com/events/symposia/diagnostics2001.pdf) at <http://www.aidsmap.com/events/symposia/diagnostics2001.pdf>

## Looking for simple information on HIV treatment?

NAM is currently revising our award-winning *Information series for HIV-positive people*, our booklet series which provides basic information on key topics in HIV medicine. The series includes *Anti-HIV drugs, Clinical trials, Glossary, Nutrition, Resistance, Viral load & CD4*, and a completely new title, *Lipodystrophy*.

These easy-to-read publications are available free from NAM to people personally affected by HIV. For your free copy, call NAM.

## NAM Information Forum: HIV treatment update March 25

NAM Information Forums are monthly, free meetings which offer an opportunity to hear the latest news, views, and research around HIV treatments. On March 25<sup>th</sup>, we are hosting a special event where guest speaker Dr Ian Williams of the Mortimer Market Centre, London, will discuss the highlights of the 9<sup>th</sup> Conference on Retroviruses and Opportunistic Infections. This major treatment-related HIV conference takes place in Seattle in February.

NAM forums are held at the University of London Union, Malet Street, London, WC1, and run from 7-9pm. Entrance is free and refreshments, and a sign language interpreter, are provided.

For more news on the Seattle Retroviruses meeting, see daily reports posted to [aidsmap.com](http://aidsmap.com), and forthcoming issues of *ATU*.



## credits

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## any questions

For an introduction to HIV treatment issues

The booklets in NAM's Information Series for Positive People are free to people with HIV. This easy-to-read series covers six key topics: Viral Load, Clinical Trials, Nutrition, Anti-HIV Drugs, Resistance, and a Glossary.

The HIV & AIDS Treatments Directory

This 600 page book, published twice a year, is a comprehensive guide to the medical aspects of HIV. Available at only £12.95 to people with HIV, £64.95 to professionals.

<http://www.aidsmap.com>

NAM's resources are also available online at [aidsmap.com](http://www.aidsmap.com). These include our extensive and searchable treatments database, the latest news on treatment developments, our online directory of AIDS service organisations, hundreds of links to recommended HIV-related sites, and free downloadable resources.

Monthly NAM information forums in London

Each month an expert speaker discusses a treatment-related topic. Entry is free. Future forums are advertised inside this newsletter.

THT Living Well Phonenumber 0845 9470047 Mon-Thu 6-9pm  
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NAM recommends that you discuss all your treatment decisions with your doctor.



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AIDS Treatment Update is available free to individuals in the UK affected by HIV or AIDS.

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