



A lifetime of specialist care

Royal Brompton & Harefield **NHS**  
NHS Foundation Trust

Harefield Hospital

# Information about lipoprotein apheresis





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*This leaflet gives you general information on lipoprotein apheresis. It does not replace the need for personal advice from a qualified healthcare professional. Please ask us if you have any questions.*

## Cholesterol

Cholesterol is carried around the body by proteins. The combination of cholesterol and protein is called lipoprotein.

There are two main types of lipoproteins:

- LDL (low-density lipoprotein) – the harmful type of cholesterol
- HDL (high-density lipoprotein) – the protective type of cholesterol (sometimes, called 'good' cholesterol)

Having too much harmful cholesterol in your blood can increase your risk of getting cardiovascular (heart) disease. The risk is particularly high if you have a high level of LDL cholesterol and a low level of HDL cholesterol.

Lipoprotein (a) [Lp(a)] is another lipoprotein which, when raised, can also increase the risk of cardiovascular disease.

## What is lipoprotein apheresis?

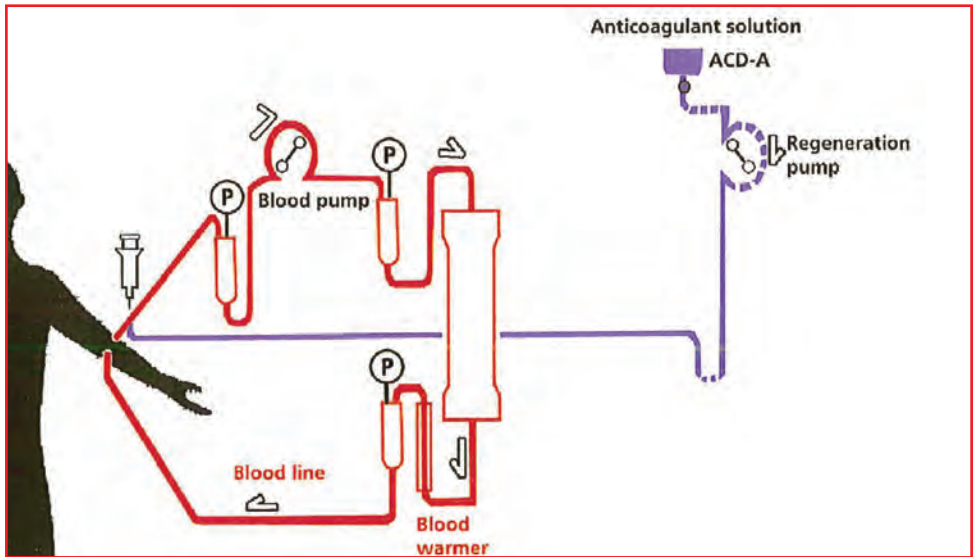
Lipoprotein apheresis is a method of removing LDL cholesterol and other fats (lipoproteins and triglycerides) from the blood. Treatment causes just a small drop in the HDL level.

Lipoprotein apheresis is considered for patients who have tried drug treatment and a low cholesterol diet, but still have a high LDL cholesterol level. It is also the preferred treatment for high levels of Lp(a).

## What happens during the treatment?

Lipoprotein apheresis is very similar to kidney dialysis. The treatment involves placing two needles (cannulae) into your veins – one to remove the blood and the other to return the treated blood to you. Lipoprotein apheresis circulates a portion of the blood through a machine outside the body. This removes the LDL cholesterol and Lp(a), and then returns the treated blood back to your body.

All the parts in the machine that come into contact with your blood are sterile and used only once.



*The diagram shows how lipoprotein apheresis is performed.*

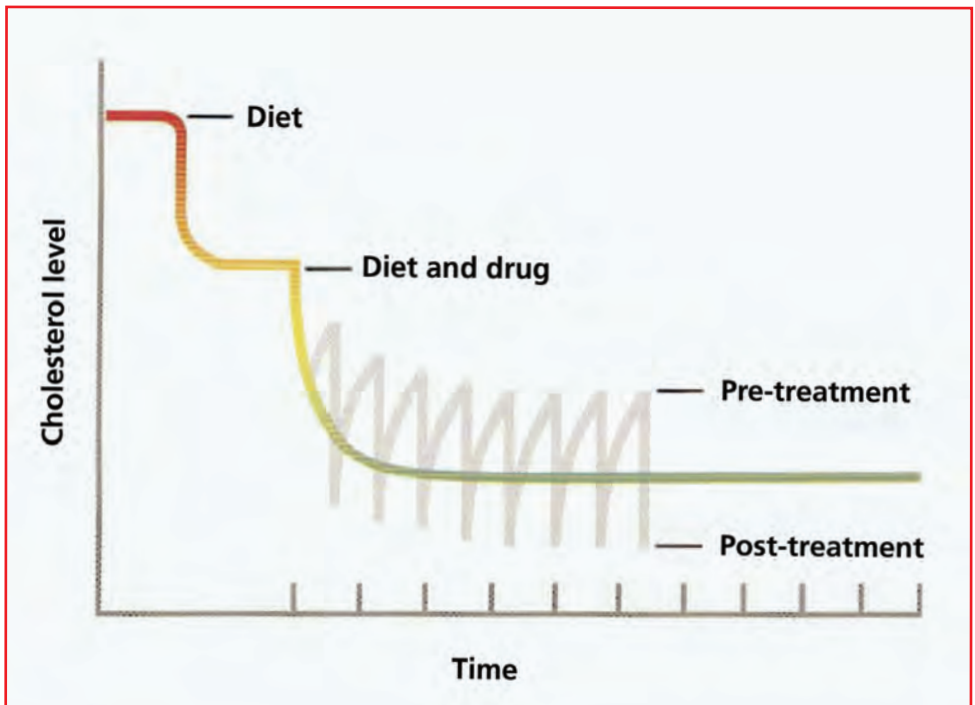
## How do I know if the treatment is working?

We will take blood samples before and after every apheresis treatment to measure your LDL/Lp(a) levels. We review your blood results regularly and will make adjustments to your treatment as necessary to ensure it is as effective as possible.

## What are the benefits?

Lipoprotein apheresis can lower your LDL and Lp(a) level by 50 to 65 per cent after a single treatment, depending on the amount of blood treated and your original levels.

However, the treatment does not correct the underlying problem that causes high levels of LDL cholesterol/Lp(a). Your levels will start to increase again, soon after the treatment. In order to keep a lower level of LDL/Lp(a), you will need to have the treatment once every two weeks or sometimes once every week. Lipoprotein apheresis is a lifelong treatment and it is important that you continue on a low-fat diet and take all your cholesterol medication.



*The diagram shows how a combination of diet, medication and apheresis treatment lower cholesterol.*



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## What are the risks and possible side effects?

If we experience problems with the blood flow from the veins in your arms, we may suggest the following:

- Forming a shunt in your arm, called an arteriovenous (AV) fistula. This is a small operation to connect a vein and artery to increase the blood flow, similar to those used in kidney dialysis.
- Placement of a permanent cannula in your chest.

If you need either of these, we will discuss both options with you in more detail.

We use heparin or another anticoagulant solution, called ACD-A, to thin your blood before it circulates through the machine. The type of blood-thinning medication will depend on the type of machine we use. ACD-A may sometimes cause a temporary drop in the level of calcium in your blood. To help prevent this, we will give you calcium tablets to take each time you come in for your treatment.

A small number of patients may experience one or more of the following temporary side effects:

- Light-headedness (this is more likely to happen during the first few treatments)
- Hypotension (low blood pressure)
- Nausea (feeling sick)
- Headache
- Anaemia (blood contains too few red blood cells)
- Chest pain
- Fast or slow heart rate

- Abdominal (stomach) discomfort
- Blood loss
- Feeling tired and a little irritable the day after treatment

The nurses in the unit will be able to help treat any problems or side effects.

## How can I reduce the risk of getting side effects?

Please do not take any beta blocking tablets (such as atenolol, propranolol, metoprolol, and bisoprolol) or any other medication to lower your blood pressure on the day of the treatment. You should continue with your medication as normal the day after your treatment.

If you develop anaemia, you may need to have an iron supplement.


ACE inhibitor medication (such as ramipril, lisinopril and perindopril) may interfere with some of the machines used for lipoprotein apheresis. If your doctor suggests starting any of these medications, please ask him or her to contact us. If you are taking ACE inhibitor medication before starting apheresis, we will change them to an alternative medicine that does not interfere with the machine before you start treatment.

Please eat and drink something before you start the treatment. You may eat and drink during the procedure.

It is important that you do not drink alcohol during the 24 hours before your treatment.

Please avoid exercise on the day of your treatment. You should also try to avoid activities that may increase the risk of physical injury for 24 hours after your treatment due to the blood-thinning medication used.

We advise you not to drive to and from your treatment for the



first two or three occasions. If you live locally to Harefield Hospital you should be able to drive once you are established on treatment. If you live a long distance from Harefield, you will either need a friend/family member to bring you or we will organise hospital transport for you.

You can further reduce the risk of side effects if you rest for the remainder of the day after your treatment.

## Useful contacts

The apheresis unit

**01895 826 563**

Alison Pottle, consultant  
nurse in cardiology

**01895 828 677** (direct line)  
or **01895 823 737**  
and ask for **bleep 6137**



## Your notes



## Your notes

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If you have concerns about any aspect of the service you have received in hospital and feel unable to talk to those people responsible for your care, call the Patient Advice and Liaison Service (PALS) on:

- Royal Brompton Hospital – 020 7349 7715
- Harefield Hospital – 01895 826 572

You can also email [pals@rbht.nhs.uk](mailto:pals@rbht.nhs.uk). This is a confidential service.



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إذا كنت ترغب في الحصول على ترجمة فورية لمضمون هذه الوثيقة إلى اللغة العربية، يرجى منك الاتصال بأحد مستخدمينا بجناح المصلحة التي يتم فيها استشفائك. أحد موظفينا سيسعى لترتيب إجراءات الترجمة وإتمامها في الوقت المناسب لك.

Brosurteki bilginin Türkçe tercumesi için tedavi görüyor olduğunuz bölüme bas vurunuz. Bölüm personeli tercümenin gerçekleşmesini en kısa zamanda ayarlayacaktır.

