

Patient Information

Renal Services

Haemodiafiltration (HDF)

Introduction

Haemodiafiltration is a form of renal replacement therapy for the treatment of end stage renal failure.

With conventional haemodialysis, your blood is pumped through an artificial dialyser (kidney) by a blood pump on a dialysis machine. Blood goes one way through the artificial dialyser and dialysis fluid, used to clean your blood goes the opposite way through the dialyser and they do not mix.

The artificial kidney is made up of many fibres and there are holes in the fibres which allow the toxins from your blood to pass to across into the dialysis fluid.

Not all toxins or cells pass across the artificial kidney, important cells which the body needs to conserve, for example red and white blood cells and protein do not cross the artificial dialyser membrane, as the body needs to keep these. Other substances which are smaller in size do cross from the blood into the dialysis fluid for example urea, creatinine, and potassium as these are only required in small amounts in the blood and if the levels rise you become unwell. Excess water which is carried around in your blood stream is also removed across the artificial dialyser.

The toxins in your blood pass across the artificial dialyser membrane into the dialysis fluid and are taken away by the dialysis machine through a drain on the back of the dialysis machine.

During Haemodiafiltration the machine removes more water from the blood than during conventional haemodialysis. This additional fluid being



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removed is continually replaced with an ultra pure electrolyte solution, which is produced by the machine and then infused into your blood stream during treatment. The artificial dialyser removes the additional fluid as well as a higher level of toxins than conventional dialysis.

Reported advantages of Haemodiafiltration

- An increased tolerance of fluid loss.
- Better control of blood pressure. There has been a lower incidence of patients having episodes of hypotension (low blood pressure).
- Episodes of patients experiencing cramps have decreased.
- There have been fewer reports of patients having nausea or vomiting.
- A reduced rate in patients having headaches.
- Incidences of cardiac arrhythmias have lowered.
- The removal of medium molecules helps prevent against carpal tunnel syndrome.
- A better control of acidosis is achieved.

It has been reported by patients who have been receiving haemodiafiltration therapy that they generally feel a lot better in themselves. They don't seem to be as tired as they would normally feel after a Haemodialysis session. Patients have also reported that their joints have improved and they have experienced a reduction in joint pain.

If HDF is so good then why isn't everybody on it?

Not every dialysis patient is suitable for haemodiafiltration. Certain criteria need to be met for haemodiafiltration which will be discussed with your consultant.

In order for Haemodiafiltration to be effective you need to be able to tolerate the recommended higher pump speeds and it is important that you have good vascular access. Treatment can not be done in single needle mode. Patients with heart conditions who can only dialyse with low pump speeds may not be suitable. It is also important to be compliant with fluid management for the treatment to be effective as possible. Patients with a high inter dialysis fluid gain may not be considered for this treatment.

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If you need further information or clarification, please contact Renal Services: 024 7696 7777

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