

# Hemodiafiltration with Endogenous Reinfusion (HFR): An educational movie to train our nursing staff

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## Background

Dialysis techniques are complex and a good understanding is essential for staff and patients.

A traditional hemodialysis system involves diffusion of solutes across a semipermeable membrane. Depending on the pore size of the membrane uremic toxins up to a certain molecular weight are cleared. Hemodiafiltration is well known to increase the solute convective clearance due to increased ultrafiltration but requires substantial amounts of reinfusion fluid.

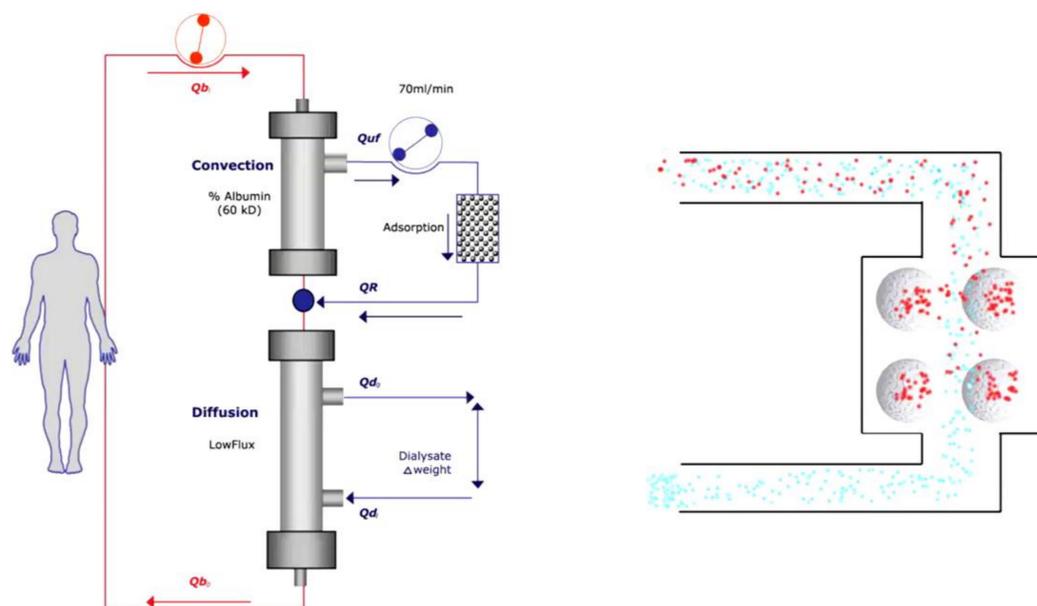
HFR combines three different dialysis principles: convection, adsorption and diffusion.

With HFR we use a 2-chamber filter to produce reinfusion fluid from the ultrafiltrate of the patient himself (convection) and subsequently lead it over a resin bed with high affinity for several uremic toxins. At this stage the toxins will be adsorbed on the surface of this resin.

Finally the blood runs through a traditional hemodialysis system (diffusion). This method has been clinically demonstrated to reduce the loss of physiological components and is associated with decreased inflammation and oxidative stress.

## Objective

To promote a better understanding of HFR we created an additional and highly specific training tool in adjunction to the existing written procedures. We developed a short educational movie as a result of close cooperation between nursing staff, medical staff and communication professionals.



## Methods

The HFR procedure in our centre is performed with the Flexya machine (the Bellco company). The nurses prepared a scenario in which all the steps of the HFR technique were described. Subsequently, a professional camera crew shot the procedure take by take. Introductory remarks were presented by Professor Tielemans, head of the Nephrology department of UZ Brussel. In addition to a dialysis patient who had volunteered two dialysis nurses of our department figured in the presentation. Our dialysis technicians and the supplier of the device were engaged in giving all the necessary advice on technical aspects.

Finally after a film of about 7 minutes was edited, an instructive voiceover was provided by a volunteering doctor.



## Conclusions

Several employees of our hospital associated with the University of Brussels successfully made an educational movie in cooperation with a professional camera crew.

This movie is now part of our standard operating procedures and is used as an educational tool for nursing staff, medical staff and patients.

Movie is available at: <https://youtu.be/9qRlqChesFs>