14 h (10 µmol/kg/h) after one bolus of 10 µmol/kg and two were submitted to a bolus (53 µmol/kg). Blood samples were drawn during the study. HDL2 ($1.063 < d < 1.125$) and HDL3 ($1.125 < d < 1.21$) were isolated by ultracentrifugation and apolipoprotein AI by electrophoresis. The isotopic enrichment of apolipoprotein AI was measured by mass spectrometry. The plateau of very low density lipoprotein (VLDL) apolipoprotein B-100 was used as a precursor pool estimation for apolipoprotein AI and the data were analyzed by monoexponential regression. For the bolus study, the precursor pool was plasma leucine which was used in the model as a forcing function. The production rate was calculated as the product of FCR and apolipoprotein AI mass.

The apolipoprotein AI kinetic curves were similar in HDL2 and HDL3 in the six volunteers for the two methods of administration. For our analysis, no kinetic heterogeneity was required in HDL.

The FCR of apolipoprotein AI was 20 ± 5%/day and the production rate was 10.2 ± 2.6 mg/kg/day. These results were in agreement with those previously obtained with radioisotopes.

LDL-apheresis: a comparison between double-membrane filtration (DF) and dextran sulfate-cellulose adsorption (DSC).

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The two most widely available techniques of LDL-apheresis – DF and DSC – have been comparatively tested in terms of the decrease after apheresis in plasma lipoprotein values but not in terms of mass transfer. This latter would provide more accurate information on the efficacy and selectivity of removal. For this purpose, we studied long-term apheresis treatment of seven patients with severe familial hypercholesterolemia, of whom three had, in addition, elevated plasma lp(a) levels. Ninety exchanges were performed at biweekly intervals using DF (Evaflux, Kuraray) or DSC (Kaneka columns). We calculated the removal coefficient (Cpost-Cpre/Cpre, where Cpost and Cpre are the post- and the pre-apheresis plasma concentrations) and the mass transfer ($C \times \sum V$, where C is the plasma concentration and $\sum V$ the sum of the volumes of rejected plasma and of rinsing fluids for DF and the volume of rinsing and regenerating fluids for DSC). The results are shown in the table.

In conclusion, calculating mass transfer revealed information that could not be appreciated using the classical determination of removal coefficient: DF removed LDL-CT more efficiently than DSC while DSC seemed to be more efficient for lp(a) removal and was more selective than DF, removing less HDL-CT.

Parameters	*Removal coefficient %*		*Mass transfer mmol, g for lp(a)*	
	DF	*DSC*	*DF*	*DSC*
LDL-CT	55.1 ± 2.5	54.7 ± 2.5	8.1 ± 0.9	5.8 ± 0.5**
HDL-CT	45.7 ± 3.3	11.2 ± 2.7*	1.3 ± 0.1	0.16 ± 0.04
Lp(a)($n = 14$)	70 ± < 1	70 ± < 1	1.75 ± 0.24	2.08 ± 0.36

* $P < 0.02$; ** $P < 0.001$.