

# \*Dialyzable drugs

# \* Definition

\* They are drugs capable of being dialyzed especially those are able of diffusion through a dialyzing membrane

## \* Factors influencing dialyzability

1. Molecular weight
2. Protein binding
3. Volume of distribution
4. Plasma clearance
5. Dialysis low rates

## **Molecular weight**

- Smaller molecular weight substances will pass through the dialysis membrane more easily than larger molecular weights.

## **Protein Binding**

- Drugs with a high degree of protein binding will have a small plasma concentration of unbound drug available for dialysis, making them poorly dialyzable or requiring multiple sessions.

## **Volume of Distribution**

- Drugs with large volumes of distribution usually due to lipid solubility and low plasma protein binding are poorly dialyzable.

## **Plasma clearance**

- Although plasma clearance may be beneficial, increasing plasma clearance will decrease dialysis clearance.

## **Dialysis Flow Rates**

- Greater degrees of dialysis can be achieved with faster dialysate flow rates if the dialysate drug concentrations is low.

# \* Common dialyzable drugs used in rheumatology

**Yes**- dialyzable, **No**-not dialyzable, **U**-unlikely, **L**-likely but no data, **ND**-no data, **NS**- no high permeability membrane specified

Drug Name	Conventional Dialysis	High Permeability	Peritoneal Dialysis
Amlodipine	No	ND	No
Azathioprine	Yes	L	ND
Baclofen	ND	ND	ND
Calcitriol	No	No	U
Captopril	Yes	L	No
Ceftriaxone	No	ND	No
Celecoxib	U	ND	U

Drug Name	Conventional Dialysis	High Permeability	Peritoneal Dialysis
Colchicine	No	ND	No
Cyclophosphamide	Yes	L	ND
Dexamethasone	No	ND	No
Diclofenac	U	ND	U
Diltiazem	No	ND	No
Gabapentin	Yes	L	ND
Hydroxychloroquine	ND	ND	ND
Ibuprofen	No	ND	U
Insulin	No	ND	No
Leflunomide	No	ND	No
Mesna	ND	ND	ND
Methotrexate	Yes	Yes	No
Methylprednisolone	Yes	L	ND
Omeprazole	U	ND	U

<b>Drug Name</b>	<b>Conventional Dialysis</b>	<b>High Permeability</b>	<b>Peritoneal Dialysis</b>
Prednisone	No	ND	No
Sildenafil	U	ND	U
Tacrolimus	No	ND	U
Valsartan	U	ND	U
Warfarin	No	ND	No



**THANK YOU**