

Note: The printed syllabus will have black-white pages with 6 slides per page. The printed syllabus may contain older versions of the slides than the electronic syllabus or onsite presentations.

TALK OUTLINE

- The peritoneum as a dialyzer
- Peritoneal physiology
- Clinical significance of known physiology
- Approach to volume overload

- For you to do at home (Or here if there is time)
 - A case presentation of a volume overloaded patient

“THE PERITONEAL MEMBRANE”

Key learning Points

- The Peritoneal membrane is Not just mesothelial cells.
- Understanding Pathways (pores) and solute and fluid movement is important for solute removal and BP and volume control.
- Peritoneal Membrane Structure may change over time

THE PERITONEAL MEMBRANE:

Potential Resistance sites

Janet Wild, *Kidney Failure*, 2nd Edition, Class Publications, 2002
2 Rev Ed edition (1 Oct 2002)

PERITONEAL MEMBRANE:

Anatomy

Mesothelial cells:

- Line peritoneal cavity
- Have many functions:
 - Produce surfactant.
 - Control fibrinolysis and inflammation
 - Produce CA-125
 - Have a local Renin Angiotensin System

Interstitium:

- Supporting structures, can change over time, glucose gradient present within this space

Capillaries:

- Deliver blood, location of 3 pore model, most of resistance to diffusion in health

HD MEMBRANE STRUCTURE

Cellulose
Cellulose porosity

Synthetic membrane foam-like

Synthetic membrane macroreticular anisotropic

STRUCTURE OF DIALYSIS MEMBRANES

PI. 5

Artist's representation of "channels" of various sizes crossing through a membrane.

Small molecule

Large molecule

Artist's impression of large and small molecules crossing the membrane at different speeds.