WHAT IS CLAIMED IS:

1. A connector comprising:

a plug defining a channel extending between a plug inlet defined by the plug and a plug outlet defined by the plug, wherein the plug inlet is configured to mechanically and fluidically engage a first conduit;

a socket comprising:

a socket body defining a socket well, wherein the socket is configured to mechanically and fluidically engage a second conduit, and wherein the plug is configured to insert into the socket well to mechanically mate with the socket; and

a socket membrane biased to a closed position in which the socket membrane blocks fluid flow through the socket well, and wherein, when the plug is inserted into the socket well, the socket membrane is configured to open to enable fluid flow through the socket well.

2. The connector of claim 1, wherein the socket membrane is positioned within the socket well.

3. The connector of claim 1, further comprising a dialysis machine housing, wherein the socket membrane is connected to the dialysis machine housing.

4. The connector of claim 1, wherein the socket membrane is deformable and configured to position between an outer surface of the plug and an inner surface of the socket well in response to insertion of the plug into the socket well.

5. The connector of claim 4, wherein the socket membrane is further configured to undeform and assume the closed position in response to one or more of a removal of the plug from the socket well or an application of a physical stimulus to the socket membrane.

6. The connector of claim 1, wherein the socket membrane comprises at least two leaflets configured to coapt to define the closed position.

7. The connector of claim 6, wherein the leaflets define free edges configured to move distally away from the plug when the plug is inserted into the socket well.

8. The connector of claim 1, wherein the socket is configured to fluidly couple the plug inlet and the second conduit when the plug mechanically mates with the socket and the socket mechanically and fluidically engages the second conduit.

9. The connector of claim 1 , wherein the plug further comprises a rim extending from an outer surface of the plug, and wherein the rim is configured to contact the socket body to control a depth of insertion of the plug into the socket well.

10. The connector of claim 9, wherein one of the socket body or a housing of a dialysis machine comprises a flange configured to contact the rim when the plug is fully inserted in the socket well.

11. The connector of claim 1, wherein the plug and the socket comprise respective visible indications to indicate that the plug is configured to mechanically mate with the socket body.

12. The connector of claim 1, wherein the socket membrane is formed using one or more of an elastic polymer, a shape memory material, or harmonic steel.

13. A medical system comprising:

a plug defining a channel extending between a plug inlet defined by the plug and a plug outlet defined by the plug, wherein the plug inlet is configured to mechanically and fluidically engage a tubing;

a dialysis machine comprising a hydraulic line and a socket fluidically connected to the hydraulic line, wherein the socket comprises:

a socket body defining a socket well, wherein the plug is configured to insert into the socket well to mechanically mate with the socket and to fluidically connect the plug inlet and the hydraulic line; and

a socket membrane positioned within the socket well, wherein the socket membrane is biased to a closed position in which the socket membrane blocks fluid flow through the socket well, and wherein, when the plug is inserted into the socket well, the socket membrane is configured to open to enable fluid flow through the socket well.

14. The medical system of claim 13, wherein the socket membrane is deformable and configured to position between an outer surface of the plug and an inner surface of the socket well in response to insertion of the plug into the socket well.

15. The medical system of claim 14, wherein the socket membrane is further configured to undeform and assume the closed position in response to one or more of a removal of the plug from the socket well or an application of a physical stimulus to the socket membrane.

16. The medical system of claim 13, wherein the socket membrane comprises at least two leaflets configured to coapt to define the closed position.

17. The medical system of claim 16, wherein the leaflets define free edges configured to move distally away from the plug when the plug is inserted into the socket well.

18. The medical system of claim 13, wherein the socket is configured to fluidically couple the plug inlet and the hydraulic line when the plug mechanically mates with the socket and the socket mechanically and fluidically engages the hydraulic line, and wherein the hydraulic line is in fluid communication with a dialysis cycler.

19. The medical system of claim 13, further comprising the tubing, wherein the tubing is configured to fluidically connect to a container including a dialysate component.

~~20. A method comprising:~~

~~inserting a plug into a socket well defined by a socket, wherein:~~

~~the plug defines a channel extending between a plug inlet defined by the plug and a plug outlet defined by the plug, wherein the plug inlet is configured to mechanically and fluidically engage a first conduit; and~~

~~the socket comprises:~~

~~a socket body defining the socket well, wherein the socket is fluidically connected to a second conduit of a medical machine, and wherein the plug is configured to insert into the socket well to mechanically mate with the socket;~~

~~a socket membrane biased to a closed position in which the socket membrane blocks fluid flow through the socket well, and wherein inserting the plug into the socket well opens the socket membrane to enable fluid flow through the socket well from the plug inlet to the second conduit; and, subsequently,~~

~~removing the plug from the socket.~~