CLAIMS

1. A catheter priming apparatus, comprising:

a barrier forming a reservoir;

fluid disposed within the reservoir;

a support structure disposed within the reservoir, the support structure having an opening extending through the support structure and a connector configured to couple the catheter priming apparatus to a catheter system; and

a one-way valve coupled to the support structure and configured to allow the fluid to flow out of the reservoir through the connector in response to compression of a portion of the barrier aligned with the opening.

2. The catheter priming apparatus of claim 1, wherein the support structure reduces compression of another portion of the barrier.

3. The catheter priming apparatus of claim 2, wherein an outer diameter of the portion of the barrier aligned with the opening is less than an outer diameter of the other portion of the barrier.

4. The catheter priming apparatus of claim 1, wherein the barrier comprises a film.

5. The catheter priming apparatus of claim 1, wherein the barrier is constructed of foil.

6. The apparatus of claim 1, wherein the fluid comprises saline.

7. The catheter priming apparatus of claim 1, wherein the opening is ~~about~~ a size of a human thumb.

8. The catheter priming apparatus of claim 1, wherein the connector comprises a male luer fitting.

9. The catheter priming apparatus of claim 1, wherein the support structure comprises a ring shape.

10. The catheter priming apparatus of claim 1, wherein the support structure is rigid.

11. The catheter priming apparatus of claim 1, wherein the support structure comprises a polymer.

12. A catheter priming apparatus, comprising:

a barrier forming a reservoir, the barrier comprising an aperture;

fluid disposed within the reservoir;

a seal coupled to a spring and sealing the aperture, wherein in response to compression of the barrier, the fluid forces the seal distally to open the aperture and compress the spring.

13. The catheter priming apparatus of claim 12, wherein the seal comprises a ball.

14. The catheter priming apparatus of claim 12, wherein the spring is configured to return the seal to a position sealing the aperture in response to ceasing of compression of the barrier.

15. The catheter priming apparatus of claim 12, further comprising a washer coupled to the barrier, wherein a distal end of the spring is coupled to the seal, wherein a proximal end of the spring is coupled to the washer.

16. The catheter priming apparatus of claim 15, wherein in response to compression of the barrier, the fluid flows through the aperture, around the seal and the spring, and through the washer.

17. The catheter priming apparatus of claim 15, wherein a distal end of the barrier comprises a connecting portion configured to couple to a catheter system, wherein an outer surface of the connecting portion is tapered.

18. The catheter priming apparatus of claim 17, wherein the outer surface of the connecting portion is tapered at an angle of ~~about~~ six percent.

19. A catheter priming apparatus, comprising:

a barrier forming a reservoir;

fluid disposed within the reservoir;

a duckbill valve coupled to the barrier, wherein the duckbill valve is configured to open in response to compression of the barrier to allow the fluid to flow out of the catheter priming apparatus.

20. The catheter priming apparatus of claim 19, wherein a first flap and a second flap of the duckbill valve are configured to contact each other and seal the catheter priming apparatus in response to ceasing of compression of the barrier.