CLAIMS

1. A medical device for use with a filler material for occupying a space within a patient's body, the medical device comprising:

a device assembly comprising an enclosed reservoir, a fluid transfer member, and a release section comprising an elongated structure extending into the reservoir, where a lumen of the elongated structure provides a fluid path out of the enclosed reservoir;

where the enclosed reservoir is fluid impermeable;

the fluid transfer member is configured to permit delivery of the filler material into the enclosed reservoir to expand the device assembly towards an active profile;

where a release material is located within the reservoir and compresses an exterior of the elongated structure to prevent fluid flow through the fluid path; and

where the elongated structure separates the release material from the fluid path such that the release material remains entirely exterior to the fluid path and is physically separated from an environment within the patient's body until reduction of the structural integrity of the release material opens the elongated structure to open the fluid.

2. The device of claim 1, further comprising a swellable filler material in the enclosed reservoir.

3. The device of claim 2, where the swellable filler material comprises a hydrogel.

4. A medical device for occupying a gastric space within a patient's body, the medical device comprising:

a device assembly comprising a skin, and a fluid transfer member, the skin forming a perimeter of the device assembly defining a reservoir therein, where the skin is liquid impermeable and where the fluid transfer member comprises a flexible elongate fluid path that permits delivery of fluids into the reservoir;

where the skin forms an invaginated section having a passage extending within the reservoir;

a release material located within the reservoir and disposed entirely exterior to the passage of the invaginated section where the release material compresses a portion of the invaginated section to seal the passage such that the release material is physically separated from the gastric space until a reduction in the structural integrity of the release material causes the passage to open to an exterior of the device assembly;

the device assembly having a deployment profile and an active profile, where the deployment profile is smaller than the active profile and permits positioning of the device assembly within the patient's body;

where the fluid transfer member is configured to deliver a filler into the reservoir to cause the device assembly to expand from the deployment profile to the active profile such that the device assembly occupies at least a portion of the gastric space within the patient's body; and

an elongate conduit having a proximal end and a device end, where the device end is flexible to accommodate swallowing by the patient, the elongate conduit configured to deliver fluid through the fluid transfer member, where the device end of the conduit is removably located within the flexible elongate fluid path, such that upon removal of the conduit a flow resistance of the flexible elongate fluid path is sufficient to prevent the filler material from escaping.

5. The device of claim 4, where the conduit comprises a slidable fit with the sealable path.

6. The device of claim 4, where the portion of the invaginated section forming the passage is mechanically bound by the release material.

7. The device of claim 6, where the device assembly can be reduced to at least 5ml volume when in the deployment profile.

8. The device of claim 6, where the release material is mechanically coupled to the portion of the invaginated section forming the passage.

9. The device of claim 1, where the fluid transfer member comprises both a sealable fluid path and a removable conduit located therein, the conduit having a proximal end and a device end, where a length of the conduit permits delivery of the filler material into the reservoir when the device assembly is located within the patient's body and the proximal end is positioned outside of the patient's body, where the conduit permits delivery of the filler material into the reservoir; and

wherein the sealable fluid path is configured to seal to prevent flow of the filler material therethrough upon removal of the conduit.

10. The device of claim 9, where the sealable fluid path is configured to seal when the device assembly assumes the active profile and the conduit disengages from the sealable fluid path.

11. The device of claim 9, where the conduit comprises a slidable fit with the sealable fluid path.

12. A medical device for occupying a space within a patient's body, the medical device comprising:

a device assembly having a deployment profile and an active profile, where the deployment profile is smaller than the active profile and permits deployment of the device assembly within the space in the patient's body;

the device assembly comprising:

an enclosed reservoir configured to be fluid impermeable;

a fluid transfer member configured to permit delivery of a filler material into the enclosed reservoir;

a release section that provides a fluid path out of the enclosed reservoir; and

a release material that is located entirely exterior to a fluid path of the release section and compresses a portion of the release section to prevent fluid flow through the fluid path, such that the release material is physically separated from an environment within the patient's body by the enclosed reservoir and remains physically separated from the environment within the patient's body until a reduction of a structural integrity of the release material allows opening of the fluid path allowing release of the filler material from the enclosed reservoir.

13. The device of claim 12, where the fluid transfer member comprises a sealable fluid path and a removable conduit located therein, the removable conduit having a proximal end and a device end, where a length of the removable conduit permits delivery of the filler material into the enclosed reservoir when the device assembly is located within the patient's body and the proximal end is positioned outside of the patient's body, where the removable conduit permits delivery of the filler material into the reservoir to cause the device assembly to expand from the deployment profile to the active profile such that the device assembly occupies at least a portion of the space within the patient's body; and

wherein the sealable fluid path is configured to seal to prevent flow of the filler material therethrough upon removal of the removable conduit.

14. The device of claim 13, where the sealable fluid path is configured to seal when the device assembly assumes the active profile and the removable conduit disengages from the sealable fluid path.

15. The device of claim 13, where the removable conduit comprises a slidable fit with the sealable fluid path.

16. The device of claim 13, further comprising a swellable filler material in the enclosed reservoir.

17. The device of claim 16, where the swellable filler material comprises a hydrogel.

The invention claimed is:

1. A medical device for use with a filler material for occupying a space within a patient's body, the medical device comprising:

a device assembly comprising an enclosed reservoir, a fluid transfer member, and a release section comprising an elongated structure extending into the reservoir, where a lumen of the elongated structure provides a fluid path out of the enclosed reservoir;

where the enclosed reservoir is fluid impermeable;

the fluid transfer member is configured to permit delivery of the filler material into the enclosed reservoir to expand the device assembly towards an active profile;

where the release material is located within the reservoir and compresses an exterior of the elongated structure to prevent fluid flow through the fluid path; and

where the elongated structure separates the release material from the fluid path such that the release material remains entirely exterior to the fluid path and is physically separated from an environment within the patient's body until reduction of the structural integrity of the release material opens the elongated structure to open the fluid path.

2. The device of claim 1, where the fluid transfer member comprises both a sealable fluid path and a removable conduit located therein, the conduit having a proximal end and a device end, where a length of the conduit permits delivery of the filler material into the reservoir when the device assembly is located within the patient's body and the proximal end is positioned outside of the patient's body, where the conduit permits delivery of the filler material into the reservoir; and

wherein the sealable fluid path is configured to seal to prevent flow of the filler material therethrough upon removal of the conduit.

3. The device of claim 2, where the conduit comprises a slidable fit with the sealable fluid path.

4. The device of claim 2, further comprising a swellable filler material in the enclosed reservoir.

5. The device of claim 4, where the swellable filler material comprises a hydrogel.

6. A medical device for occupying a gastric space within a patient's body, the medical device comprising:

a device assembly comprising a skin, and a fluid transfer member, the skin forming a perimeter of the device assembly defining a reservoir therein, where the skin is liquid impermeable and where the fluid transfer member comprises a flexible elongate fluid path that permits delivery of fluids into the reservoir;

where the skin forms an invaginated section having a passage extending within the reservoir;

a release material located within the reservoir and disposed entirely exterior to the passage of the invaginated section where the release material compresses a portion of the invaginated section to seal the passage such that the release material is physically separated from the gastric space until, a reduction in the structural integrity of the release material causes the passage to open to an exterior of the device assembly;

the device assembly having a deployment profile and an active profile, where the deployment profile is smaller than the active profile and permits positioning of the device assembly within the patient's body;

where the fluid transfer member is configured to deliver a filler into the reservoir to cause the device assembly to expand from the deployment profile to the active profile such that the device assembly occupies at least a portion of the gastric space within the patient's body; and

an elongate conduit having a proximal end and a device end, where the device end is flexible to accommodate swallowing by the patient, the elongate conduit configured to deliver fluid through the fluid transfer member, where the device end of the conduit is removably located within the flexible elongate fluid path, such that upon removal of the conduit a flow resistance of the flexible elongate fluid path is sufficient to prevent the filler material from escaping.

7. The device of claim 6, where the conduit comprises a slidable fit with the sealable path.

8. The device of claim 6, where the portion of the invaginated section forming the passage is mechanically bound by the release material.

9. The device of claim 8, where the device assembly can be reduced to at least 5 ml volume when in the deployment profile.

10. The device of claim 8, where the release material is mechanically coupled to the portion of the invaginated section forming the passage.

11. The device of claim 2, where the sealable fluid path is configured to seal when the device assembly assumes the active profile and the conduit disengages from the sealable fluid path.

12. A medical device tbr occupying a space within a patient's body, the medical device comprising:

a device assembly having a deployment profile and an active profile, where the deployment profile is smaller than the active profile and permits deployment of the device assembly within the space in the patient's body;

the device assembly comprising:

an enclosed reservoir configured to be fluid impermeable;

a fluid transfer member configured to permit delivery of a filler material into the enclosed reservoir;

a release section that provides a fluid path out of the enclosed reservoir; and

a release material that is located entirely exterior to a fluid path of the release section and compresses a portion of the release section to prevent fluid flow through the fluid path, such that the release material is physically separated from an environment within the patient's body by the enclosed reservoir and remains physically separated from the environment within the patient's body until a reduction of a structural integrity of the release material allows opening of the fluid path allowing release of the filler material from the enclosed reservoir.

13. The device of claim 12, where the fluid transfer member comprises a sealable fluid path and a removable conduit located therein, the removable conduit having, a proximal end and a device end, where a length of the removable conduit permits delivery of the filler material into the enclosed reservoir when the device assembly is located within the patient's body and the proximal end is positioned outside of the patient's body, where the removable conduit permits delivery of the filler material into the reservoir to cause the device assembly to expand from the deployment profile to the active profile such that the device assembly occupies at least a portion of the space within the patient's body; and

wherein the sealable fluid path is configured to seal to prevent flow of the filler material therethrough upon removal of the removable conduit.

14. The device of claim 13, where the sealable fluid path is configured to seal when the device assembly assumes the active profile and the removable conduit disengages from the removable fluid path.

15. The device of claim 13, where the removable conduit comprises a slidable fit with the sealable fluid path.

16. The device of claim 13, further comprising a swellable filler material in the enclosed reservoir.

17. The device of chum 16, where the swellable filler material comprises a hydrogel.