ABSTRACT

Embodiments provide systems, apparatus and methods for cleaning a vagina. Embodiments include a handle; and a cleaning bulb coupled to the handle, the cleaning bulb having a shape including a plurality of ridges and grooves extending longitudinally along a length of the cleaning bulb, the cleaning bulb formed from a ridged material and adapted to be used to wipe the walls of a vagina upon insertion thereof. Numerous additional aspects are disclosed.
INSERT THE CLEANING BULB INTO THE BODY CAVITY

MOVE THE CLEANING BULB AGAINST THE INNER WALLS OF THE BODY CAVITY

COLLECT DEBRIS ON THE CLEANING BULB

REMOVE THE BULB FROM THE BODY CAVITY WITH THE COLLECTED DEBRIS

FIG. 14
SYSTEMS, APPARATUS AND METHODS FOR IMPROVED VAGINAL CLEANING

RELATED APPLICATIONS


FIELD

[0002] The invention relates generally to personal hygiene and more particularly to systems, apparatus and methods for improved vaginal cleaning.

BACKGROUND

[0003] Women want to remove debris from the vagina, typically post-menstrual, post-intercourse, pre-intercourse, during yeast infection, and for hygiene and aesthetic reasons. Unfortunately however, many women use irrigation methods, often referred to as “douching”, that are counter-indicated by the medical community and that create a host of negative side-effects. While twenty-five percent or more of U.S. women (and much higher percentages in other countries) persist in douching despite the negative consequences, many more are waiting for a solution to vaginal cleaning that does not create more problems than it solves.

[0004] Currently publically available devices, products, and methods for cleaning the vagina are limited to flushing out the vagina with a solution and/or the introduction of perfumed, odor-masking solutions intended to make the vagina “smell clean.” Frequently however, these solutions do not actually clean the vagina, debris remains behind, and the consumer ends up merely accepting the masked smell as a substitute for clean. Thus, what is needed are improved systems, apparatus and methods for improved vaginal cleaning.

SUMMARY

[0005] In some other embodiments, the present invention provides an improved apparatus for vaginal cleaning. The apparatus includes a handle; and a cleaning bulb coupled to the handle, the cleaning bulb having a shape including a plurality of ridges and grooves extending longitudinally along a length of the cleaning bulb, the cleaning bulb formed from a ridged material and adapted to be used to wipe the walls of a vagina upon insertion thereof.

[0006] In yet other embodiments, the present invention provides an improved method for vaginal cleaning. The method includes inserting a cleaning bulb coupled to a handle into a body cavity to be cleaned, the cleaning bulb having a shape including a plurality of ridges and grooves extending longitudinally along a length of the cleaning bulb; rotating the cleaning bulb via the handle against the body cavity inner walls to trap debris on the cleaning bulb; and removing the cleaning bulb with the trapped debris.

[0007] Still other features, aspects, and advantages of the present invention will become more fully apparent from the following detailed description, the appended claims, and the accompanying drawings by illustrating a number of exemplary embodiments and implementations, including the best mode contemplated for carrying out the present invention. Embodiments of the present invention may also be capable of other and different applications, and its several details may be modified in various respects, all without departing from the spirit and scope of the present invention. Accordingly, the drawings and descriptions are to be regarded as illustrative in nature, and not as restrictive. The drawings are not necessarily drawn to scale. The description is intended to cover all modifications, equivalents, and alternatives falling within the spirit and scope of the claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] FIG. 1A is an isometric diagram depicting a first example vaginal cleaning device according to embodiments of the present invention.

[0009] FIG. 1B is a font view of the example vaginal cleaning device of FIG. 1A.

[0010] FIG. 1C is a side view of the example vaginal cleaning device of FIG. 1A.

[0011] FIG. 1D is a top view of the example vaginal cleaning device of FIG. 1A.

[0012] FIG. 1E is a cross-sectional view of the example vaginal cleaning device of FIG. 1A taken along line E-E in FIG. 1C.

[0013] FIG. 2A is an isometric diagram depicting a second example vaginal cleaning device according to embodiments of the present invention.

[0014] FIG. 2B is a top view of the example vaginal cleaning device of FIG. 2A.

[0015] FIG. 2C is a cross-sectional view of the example vaginal cleaning device of FIG. 2A taken along line C-C in FIG. 2A.

[0016] FIG. 3A is an isometric diagram depicting a third example vaginal cleaning device according to embodiments of the present invention.

[0017] FIG. 3B is a top view of the example vaginal cleaning device of FIG. 3A.

[0018] FIG. 3C is a cross-sectional view of the example vaginal cleaning device of FIG. 3A taken along line D-D in FIG. 3A.

[0019] FIG. 4A is an isometric diagram depicting a fourth example vaginal cleaning device according to embodiments of the present invention.

[0020] FIG. 4B is a top view of the example vaginal cleaning device of FIG. 4A.

[0021] FIG. 4C is a cross-sectional view of the example vaginal cleaning device of FIG. 4A taken along line F-F in FIG. 4A.

[0022] FIG. 5A is an isometric diagram depicting a fifth example vaginal cleaning device according to embodiments of the present invention.

[0023] FIG. 5B is a top view of the example vaginal cleaning device of FIG. 5A.

[0024] FIG. 6A is an isometric diagram depicting a sixth example vaginal cleaning device according to embodiments of the present invention.

[0025] FIG. 6B is a top view of the example vaginal cleaning device of FIG. 6A.

[0026] FIGS. 7 through 13 are cross-sectional views of additional example vaginal cleaning devices according to embodiments of the present invention.

[0027] FIG. 14 is a flowchart depicting an example method of using a vaginal cleaning device according to embodiments of the present invention.
DETAILED DESCRIPTION

[0028] Embodiments of the present invention provide systems, apparatus, and methods for improved vaginal cleaning. A vaginal cleaning device collects debris by trapping it in gullies and grooves or between ridges or bumps on a surface of the device which is insertable into the vagina. In some embodiments, the ridges and grooves are arranged such that the inserting action and the withdrawing action alone wipes the vaginal walls of debris. In some embodiments, the device is rotated using a handle and the twisting action causes the ridges to wipe the debris into the grooves where it is trapped. The device does not require use of odor-masking chemicals or irrigation-based intervention to clean the vagina. Instead, the device is relatively inert to the vaginal environment and provides a physical process for collecting debris from the surface of the vaginal walls and carrying the debris out of the body.

[0029] Embodiments of the invention mechanically collect and carry debris out of the vagina without the use of solvents to flush out the debris. There is therefore no chemical interaction with the vagina that could disturb the natural pH balance, as the debris is removed by inert physical means.

[0030] Embodiments of the invention differ from conventional cleaning methods and apparatus. Conventional women’s personal hygiene methods and apparatus tend to focus on two modes of attempting to clean the vagina: (1) using water or a substantially water-based solution to flush out the vagina with devices created to flush out debris from the vagina, or (2) an absorbent material inserted into the vaginal to absorb liquids that had been introduced intravaginally. The vaginal cleaning device of embodiments of the present invention does not depend on flushing the vagina with water, nor sponging after a watery solution has been inserted. Instead, debris is physically gathered, collected and carried out of the body. Since the vaginal cleaning device of embodiments of the present invention does not introduce solvents to flush out the vagina, the natural pH balance of the vagina is left undisturbed, unlike current and traditional douching methods and tools.

[0031] Health professionals and American government health agencies strongly recommend against flushing the vagina out with solutions as that disrupts the pH balance, and likewise, the introduction of odor-masking chemicals are detrimental to the flora and tissues of the vagina.

[0032] The device uses no odor-masking chemical or irrigation-based intervention to clean the vagina; rather it is an inert physical process of collecting debris from the surface of the walls and carrying it out of the body.

[0033] Turning now to FIGS. 1A to 1D, a first example embodiment of a vaginal cleaning device 100 is depicted. The device 100 includes a handle 102 at one end and a cleaning bulb 104 at the other end. The handle 102 is ridged and attached to the cleaning bulb 104 which in some embodiments is ridged but in other embodiments can be compressible. The cleaning bulb 104 includes a series of ridges and grooves. The blade of each ridge is rounded/softened and not sharp.

[0034] In some embodiments, the cleaning bulb 104 is inserted into the vagina and gently turned (e.g., rotated about the longitudinal axis of the device), allowing for the blades of the ridges to wipe the vaginal walls and trap debris in the grooves between the ridges. Pulling the device 100 out of the vagina after a few revolutions will carry the trapped debris out of the body, where upon the debris can be discarded.

[0035] In some embodiments, the device 100 can be injection molded, casted or molded plastic, silicone, ceramics, or metal. The handle 102 can be a cylindrical or other easily turnable and graspable shape. The cleaning bulb 104 can be a bulbous, spherical, spherical, conical or cylindrical (or a combination of such shapes) ridgedly formed that has gullies between the ridges that would permit the collection of debris when turned after having been inserted intravaginally.

[0036] Ridges, ribs, ripples, and or bumps cover the surface of the cleaning bulb 104 of the device 100 to allow a gentle scraping, wiping, and/or squeegee action against the tissue of the vaginal walls through rotation and/or pushing and pulling motion.

[0037] In some embodiments as shown in FIGS. 2A-2C, the ridges can be disposed at an angle similar to a screw thread, so that through rotation in a first “cleaning” direction, debris can be drawn out of the vagina by the “threads”. In some embodiments, the device can be used to draw in, for example, medication by rotating the handle in the opposite direction.

[0038] The cross-section of the ribs can support the function. They can be bent in an angle or just shaped unsymmetrical or both, so that in the cleaning rotation direction more scraping is happening and in the other direction more a deposition effect takes place.

[0039] Materials used to manufacture the device 100 can range from soft and pliable (e.g. silicone) to hard plastic and also metal or even ceramic/porcelain.

[0040] FIG. 2A is an isometric diagram depicting a second example vaginal cleaning device 200 and FIG. 2B is a top view of the example vaginal cleaning device of FIG. 2A. FIG. 2C is a cross-sectional view of the example vaginal cleaning device of FIG. 2A taken along line C-C in FIG. 2A. FIG. 3A is an isometric diagram depicting a third example vaginal cleaning device 300 and FIG. 3B is a top view of the example vaginal cleaning device of FIG. 3A. FIG. 3C is a cross-sectional view of the example vaginal cleaning device of FIG. 3A taken along line D-D in FIG. 3A. FIG. 4A is an isometric diagram depicting a fourth example vaginal cleaning device 400 and FIG. 4B is a top view of the example vaginal cleaning device of FIG. 4A. FIG. 4C is a cross-sectional view of the example vaginal cleaning device of FIG. 4A taken along line E-E in FIG. 4A. FIG. 5A is an isometric diagram depicting a fifth example vaginal cleaning device 500 and FIG. 5B is a top view of the example vaginal cleaning device of FIG. 5A. FIG. 6A is an isometric diagram depicting a sixth example vaginal cleaning device 600 and FIG. 6B is a top view of the example vaginal cleaning device of FIG. 6A. FIGS. 7 through 13 are cross-sectional views of the cleaning bulks of additional example vaginal cleaning devices 700-1300.

[0041] In some embodiments, the rotation can be driven by an inbuilt motor. In some embodiments, an inbuilt vibrational motor can be included. In some embodiments, the device may be used to deposit material into the vagina depending on the angles of the ridges and the direction the handle is turned intravaginally. In some embodiments, the device can be used for sexual pleasure. In some embodiments, the device can be used to remove debris from the rectum. In some embodiments, the cleaning bulb can be removed from the handle and replaced with a different clean
(e.g., unused) cleaning bulb with the same or a different shape. In some embodiments, the cleaning bulbs can be disposable.

[0042] Turning now to FIG. 14, a flowchart depicting a method 1400 of using embodiments of the present invention is provided. The user inserts the cleaning bulb of the device into the cavity to be cleaned (1402). The device is then turned and/or moved against the inner walls of the cavity (1404). This action collects debris in the gullies and/or grooves between the ridges and/or bumps of the cleaning bulb (1406). The device is then removed from the body with the debris remaining trapped in the gullies and/or grooves (1408).

[0043] Numerous embodiments are described in this disclosure, and are presented for illustrative purposes only. The described embodiments are not, and are not intended to be, limiting in any sense. The presently disclosed invention(s) are widely applicable to numerous embodiments, as is readily apparent from the disclosure. One of ordinary skill in the art will recognize that the disclosed invention(s) may be practiced with various modifications and alterations, such as structural, logical, software, and electrical modifications. Although particular features of the disclosed invention(s) may be described with reference to one or more particular embodiments and/or drawings, it should be understood that such features are not limited to usage in the one or more particular embodiments or drawings with reference to which they are described, unless expressly specified otherwise.

[0044] The present disclosure is neither a literal description of all embodiments nor a listing of features of the invention that must be present in all embodiments.

[0045] The Title (set forth at the beginning of the first page of this disclosure) is not to be taken as limiting in any way as the scope of the disclosed invention(s).


[0047] The terms “an embodiment”, “embodiments”, “embodiment”, “the embodiment”, “the embodiments”, “one or more embodiments”, “some embodiments”, “one embodiment” and the like mean “one or more (but not all) disclosed embodiments”, unless expressly specified otherwise.

[0048] The terms “the invention” and “the present invention” and the like mean “one or more embodiments of the present invention.”

[0049] A reference to “another embodiment” in describing an embodiment does not imply that the referenced embodiment is mutually exclusive with another embodiment (e.g., an embodiment described before the referenced embodiment), unless expressly specified otherwise.

[0050] The terms “including”, “comprising” and variations thereof mean “including but not limited to”, unless expressly specified otherwise.

[0051] The terms “a”, “an” and “the” mean “one or more”, unless expressly specified otherwise.

[0052] The term “and/or”, when such term is used to modify a list of things or possibilities (such as an enumerated list of possibilities) means that any combination of one or more of the things or possibilities is intended, such that while in some embodiments any single one of the things or possibilities may be sufficient in other embodiments two or more (or even each of) the things or possibilities in the list may be preferred, unless expressly specified otherwise. Thus for example, a list of “a, b and/or c” means that any of the following interpretations would be appropriate: (i) each of “a”, “b” and “c”; (ii) “a” and “b”; (iii) “a” and “c”; (iv) “b” and “c”; (v) only “a”; (vi) only “b”; and (vii) only “c.”

[0053] The term “plurality” means “two or more”, unless expressly specified otherwise.

[0054] The term “herein” means “in the present disclosure, including anything which may be incorporated by reference”, unless expressly specified otherwise.

[0055] The phrase “at least one of”, when such phrase modifies a plurality of things (such as an enumerated list of things) means any combination of one or more of those things, unless expressly specified otherwise. For example, the phrase at least one of a widget, a car and a wheel means either (i) a widget, (ii) a car, (iii) a wheel, (iv) a widget and a car, (v) a widget and a wheel, (vi) a car and a wheel, or (vii) a widget, a car and a wheel.

[0056] The phrase “based on” does not mean “based only on”, unless expressly specified otherwise. In other words, the phrase “based on” describes both “based only on” and “based at least on”.

[0057] Each process (whether called a method, algorithm or otherwise) inherently includes one or more steps, and therefore all references to a “step” or “steps” of a process have an inherent antecedent basis in the mere recitation of the term “process” or a like term. Accordingly, any reference in a claim to a ‘step’ or ‘steps’ of a process has sufficient antecedent basis.

[0058] When an ordinal number (such as “first”, “second”, “third” and so on) is used as an adjective before a term, that ordinal number is used (unless expressly specified otherwise) merely to indicate a particular feature, such as to distinguish that particular feature from another feature that is described by the same term or by a similar term. For example, a “first widget” may be so named merely to distinguish it from, e.g., a “second widget”. Thus, the mere usage of the ordinal numbers “first” and “second” before the term “widget” does not indicate any other relationship between the two widgets, and likewise does not indicate any other characteristics of either or both widgets. For example, the mere usage of the ordinal numbers “first” and “second” before the term “widget” (1) does not indicate that either widget comes before or after any other in order or location; (2) does not indicate that either widget occurs or acts before or after any other in time; and (3) does not indicate that either widget ranks above or below any other, as in importance or quality. In addition, the mere usage of ordinal numbers does not define a numerical limit to the features identified with the ordinal numbers. For example, the mere usage of the ordinal numbers “first” and “second” before the term “widget” does not indicate that there must be no more than two widgets.

[0059] When a single device, component or article is described herein, more than one device, component or article (whether or not they cooperate) may alternatively be used in place of the single device, component or article that is described. Accordingly, the functionality that is described as being possessed by a device may alternatively be possessed by more than one device, component or article (whether or not they cooperate).

[0060] Similarly, where more than one device, component or article is described herein (whether or not they cooperate), a single device, component or article may alternatively be used in place of the more than one device, component or
article that is described. For example, a plurality of computer-based devices may be substituted with a single computer-based device. Accordingly, the various functionality that is described as being possessed by more than one device, component or article may alternatively be possessed by a single device, component or article.

[0061] The functionality and/or the features of a single device that is described may be alternatively embodied by one or more other devices that are described but are not explicitly described as having such functionality and/or features. Thus, other embodiments need not include the described device itself, but rather can include the one or more other devices which would, in those other embodiments, have such functionality/features.

[0062] A description of an embodiment with several components or features does not imply that all or even any of such components and/or features are required. On the contrary, a variety of optional components are described to illustrate the wide variety of possible embodiments of the present invention(s). Unless otherwise specified explicitly, no component and/or feature is essential or required.

[0063] Further, although process steps, algorithms or the like may be described in a sequential order, such processes may be configured to work in different orders. In other words, any sequence or order of steps that may be explicitly described does not necessarily indicate a requirement that the steps be performed in that order. The steps of processes described herein may be performed in any order practical. Further, some steps may be performed simultaneously despite being described or implied as occurring non-simultaneously (e.g., because one step is described after the other step). Moreover, the illustration of a process by its depiction in a drawing does not imply that the illustrated process is exclusive of other variations and modifications thereto, does not imply that the illustrated process or any of its steps are necessary to the invention, and does not imply that the illustrated process is preferred.

[0064] Although a process may be described as including a plurality of steps, that does not indicate that all or even any of the steps are essential or required. Various other embodiments within the scope of the described invention(s) include other processes that omit some or all of the described steps. Unless otherwise specified explicitly, no step is essential or required.

[0065] Although a product may be described as including a plurality of components, aspects, qualities, characteristics and/or features, that does not indicate that all of the plurality are essential or required. Various other embodiments within the scope of the described invention(s) include other products that omit some or all of the described plurality.

[0066] An enumerated list of items (which may or may not be numbered) does not imply that any or all of the items are mutually exclusive, unless expressly specified otherwise. Likewise, an enumerated list of items (which may or may not be numbered) does not imply that any or all of the items are comprehensive of any category, unless expressly specified otherwise. For example, the enumerated list “a computer, a laptop, a PDA” does not imply that any or all of the three items of that list are mutually exclusive and does not imply that any or all of the three items of that list are comprehensive of any category.

[0067] Headings of sections provided in this disclosure are for convenience only, and are not to be taken as limiting the disclosure in any way.

[0068] The present disclosure provides, to one of ordinary skill in the art, an enabling description of several embodiments and/or inventions. Some of these embodiments and/or inventions may not be claimed in the present application, but may nevertheless be claimed in one or more continuing applications that claim the benefit of priority of the present application. Applicants intend to file additional applications to pursue patents for subject matter that has been disclosed and enabled but not claimed in the present application.

[0069] The foregoing description discloses only example embodiments of the invention. Modifications of the above-disclosed apparatus, systems and methods which fall within the scope of the invention will be readily apparent to those of ordinary skill in the art.

[0070] Accordingly, while the present invention has been disclosed in connection with exemplary embodiments thereof, it should be understood that other embodiments may fall within the spirit and scope of the invention, as defined by the following claims.

The invention claimed is:

1. A device for cleaning a vagina, the device comprising: a handle; and a cleaning bulb coupled to the handle, the cleaning bulb having a shape including a plurality of ridges and grooves extending longitudinally along a length of the cleaning bulb, the cleaning bulb formed from a ridged material and adapted to be used to wipe the walls of a vagina upon insertion thereof.

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