ELASTIC RING AND METHOD OF USE IN PERFORMING YOGA ASANAS

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Abstract
An exercise apparatus includes a flattened ring of elastic material with specific components of different ridge configurations and spherical patterns integrated into the inner surface of the ring to provide alignment and tension which enable a practitioner to perform series of yoga exercises safely and correctly.
FIG 1.

FIG 2.
ELASTIC RING AND METHOD OF USE IN PERFORMING YOGA ASANAS

CROSS-REFERENCE TO RELATED APPLICATIONS


FIELD OF THE INVENTION

[0002] This invention relates generally to the field of elastic exercise equipment, and more particularly to an elastic ring which enables a person to perform a series of movements associated with yoga asanas poses.

BACKGROUND OF THE INVENTION

[0003] Yoga is an exercise originating from India gaining popularity in the western world. This exercise includes thousands of postures and combinations of flow. The postures are tied to breathe and mental concentration. To properly execute and obtain the full benefit of the postures, the person, especially a beginner, needs to be able to feel what their body is doing while performing the asanas poses. It is also important to achieve symmetry of the body while performing the asanas. The person has to continuously practice and fine tune their body to attain and maintain the proper asanas due to the difficulty in executing the asanas.

[0004] The novice practitioner usually practices with the assistance of an instructor. Even then the practitioner cannot attain the proper posture for the asana without proper guidance from the instructor on the placement of the arms, legs, torso, and head. The asanas can also be practiced alone but the practitioner may not have the correct and proper placement of body parts in place to achieve the full benefit of the asana. This is due to the complexity of combining of body, breathe and mind synchronization to execute the yoga asana. The final asana may look simple to the layman’s eye but to execute and maintain it properly to achieve the benefit of the asana for the practitioner is often quite difficult.

[0005] For example, the mountain pose Tadasana requires the practitioner to stand up straight and strong like a mountain. The novice practitioner is not able to fully perform this seemingly simple pose by just listening to the instructor’s guidance. Another example is the “Extended Hand to Big Toe” pose Utthita Hasta Padangusthasana. This posture requires the practitioner to engage the quadriceps and adductor muscles to pull the femur towards the pelvis and stretching the bicep femoris muscle to raise and straighten the leg to a range from 90 to 120 degrees.

SUMMARY OF THE INVENTION

[0006] Briefly stated, an exercise apparatus includes a flattened ring of elastic material with specific components of different ridge configurations and spherical patterns integrated into the inner surface of the ring to provide alignment and tension which enable a practitioner to perform series of yoga exercises safely and correctly.

[0007] According to an embodiment of the invention, an elastic ring includes a ring consisting of an elastic material; the ring having a circumference, wherein the circumference of the ring has an inner surface and an outer surface, the ring including at least one alignment ridge and one tension ridge on the inner surface; a length of the circumference of the ring being in a range from 12 inches to 88 inches; a thickness of the ring being in a range from one-sixteenth of an inch to one inch; and a width of the ring being in a range from one-half inch to four inches.

[0008] According to an embodiment of the invention, a method of manufacturing an elastic ring to be used in performing exercises includes the steps of: (a) forming a ring consisting of an elastic material; wherein the ring has a circumference, and wherein the circumference of the ring has an inner surface and an outer surface; (b) forming at least one alignment ridge and one tension ridge on the inner surface of the ring; (c) forming the ring such that a length of the circumference of the ring is in a range from 12 inches to 88 inches; (d) forming the ring such that a thickness of the ring is in a range from one-sixteenth of an inch to one inch; and (e) forming the ring such that a width of the ring is in a range from one-half inch to four inches.

[0009] According to an embodiment of the invention, a method of exercise for a practitioner includes the steps of: (a) providing an elastic ring having at least one alignment ridge and one tension ridge on an inner circumferential surface, a length of the inner circumferential surface of the ring being in a range from 12 inches to 88 inches, a thickness of the ring being in a range from one-sixteenth of an inch to one inch; and a width of the ring being in a range from one-half inch to four inches; (b) aligning the elastic ring in a desired position using the at least one alignment ridge such that the ring makes contact in at least predetermined locations on a body of the practitioner; and (c) stretching the elastic ring and adjusting the body of the practitioner such that proper alignment is achieved.

[0010] The ring of the present invention, when attached to the appropriate areas of the body, will properly guide the novice practitioner on how to adjust the body alignment to achieve the proper posture for Mountain Pose “Tadasana.”

[0011] The ring of the present invention, when attached to the appropriate areas of the body, will assist in properly guiding the novice practitioner to achieve the proper posture for the Extended Hand to Big Toe pose “Utthita Hasta Padangusthasana.” This posture requires the practitioner to engage the quadriceps and adductor muscles to pull the femur towards the pelvis and stretching the bicep femoris muscle to raise and straighten the leg to a range from 90 to 120 degrees. For a novice practitioner the posture cannot be done properly without the assistance of the present invention. The elastic material of the ring promotes the feeling of pulling of the quadriceps and the feeling of the femur retracting toward the pelvic bone. By pulling and releasing the elastic ring the practitioner can train the body to perform this contraction of the quadriceps and the extension of the femoris muscles. In continuing to practice using the pulling and releasing the ring and the method, the practitioner gradually develops body intelligence and will eventually be able to do the yoga posture without the aid of the ring.

[0012] The present invention relates to an article made from an elastic material and methodology for a person to perform a series of movement associated to yoga asanas by following a proper placement of the ring in the appropriate body parts. The present invention is used to attain symmetry of the body to perform the yoga asanas. It is also used to alleviate and strengthen the lower back muscles when used while sitting in a chair following a method of proper placement of the ring in the appropriate body parts. It also acts to function as a yoga mat carrier with an assistance of two VELCRO® straps.
The first embodiment of the present invention is an article made from elastic materials and the different ridge configuration and spherical patterns for use by a person in conjunction with the proper method of placement and alignment to perform a series of movements and maintaining the postures or asanas associated with yoga asanas. It is used for training the practitioner to achieve the proper alignment, stretching and strength in performing and maintaining the proper postures or asanas through proper placement of the ring with the help of the different ridge configuration and spherical patterns and the tension created by the tensile strength exerted by the elastic material. For example, postures or asanas such as Tadasana Mountain Pose, Dandasana Staff Pose, Paripurna Navasana Full Boat Pose, Krounchasana Heron Pose, Head to Knee Forward Bend, and Utthita Hasta Padangustasana Extended Hand to Big Toe Pose are enhanced or made possible by using the elastic ring of the present invention. Due to the elastic material’s tensile strength and the different ridge configuration and spherical patterns of the present invention, the invention provides the practitioner guidance and proper tension to immediately adjust the body alignment and fine tune the adjustment without too much strap readjustment or equipment change. Using the proper method of alignment, the invention also trains the body to feel isometric forces that are needed to be exerted to properly perform the postures or asanas. The present invention also trains the practitioner to attain the proper symmetry required to perform the poses through the ridge configuration and spherical patterns. The present invention’s elastic properties and tensile strength, ridge configuration and spherical patterns makes it extremely versatile in the performing the hundreds of asanas in a yoga practice.

The second embodiment of the present invention is an article made from elastic material’s tensile strength, different ridge configuration and spherical patterns when use, the person can alleviate and strengthen low back lumbar muscles while sitting in a chair. As technology advances to improve our lives we became chained to our desk and have an increasing sedentary lifestyle. There is a very high incidence of low back pain and ailments are caused by sitting for long periods of time. The present invention ring due to the elastic material’s tensile strength, different ridge configuration and spherical patterns can be used while sitting and working in front of a computer or desk. When the present invention is attached to the appropriate body parts it creates slight pressure on the lower lumbar back muscles to alleviate low back fatigue and pain due to long periods of sitting, this is assisted by the different ridge configuration and spherical patterns. The pressure exerted by the present invention from the tensile strength of the elastic material and the pressure point that the different ridge configuration and spherical patterns attempts to strengthen the low back lumbar muscles and to prevent low back pain.

The present invention exerts slight pressure to the lower back to alleviate and strengthen the low back muscles while the user sits in a chair working on a computer, writing or any activities that needs the user to sit for long periods of time. The present invention is tied around the feet and looped around the low lumbar muscles. The pressure exerted from the contraction and extension of the legs will tighten and loosen the pressure on the low lumbar muscles. The pressure acts like a lumbar support for the low back lumbar muscles to reduce fatigue and also gradually strengthens the lower back muscles. This in the long term will alleviate lower back pain and ailments.

The third embodiment of the present invention is a multifunction; it acts as a yoga mat carrier secured by two VELCRO® straps. The practitioner of yoga generally practices on a mat and instead of carrying bags and other contraption; the present invention is a multifunction product that can function as a yoga mat carrier.

**BRIEF DESCRIPTION OF THE DRAWINGS**

FIG. 1 shows an elastic ring according to an embodiment of the invention.

FIG. 2 shows an elastic ring according to an embodiment of the invention.

FIG. 3 shows the inside pattern of the elastic ring according to an embodiment of the present invention.

FIG. 4 shows the inside pattern of the elastic ring according to an embodiment of the present invention.

FIG. 5 shows the inside pattern of the elastic ring according to an embodiment of the present invention.

FIG. 6 shows the inside pattern of the elastic ring according to an embodiment of the present invention.

FIG. 7 shows the exterior view with a sample print of the elastic ring according to an embodiment of the present invention.

FIG. 8 shows a cross-sectional view of the elastic ring according to an embodiment of the present invention.

FIG. 9 shows an alternate cross-sectional view of the elastic ring according to an embodiment of the present invention.

FIG. 10 shows an alternate cross-sectional view of the elastic ring according to an embodiment of the present invention.

FIG. 11A shows a top view of a section of the elastic ring according to an embodiment of the invention.

FIG. 11B shows a perspective view of a section of the elastic ring according to an embodiment of the invention.

FIG. 11C shows a perspective view of a section of the elastic ring according to an embodiment of the invention.

FIG. 12 shows a perspective view of a user using the elastic ring of FIG. 1 to perform Paripurna Navasana Full Boat Pose.

FIG. 13 shows a perspective view of the user using the elastic ring of FIG. 1 to perform Krounchasana Heron Pose.

FIG. 14 shows a front view of the user using the elastic ring of FIG. 1 to perform Tadasana Mountain Pose.

FIG. 15 shows a side view of the user using the elastic ring of FIG. 1 to perform Uttihita Hasta Padangustasana Extended hand to big toe pose.

FIG. 16 shows a front view of the user using the elastic ring of FIG. 1 to alleviate low back pain and pressure and strengthen the low back muscles.

FIG. 17 shows a side view of the user using the elastic ring of FIG. 1 to alleviate low back pain and pressure and strengthen the low back muscles.

FIG. 18A shows a perspective view of a VELCRO® strap to attach the elastic ring of FIG. 1 to hold a yoga mat.

FIG. 18B shows a perspective view of a VELCRO® strap to attach the elastic ring of FIG. 1 to hold a yoga mat.

FIG. 19A shows a first step in arranging the elastic ring of FIG. 1 around the yoga mat to hold the mat together.
FIG. 19B shows a second step in arranging the elastic ring of FIG. 1 around the yoga mat to hold the mat together.

FIG. 19C shows a third step in arranging the elastic ring of FIG. 1 around the yoga mat to hold the mat together.

FIG. 19D shows a fourth step in arranging the elastic ring of FIG. 1 around the yoga mat to hold the mat together.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

FIG. 1 illustrates the dimensions of the elastic ring 1. The circumference 2 of the elastic ring ranges from 12 inches to 88 inches. The wall thickness 4 ranges from 1/16th to 1 inch and the width of the elastic ring ranges from 1/2 to 4 inches. Component A illustrates the outside surface of the elastic ring. Component B illustrates the series of incremental raised alignment ridges spaced symmetrically along the length of the elastic ring, with the number of raised ridges ranging from 2-30. The ridges (FIG. 11A) have a spacing distance ranging from 0.05 mm to 100 mm for components 8, 9, 11, 12. The thickness of the ridges (FIGS. 8-10) ranges from 1 mm to 300 mm for component 13. The shape of the ridges (FIGS. 8-10) can be of angular, spherical or flat characteristic. A primary purpose of the alignment ridges is to help the user align himself/herself properly.

FIGS. 11B-11C show different configurations with ridges and spherical patterns. The height of the ridge can range from 0.05 mm to 30 mm and the width of the ridge can range from 0.01 mm to 100 mm and the height of the ridge can range from 0.01 mm to 100 mm. The height of the spherical patterns range from 0.05 mm to 30 mm, while the distance between the half spheres can range from 0.050 mm to 100 mm. The diameter of the spheres can range from 0.005 mm to 30 mm.

FIGS. 1-2 illustrate a view of an embodiment of the present invention. This embodiment includes a ring made from an elastic material. The elastic ring can be in one continuous ring or be a flat strap connected at 5 to make a ring. The elastic ring can have the inside and outside surfaces flat. The elastic ring can have the inside surface flat and the outside surface with tension ridges (FIGS. 3-4) that run the length of the elastic ring. A primary purpose of the tension ridges is to increase the tension of the elastic belt. The elastic ring can have the inside surface with alignment ridges (FIGS. 5-6) that run the width of the ring and the outside surface flat. The elastic ring can have the inside and outside surface both having tension ridges (FIGS. 2-4) running the length of the elastic ring. The elastic ring can have alignment ridges (FIGS. 5-6) on the inside of the elastic ring running the width of the elastic ring. The elastic ring can have alignment ridges (FIGS. 3-6) on both the inside and outside of the elastic ring running the width of the elastic ring. The alignment and tension ridges (FIGS. 7-11A) can be in angular, spherical or flat. The inside pattern can be of any designs from stamped illustrations of geometric patterns or artistic patterns. The elastic material can be made from natural rubber, synthetic rubber, silicone, EPDM, neoprene, latex, polyester, or polyurethane. The outside of the elastic ring can be flat as in FIG. 10 or with ridges as in FIGS. 7-9. The outside of the elastic ring FIG. 7 can have letters, numerals, and logos, illustrations, printed, stamped, embossed, and debossed. The distance between the ridges for the inside and or outside of the elastic ring is preferably between the ranges of 0.5 mm to 30 mm wide. The height of the ridges for the inside and or outside of the elastic ring is preferably between the ranges of 0.01 mm to 30 mm high. The height of the stamped or embossed or debossed designs and/or illustrations preferably ranges from 0.01 mm to 30 mm high. Along the inside of the elastic ring are ridges placed crosswise along the length of the elastic ring. The height of the ridges preferably ranges from 0.02 mm to 40 mm, while the width of the ridges preferably ranges from 0.050 mm to 30 mm.

FIG. 12 Illustrates the usage of the elastic ring 1 in the Parijama Namasana Full Boat Pose. The elastic ring 1 is used by the user 14 to perform this pose by placing the elastic ring 1 at the soles of the feet and using both hands to grab hold of the elastic ring. The elasticity and grip of the elastic ring due to the ridges Component B (FIGS. 8-10) and Cross Ridge Component C and the material that is used to construct it enables the user to move into a “V” shaped position.

FIG. 13 Illustrates the usage of the elastic ring 1 in the Krounchasana Heron Pose. The elastic ring 1 is used by the user 15 to raise the leg that is not bent to perform this pose. Due to the tight hamstrings this present invention elastic ring 1 can assist the user to safely perform this pose without risk to injury due to the elastic characteristics of the ring, different ridges configuration and spherical patterns enables the ring to possess the ability to grip Component B (FIGS. 1-6), Component C (FIGS. 8-10, FIGS. 11A-11C) to grip the soles of the feet of the user.

FIG. 14 Illustrates the usage of the elastic ring 1 in the Mountain Pose Tadasana. The elastic ring is used by the user 16 to perform this pose by placing the elastic ring 1 in the space between the neck and shoulders and anchored on the feet located in same side of the shoulder. The tensile strength of the elastic ring 1, different ridge and spherical patterns (FIGS. 11A-11C) enable the practitioner to adjust the body of the user to achieve the proper alignment of the body and thereby attaining proper symmetry to perform the pose. The elastic nature of the ring creates tension to produce isometric force to enable the user to condition the body to recreate the pose eventually without the assistance of the elastic ring. The elastic characteristics and different ridge configurations and spherical patterns in Component B (FIGS. 8-10, FIGS. 1-6) and Component C (FIGS. 11A-11C) and the elastic material that is used to construct it enable the user 16 to feel the pose without the ring slipping.

FIG. 15 Illustrates the usage of the elastic ring 1 in the Uthitha Hastapadangustasana Extended hand to big toe pose. The elastic ring is used by the user 17 to perform this pose by placing the elastic ring 1 in the non standing leg and raising it to 90 degrees. The elasticity of the ring allows the user 17 to adjust how far the user’s 17 hands should go in order for the user 17 to raise the non standing leg. The ridges of Component B (FIGS. 8-10, FIG. 1-6) and Component C and the elastic material that is used to construct it enable the user 17 and the different configuration and spherical pattern (FIGS. 11A-11C) to safely execute the pose without injury and also achieve balance.

FIGS. 16-17 illustrate the usage of the elastic ring 1 for the purpose of alleviating low back pressure and pain. The user 18 is sitting on a chair. The pressure and weight of the user’s 18 head, shoulders, spine is all on the lower back. This causes a lot of pain in the long run. The user 18 uses the elastic ring 1 to alleviate the low back pain by looping one part of the elastic ring 1 to the lower back area 19 and the other part of the elastic ring 1 to the soles of the feet 20. The elasticity of the elastic ring creates tension and isometric forces to assist the
user 18 to push the lower back forward to strengthen the lower back. The continuous usage of this elastic ring 1 in this manner will eventually strengthens the lower back muscles and this alleviating back pain and pressure. There will be minimal slippage due to the ridges Component B (FIGS. 1-6) and Component C (FIGS. 8-10) and the different ridge configuration and spherical patterns (FIGS. 11A-11C).

**0050** FIGS. 18A-19D illustrate the usage of the elastic ring 1 as a mat holder for a mat 23. Ring 1 is initially wrapped around mat 23. The two loose portions of ring 1 are brought together. Then two VELCRO® straps 21 are used to loop around ring 1 to form loops 22. Loops 22 snug down the loose portions of ring 1 as shown by the dashed lines in FIG. 19B.

**0051** While the present invention has been described with reference to a particular preferred embodiment and the accompanying drawings, it will be understood by those skilled in the art that the invention is not limited to the preferred embodiment and that various modifications and the like could be made thereto without departing from the scope of the invention as defined in the following claims.

What is claimed is:

1. An elastic ring, comprising:
   - a ring consisting of an elastic material;
   - the ring having a circumference, wherein the circumference of the ring has an inner surface and an outer surface;
   - the ring including at least one alignment ridge and one tension ridge on the inner surface;
   - a length of the circumference of the ring being in a range from 12 inches to 88 inches;
   - a thickness of the ring being in a range from one-sixteenth of an inch to one inch;
   - and a width of the ring being in a range from one-half inch to four inches.

2. A ring according to claim 1, wherein the alignment ridges are orthogonal to the circumference; wherein the tension ridges are orthogonal to the alignment ridges; wherein a width of the tension ridges is in a range from 0.010 mm to 30 mm; and wherein a height of the tension ridges is in a range from 0.010 mm to 0.30 mm.

3. A ring according to claim 2, wherein the tension ridges have a rectangular cross-section.

4. A ring according to claim 3, wherein the tension ridges are on the inner surface of the ring.

5. A ring according to claim 3, wherein the tension ridges are on the outer surface of the ring.

6. A ring according to claim 2, wherein the tension ridges have a semicircular cross section.

7. A ring according to claim 6, wherein the tension ridges are on the inner surface of the ring.

8. A ring according to claim 6, wherein the tension ridges are on the outer surface of the ring.

9. A ring according to claim 1, wherein the alignment ridges include a combination of half-sphere ridges and rectangular ridges.

10. A method of manufacturing an elastic ring to be used in performing exercises, comprising the steps of:
    - forming a ring consisting of an elastic material; wherein the ring has a circumference, and wherein the circumference of the ring has an inner surface and an outer surface;
    - forming at least one alignment ridge and one tension ridge on the inner surface of the ring;
    - forming the ring such that a length of the circumference of the ring is in a range from 12 inches to 88 inches;
    - forming the ring such that a thickness of the ring is in a range from one-sixteenth of an inch to one inch; and
    - forming the ring such that a width of the ring is in a range from one-half inch to four inches.

11. A method according to claim 10, wherein the alignment ridges are formed orthogonal to the circumference; wherein the tension ridges are formed orthogonal to the alignment ridges; wherein a width of the tension ridges is in a range from 0.010 mm to 30 mm; and wherein a height of the tension ridges is in a range from 0.010 mm to 0.30 mm.

12. A method according to claim 11, wherein the tension ridges have a rectangular cross-section.

13. A method according to claim 11, wherein the tension ridges have a semicircular cross section.

14. A method according to claim 11, wherein the alignment ridges include a combination of half-sphere ridges and rectangular ridges.

15. A method of exercise for a practitioner, comprising the steps of:
    - providing an elastic ring having at least one alignment ridge and one tension ridge on an inner circumferential surface, a length of the inner circumferential surface of the ring being in a range from 12 inches to 88 inches, a thickness of the ring being in a range from one-sixteenth of an inch to one inch; and a width of the ring being in a range from one-half inch to four inches;
    - aligning the elastic ring in a desired position using the at least one alignment ridge such that the ring makes contact in at least predetermined locations on a body of the practitioner; and
    - stretching the elastic ring and adjusting the body of the practitioner such that proper alignment is achieved.

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