ABDOMINAL SIZE REDUCER ASSEMBLY

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ABSTRACT

An Abdominal Size Reducer Assembly consisting of a pelvic and lower back support having a generally depressed shape defined by the shape of pelvis and lower back and a gentle inclination so as to support the pelvis and lower back region of the individual and a head support to be placed under a user’s head, said head support being structured to support a user’s head in a comfortable configuration while a user is reclined on his back in horizontal position, said head support being defined by the shape of the human head, and means releasably connecting said pelvic and lower back support and said head support, said pelvic and lower back support and said head support being usable in concert and separately, said pelvic and lower back support and said head support being spaced apart from each other by said connecting means when said pelvic and lower back support and said head support are used in concert.

ILLUSTRATION OF A USER USING THE ASSEMBLY
FIG 2: THE HEAD SUPPORT
FIG 3: THE COMPLETE ABDOMINAL SIZE REDUCER ASSEMBLY
FIG 4: ILLUSTRATION OF A USER USING THE ASSEMBLY
FIG 5: ANOTHER ILLUSTRATION OF A USER USING THE ASSEMBLY
ABDOMINAL SIZE REDUCER ASSEMBLY

CROSS-REFERENCES TO RELATED APPLICATIONS

[0001] The present application claims priority to the Indian patent application and hereby incorporated for reference herein.


FIELD OF INVENTION

[0003] The present invention is directed generally to an Abdominal Size Reducer Assembly. More particularly, the present invention is directed to an Abdominal Size Reducer Assembly designed to enhance comfort to lower back and pelvis when a user is lying on her back during certain abdominal exercises. More specifically, the present invention is directed to an Abdominal Size Reducer Assembly which includes a lower back and pelvic support which is designed to underlie the hips and lower back area of the user and a head support to be placed under the head of the user. The Pelvic and lower back assembly and the head support assembly can be used independent to each other or combined into a single Abdominal Size Reducer Assembly.

BACKGROUND OF THE INVENTION

[0004] The use of specially designed pillows for supporting back while sleeping, sitting, making a pregnant woman more comfortable while lying on her side on a mattress, while feeding a baby is generally known.

[0005] Various abdominal exercises for fat reduction and measurement reduction of upper abdomen and lower abdomen are commonly practiced in all gymnastics. However, for a user who has an abdominal obesity and has never exercised in the past finds most of these exercises very strenuous and painful to perform as compared to other exercises such as free weights lifting, lat pulley, pec deck or leg exercises. The main reason is that in all the abovementioned exercises the user has a choice of how much weight to lift. Dumbbells or barbells are available right from 1 kg to 100 kg. On the other hand in abdominal exercises a user has to lift either the entire upper body or the lower body which is practically half the weight of the user’s body.

[0006] In most abdominal exercises either lower or upper half of the body is lifted while keeping the other half fixed on the ground. For example in the leg raising exercise in lie down position, the upper body above waistline is kept rigid in horizontal position and contraction of abdominal muscles lifts the lower body. Similarly in sit-ups exercise the lower body is immobile and the upper body is lifted during each repetition. When the user is lying down flat on the ground, the entire body of the user is in horizontal position. So the angle between the legs and head at the waistline is 180°. When the user raises the legs, the user reduces this angle to 90° (legs vertical) or even 45° (feet above head and thighs touching abdomen). It is important to note that while the person is in standing position and when the person bends, the angle thus formed at the waistline reduces from 180° to 90° and then to 45°. But the difference is that here, the bending and straightening of the upper body is caused due to the back muscles and not the abdominal muscles.

[0007] Electronic gadgets like a tummy trimmer, tummy vibrator are also used for abdominal size and fat reduction, but people have contradictory opinions about such therapies. Considering that physical exercise is still the best remedy for fat reduction, abdominal exercises can not be avoided. To reduce abdominal obesity, maximum exercise is necessary for abdominal muscles. Large number of repetitions of abdominal exercises are necessary to reduce abdominal obesity. However, not many repetitions of abdominal exercise can be done with ease due to the above stated problem.

[0008] If more and more repetitions of abdominal exercises could be done with ease and minimal stress or pressure is to be put on abdominal muscles, then there are two ways. First, to provide external support to reduce the weight of lower body or upper body that is to be lifted and second, (to make arrangement for the upper body to be rested in an angular position instead of in straight line) to change the positioning of upper body where lower body will be lifted during exercise. To give external support to the lower or upper body while it swings during exercise is not feasible. However, this invention supports and positions the upper body (from head to hips) comfortably in a particular angle so as to allow a user to easily swing legs and perform a large number of repetitions of the abdominal exercises with ease and without causing fatigue to the abdominal muscles.

PRIOR ART

[0009] U.S. Pat. No. 6,691,354 to Joseph A. Sheppard shows an inflatable therapeutic mattress for supporting a resting body in the prone position while maintaining proper spinal alignment, features an upper surface with a pair of opposing slanting surfaces originating from an elevated ridge, one slanting surface larger than the other. The larger slanting surface has a pillow to elevate the abdominal area of the resting body, and the smaller slanting surface has a pillow with a void to accommodate the face of the resting body.

[0010] U.S. Pat. No. 4,288,879 to J. E. Pate shows a wedge-shaped abdominal support pillow having a straight front edge adapted for insertion underneath the woman’s abdomen while she is lying on her side. The upper surface of the pillow has a concave spherical configuration that conforms to the shape of the woman’s abdomen, whereby the pillow provides abdominal support.

[0011] U.S. Pat. No. 4,397,052, to R. Lund shows an abdominal support pillow having approximately the same shape as the pillow in the Pate patent. The Lund patent additionally shows a back rest detachably attached to the abdominal support pillow, whereby the woman’s body has a cradle-type support between the abdominal support pillow and the back rest.

[0012] U.S. Pat. No. 4,736,477, to G. Moore, shows a flat slab-like pillow construction adapted for positioning between the knees of a user, while he or she is resting or sleeping on a mattress. The pillow has a V notch in one edge, and a series of slits in the other edge, whereby the pillow can be bent into a buckled configuration, e.g., when the user is lying on his or her side with the legs in a bent or curled configuration.

[0013] U.S. Pat. No. 4,584,730, to E. Rajan, shows a flat slab-like pillow having a number of protrusions that can be used as legs to space the slab-like pillow above the mattress surface. A user lying on his/her side can have one leg resting on the mattress (underneath the pillow) and the other leg resting on the upper surface of the pillow.
[0014] U.S. Pat. No. 5,117,522, to P. Everett, shows a pillow adapted for positionment between a user’s legs while the user is lying on his or her back, on a mattress. The pillow has an I-beam cross section to keep the pillow in place; also, flexible straps can be attached to the pillow for extension around the user’s legs, thereby further ensuring good retention of the pillow between the user’s legs. The pillow has a transverse triangular notch that forms a hinge connection between two sections of the pillow, whereby the user can bend or straiten his/her legs without changing the fit of the pillow between the legs.

[0015] The prior art provides pillow structures that offer at least partial cushioning and support for a user’s back, lower back, abdomen and legs while the user is lying on a mattress and not performing any exercise. However, the prior art does not provide for a pillow structure that offers lower back and pelvis or hips support for abdominal exercise. Moreover, the prior art concentrated only in the area of supporting back or abdomen or legs for either breast feeding or for medical support.

[0016] The problems of the spine and abdominal muscles coming under over-stress during every repetition, arising out of abdominal exercises that are currently practiced are rapidly becoming more acute. Various health experts, health researchers, health enthusiasts, health clubs and scientific and medical societies have acknowledged them in general. There has been little or no alternative to be able to easily do more and more repetitions of the abdominal exercises to reduce the abdominal size that would not overload abdominal muscles and/or spine. Thus there was an absolute need for some sort of support assembly which would be used by an individual while performing the abdominal exercises. The Abdominal Size Reducer Assembly, therefore, needs to be available without being too expensive and too limited to be practical for the above mentioned applications. The object of this invention is to provide for a specifically shaped cushioned structure that offers a complete supporting mechanism to support a user’s lower back, pelvis or hips and head while the user is performing abdominal exercises.

[0017] The objective of the present invention is to provide for a support while performing certain abdominal exercises.

[0018] Another objective of the present invention is to provide for a support while performing certain abdominal exercises which would not put over-stress on the lower back of the user thereby cutting the risk of back or lower back injuries.

[0019] Another objective of the present invention is to provide for a support while performing certain abdominal exercises which does not put stress on the lower back or abdominal muscles of the user thereby causing the user to perform numerous repetitions of certain abdominal exercise which the user would not have performed otherwise due to back pain.

BRIEF SUMMARY OF THE INVENTION

[0020] This invention relates to an Abdominal Size Reducer Assembly consisting of a pelvic and lower back support having a generally depressed shape to accommodate the pelvis and lower back of the user and to provide a gentle inclination so as to support the pelvic and lower back region of the user and a head support to be placed under a user’s head, said head support being structured to support a user’s head in a comfortable position while a user is reclined on its back in horizontal position. The said head support is structured and shaped to accommodate the human head. The said pelvic and lower back support and the said head support are connected by using flexible and adjustable fastening straps. These connecting means or fastening straps could be adjusted by the user to either reduce or increase the distance between the said pelvic and lower back support and the head support according to the height of the user so that the pelvic and lower back and head are appropriately rested on the support provided. However, the said pelvis and lower back support and said head support could be used either in concert or separately.
pelvic and lower back support is about 407 mm whereas the base width is about 534 mm (as shown in FIG. 1, legends A & B). The maximum height of the pelvic and lower back support is about 165 mm (as shown in FIG. 1, numeral A & D). Since the pelvis is placed in the depression as explained herein, the maximum depth of depression is about 19 mm (as shown in FIG. 1, numeral 7).

0031 The entire assembly of pelvic and lower back support is thus made up of layers of plywood, HDPE, sponge and foam leather material wherein: plywood is used for the base (as shown in FIG. 1, numeral 1) to make it stable and stiff, wherein the plywood thickness is of 13 mm. Three sheets of a high-density polyurethane foam (HDPE) of thickness each of 51 mm is used (as shown in FIG. 1, numeral 2, 3 & 4), wherein first HDPE sheet is pasted on the plywood and then the remaining 2 sheets of HDPE are pasted over each other so as to form a layer over the plywood base. On these HDPE sheets, a sponge of 26 mm thickness is pasted (as shown in FIG. 1, numeral 5). The entire layers are then covered with foam leather of thickness of 2 mm (as shown in FIG. 1, numeral 6). This gives us the entire assembly of the pelvic and lower back support, which has a total weight of about 1.80 kg. HDPE is preferred material which is adequately stiff but not as stiff as wood, plastics or metal. It is easy to cut, paste and to curve the necessary curves manually, as required. Most important characteristic of this material is that it can adjust to the minor curvature differences of each user’s resting portion of body. It can take the necessary shape depending upon the amount of pressure it receives. At the same time, after use in exercise, it gains its original shape. It is light in weight, hence easy to handle, transport and store. It is also waterproof hence sweat is not absorbed inside.

0032 The entire assembly of head support is also made up of layers made up of plywood, HDPE, sponge and foam leather. Plywood is used for the base and high-density polyurethane foam is pasted to build the structure. The base length of head support is about 254 mm (as shown in FIG. 2, numerals E & F) and the base width is of 534 mm (as shown in FIG. 2, numerals E & G). The maximum height of head support is 78 mm which is as shown in FIG. 2 where the line of E & F has perpendicular from H). The head support has a maximum depth of depression of 25 mm. Even head support is made up of layers of plywood, HDPE, Sponge and Foam Leather. The base of head support is made up of plywood with base plywood thickness of 13 mm (as shown in FIG. 2, numeral 8). 51 mm thick sheets pasted on one another are HDPE foam is pasted on the base plywood (as shown in FIG. 2, numeral 9 & 10). A sponge of 26 mm thickness is pasted on HDPE (as shown in FIG. 2, numeral 11) and finally foam leather thickness 2 mm is pasted on the sponge (as shown in FIG. 2, numeral 12). The entire assembly of head support has a total weight of 0.90 kg.

0034 Pelvic and lower back support and head support are interconnectable yet independent assemblies which are connected to each other with two adjustable nylon straps as shown in FIG. 3 numeral 13. The head support has two fixed buckles (as shown in FIG. 3, numeral 14) into which the Nylon straps are interlocked. The length between the two parts can be adjusted according to each user’s length between head and pelvis and lower back as shown in FIG. 3.

Benefits of the Proposed Assembly

0035 The Abdominal Size Reducer Assembly is first of its kind in the fitness industry. Usually straight and sloping abdominal boards are commonly used on which the user lies down up side down, locks the legs to a hook and lifts upper body against the gravity. However a user who has never exercised in life and whose abdominal muscles are not toned to pull almost half of body’s weight against the gravity can not do more than handful of repetitions. Moreover, with the Abdominal Size Reducer Assembly people of varying size and weight could do and have been doing hundreds of repetitions of abdominal exercise with ease and comfort. Considering the fact that obesity is mainly concentrated in the abdominal area, abdominal exercise has a great importance. Moreover, the total weight of the Abdominal Size Reducer Assembly is barely 2.7 kg so it enhances mobility of the assembly and individuals can carry it anywhere and use it without having to go to a gymnasium.

1. An Abdominal Size Reducer Assembly to aid the user reclining on his back to perform abdominal exercises, said Abdominal Size Reducer Assembly comprising:
   A pelvic and lower back support having a generally depressed shape suitable to hold the user’s pelvis and lower back and a gentle inclination so as to support the pelvis and lower back region of the individual,
   A head support having a generally depressed shape suitable to hold the user’s head
   Means for connecting said Pelvis and lower back support and said head support.

2. The Abdominal Size Reducer Assembly of claim 1, wherein the said pelvic and lower back support is structured and shaped to hold the user’s pelvis and lower back in a particular position and angle.

3. The Abdominal Size Reducer Assembly of claim 1, wherein the said head support is structured and shaped to support a user’s head in a comfortable position while a user is reclined on his back.

4. The Abdominal Size Reducer Assembly of claim 1, wherein the said pelvic and lower back support and said head support being usable in concert and separately.

5. The Abdominal Size Reducer Assembly of claim 1, wherein the said pelvic and lower back support and said head support are spaced apart from each other by said connecting means when the said pelvis and lower back support and said head support are used in concert.

6. The Abdominal Size Reducer Assembly of claim 1, wherein the said connecting means provides adjustable positioning of the said pelvis and lower back support and said head support as per the height requirements of the user.

7. The Abdominal Size Reducer Assembly of claim 1, wherein said pelvic and lower back support is made up of layers of plywood, a high-density polyurethane foam (HDPE), sponge and foam leather.

8. The Abdominal Size Reducer Assembly of claim 1, wherein said head support is also made up of layers of plywood, a high-density polyurethane foam (HDPE), sponge and foam leather.

9. The Abdominal Size Reducer Assembly of claim 1, wherein said connecting means includes a flexible nylon straps extending from said pelvis and lower back support, and a buckle means fixed at the base of the said head support.

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