A hoop for exercise, entertainment and rehabilitation is preferably comprised of closed cell polyethylene having a density in the range of 2.0-2.6 lbs./ft³ (32 kg-41.6 kg). Features providing visual, auditory, olfactory and/or tactile stimuli may be attached to the hoop. The hoop may also comprise elements such as a sound chip or an attached LED.
EXERCISE, ENTERTAINMENT AND REHABILITATION LOOPS

RELATED APPLICATION DATA

This application claims the benefit of prior provisional application U.S. Ser. No. 61/079,147 filed Jul. 9, 2008.

BACKGROUND OF THE INVENTION

The present invention relates to an apparatus that is in the shape of a circle or "hoop" that may be used by an individual or group for exercise, entertainment and rehabilitation. The hoop of the invention may be used either singly or in combination with other hoops such as a pair of hoops, one used in each hand to aid balance, for example.

Hoops for entertainment and fitness purposes have been known for many years, the most famous of which is the HULA HOOP™ which consists of a hard plastic tubing shaped into a circle and sized to allow a person to place the hoop around their waist and move it in a circular spinning motion. One drawback of this type of hoop is that it is made of a hard plastic which may hurt the user of other people in close vicinity should they be struck with it. It is also too large in diameter so as to be useful for anything other than in its intended use of placing around the waist for exercise and play.

Other types of hoops have been proposed which are formed of a softer foam yet these have been found to be formed of a foam material that is prone to breaking off in pieces upon application of a tearing force. This may present a choking hazard to small children and those with disabilities who may innocently try to rip or bite the foam hoop.

There thus remains a need for a soft hoop which is soft so as to prevent injury yet resistant to breaking off in pieces under a tearing force. There is also a need for a hoop that may include auxiliary features to provide entertainment and beneficial stimulation to people of various demographics including children, the elderly and those with disabilities, for example.

SUMMARY OF THE INVENTION

The present invention addresses the above needs by providing a hoop made of foam having a type and density that is soft yet is resistant to a tearing force. In a preferred embodiment, the hoop is a closed cell polyethylene having a density in the range of 2.0-2.6 lbs./ft³ (32 kg.-41.6 kg). The hoop is made by taking a length of the cylindrical foam material and forming it into a closed circle by joining the opposite ends thereof together by suitable means (e.g., heat welding) to achieve the desired total diameter of the hoop. The hoop foam material in cross section is selected to have the desired diameters which may be about 2 inches, for example.

The hoops may be optionally be covered in a fabric material such as a stretch material if desired. The covering may be removable for washing or switching between different styles of fabric.

The hoop may come in a variety of different sizes, colors and styles.

The entire hoop or only selected parts of a hoop may include one or a combination of auxiliary features such as stimuli targeted to aid groups of various people including children, the elderly and those with disabilities, for example, such as auditory (e.g., bells or other tones), visual (e.g., lights, patterned or glow in the dark), olfactory (e.g., scents) and tactile stimuli, for example.

Other material such as instructional videos, books, etc. may be sold with the hoop(s) if desired. The hoops may be used singly or in combination with other hoops of the same or different sizes, as desired. Besides being used by an individual, the hoops may also be used in group fitness, gymnastics, physical education, exercises, etc. with the people in the group using the hoops either individually or interactively.

The following is a list (representative and not exhaustive) of possible uses for the hoop(s) of the present invention:

1. Senior citizens with YMCA™ Silver Sneakers™ programs: Exercise routines, flexibility, aerobic, cardiovascular, fun, fitness, etc.
2. Special needs kids: Exercise routines, games, activities, fun, rehabilitation.
3. Cheerleading: New routines using hoops instead of pom pom’s, or with the pom pom’s. Exercise for cheerleaders, etc.
4. Gymnastics: Pre-school artistic gymnastics ages 4-6.
5. Gymnastics: Recreational Pre-school thru adult.
6. Just kids: Games, activities for kids using hoops.
7. Competitive All ages.
8. Street kids, hip hop, etc. Games, activities, fun, fitness, exercise routines.
9. Dancers, fun, fitness, dance routines using hoops, etc.
10. Street kids, any kids, just for fun activities, games, exercise, etc.
11. Water aerobics using hoops in the pool (not a toy, adult supervision required), games and activities as water sport.
12. Physical education at the schools: Fitness, fun, games, activities, exercise, etc.
13. Rehabilitation: Adults, special needs, injured, veterans, etc.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a front view of a hoop according to an embodiment of the invention;
FIG. 2 is a bottom view thereof;
FIG. 3 is a side view, left to right thereof;
FIG. 4 is a top view thereof;
FIG. 5 is a side view, right to left thereof;
FIG. 6 is a rear view thereof and;
FIG. 7 is a front view of another embodiment of the hoop of the invention.

DETAILED DESCRIPTION

Referring to the drawings, there is seen in the various figures a hoop made in accordance with one embodiment of the invention and is designated generally by the reference numeral 10. As seen in FIG. 6, hoop 10 is made of a foam material 12 having a type and density that is soft yet is resistant to a tearing force. In a preferred embodiment, the foam is a closed cell polyethylene having a density in the range of 2.0-2.6 lbs./ft³ (32 kg.-41.6 kg). The hoop is made by taking a length of the cylindrical foam material and forming it into a closed circle by joining the opposite ends thereof 12a, 12b thereof together by suitable means (e.g., heat welding) to achieve the desired total diameter D, of the hoop (e.g., about 45" to 101").
The hoop foam material in cross section is selected to have the desired diameter \( D \), which may be about 2 inches, for example.

[0033] The hoop of the invention may be used either singly or in combination with other hoops such as a pair of hoops, one used in each hand to aid balance, for example.

[0034] The hoops may be optionally be covered in a fabric material 14, such as a stretch leotard material, if desired, which may be matched to an outfit of the user. The covering material seam 14x may be joined together with a hook and hoop fastener (e.g., VELCROT™) so as to be removable for washing or switching between different styles of fabric.

[0035] As seen in FIG. 7, a variety of auxiliary features may be provided on hoop 10. Features which function as stimuli for the user may be in the form of a visual stimulation (e.g., such as one or more solid or flashing LEDs 16 of same or different colors and/or glow-in-the-dark or color sections such as at section 18); auditory stimulation (e.g., such as a sound chip 20 that activates upon sensing movement of hoop 10); olfactory stimulation (e.g., such as a fragrance 22 applied to hoop 10); and/or tactile stimulation (e.g., such as a fabric 14 having a roughened or furry texture). A computer chip 24 may be used to provide and/or control these and other functionality and stimuli as desired (e.g., controlling a timed, orchestrated arrangement of blinking LEDs, sounds and/or fragrances).

What is claimed is:
1. A hoop for exercise, entertainment and rehabilitation comprised of closed cell polyethylene having a density in the range of 2.0-2.6 lbs./ft\(^3\) (32 kg.-41.6 kg).
2. The hoop of claim 1 and further comprising a removable fabric covering.
3. The hoop of claim 1 and further comprising a sound chip attached to said hoop, said sound chip operable to emit a sound in response to movement of said hoop.
4. The hoop of claim 1 and further comprising a fragrance applied to said hoop.
5. The hoop of claim 1 and further comprising one or more LEDs attached to said hoop.
6. The hoop of claim 1 and further comprising a sound chip and LED attached to said hoop.
7. The hoop of claim 6 and further comprising a computer chip attached to said hoop, said computer chip operable to control said LED and sound chip.
8. The hoop of claim 1 and further comprising a fragrance applied to said hoop, said computer chip operable to control emission of said fragrance.
9. An exercise, entertainment and rehabilitation set comprising a pair of hoops comprised of closed cell polyethylene having a density in the range of 2.0-2.6 lbs./ft\(^3\) (32 kg.-41.6 kg).

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