A proprioceptor stimulation material includes a plurality of pyramid-shaped nodes that may be arranged to stimulate small nerve proprioceptors in a user. The plurality of nodes may be arranged in diamond-shaped patterns and may stimulate small nerves in a user. The material may provide a pattern and/or texture that may stabilize a user’s balance. The material may also provide friction when pressure may be applied from the user on the plurality of pyramid-shaped nodes. The material and/or the plurality of pyramid-shaped nodes may provide a hardness that may activate a user’s nerves. Further, the material may reflect and absorb vibration external to the material.
PROPRIOCEPTOR STIMULATION MATERIAL

TECHNICAL FIELD

[0001] The disclosure relates generally to materials that may provide stimulation to proprioceptors. In particular, the disclosure relates to a material that may stimulate small nerve proprioceptors of a user.

BACKGROUND

[0002] Research studies demonstrate that conventional materials utilized in surface science and barefoot training deactivate and block proprioceptors in user feet and hands. Proprioceptors can be located within joint capsules and can provide the nervous system with information regarding joint position. The information provided by these proprioceptors can be used to control movement of the body. Training on conventional surfaces can influence proprioceptive feedback and the manner in which a user’s feet activate and communicate with the nervous system. Users who activate their nervous system and train on conventional surfaces can immediately deactivate the nervous system, which can prohibit stability and balance.

[0003] Surface science studies show that conventional and known training surfaces fail to specifically target small nerve proprioceptors on the bottom of a user’s feet. Training on softer surfaces that include cushioning can block or dampen mechanisms provided in skin along on the bottom of the feet through the contracture of toes. Additionally, surface science studies show that the surface in which a user trains influences how the user’s feet activate and communicate with the user’s nervous system, particularly during barefoot training and during exercises in which a user’s focus is directed toward movements that require rapid stabilization. Unstable training surfaces can provide slow response times and can be directed toward large nerve proprioceptive training instead of small nerve proprioceptive training.

SUMMARY

[0004] Embodiments of the present disclosure may provide a proprioceptor stimulation material including a plurality of pyramid-shaped nodes integrated along a top surface of the material. The plurality of pyramid-shaped nodes may target and stimulate small nerve proprioceptors of a user when the user applies pressure to the top surface of the material. Embodiments of the present disclosure may also provide an insulating layer that may provide adjacent the top surface. The insulating layer may be arranged to reflect and absorb external vibration. Embodiments of the present disclosure may provide a backing layer that may be provided adjacent the insulating layer. The backing layer may be arranged to prevent the material from sliding along a surface in which the material may be placed and utilized. The material may include the plurality of nodes that may be provided to stretch a user’s skin when the user applies pressure to the top surface of the material and may stimulate proprioceptors in the user’s feet and hands. The plurality of nodes may create resistance against a user’s skin when the user applies pressure to the top surface of the material. The backing layer may provide a backing length that may be longer than a top length of the material and may extend beyond opposite sides of the top surface. The material may include a material hardness of each node of the plurality of nodes that may be provided to reverberate a frequency of vibration. The material hardness of each node of the plurality of nodes may be approximately 30 Shore A. The material may activate postural muscles of the user and may reduce lateral sway of the user’s stance. The material may be in the form of a yoga mat. The material may be in the form of flooring.

[0005] Other embodiments of the present disclosure may provide a yoga mat that may include a proprioceptor stimulation material that may be integrated along a top surface of the yoga mat. The yoga mat may further include a plurality of pyramid-shaped nodes that may be integrated with the proprioceptor stimulation material along the top surface of the yoga mat. The plurality of pyramid-shaped nodes may be provided to stimulate small nerve proprioceptors of a user when the user applies pressure to the top surface of the yoga mat. The yoga mat may include an insulating layer that may be provided adjacent the top surface. The insulating layer may be arranged to reflect and absorb external vibration. A backing layer may be provided adjacent the insulating layer. The backing layer may be arranged to prevent the yoga mat from sliding along a surface in which the yoga mat may be placed and utilized. The plurality of nodes may stretch a user’s skin when the user applies pressure to the top surface of the yoga mat. The plurality of nodes may create resistance against a user’s skin when the user applies pressure to the top surface of the yoga mat. The backing layer may extend beyond opposite sides of the top surface. The yoga mat may include a material hardness of each node of the plurality of nodes that may be provided to reverberate a frequency of vibration. The material hardness of each node of the plurality of nodes may be approximately 30 Shore A. The material may activate postural muscles of the user and may reduce lateral sway of the user’s stance.

[0006] Further embodiments of the present disclosure may provide a flooring material that may include a plurality of pyramid-shaped nodes that may be integrated with the proprioceptor stimulation material along the top surface of the flooring material. The plurality of pyramid-shaped nodes may be provided to stimulate small nerve proprioceptors of a user when the user applies pressure to the top surface of the flooring material. The flooring material may include an insulating layer that may be provided adjacent the top surface. The insulating layer may be arranged to reflect and absorb external vibration. A backing layer may be provided adjacent the insulating layer. The backing layer may be arranged to prevent the flooring material from sliding along a surface in which the flooring material is placed and utilized. The flooring material may provide a thickness of approximately 3 millimeters or 5 millimeters. The flooring material may provide a vibration between approximately 5 and 15 hertz (Hz) that may facilitate nerve stimulation.

[0007] Additional embodiments of the present disclosure may provide an insole material that may include a plurality of pyramid-shaped nodes that may be provided to stimulate small nerve proprioceptors of a user when the user applies pressure on the plurality of nodes. The material hardness of each node of the plurality of pyramid-shaped nodes may be between approximately 20 to 50 Shore A. The material may activate postural muscles of the user and may reduce lateral
sway of the user’s stance. Further, a thickness of the material may be approximately 3 millimeters.

[0008] Other technical features may be readily apparent to one skilled in the art from the following drawings, descriptions and claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] For a more complete understanding of this disclosure and its features, reference is now made to the following description, taken in conjunction with the accompanying drawings, in which:

[0010] FIG. 1 depicts a top view of a proprioceptor stimulation material according to an embodiment of the present disclosure;

[0011] FIG. 2 depicts a side view of the proprioceptor stimulation material according to an embodiment of the present disclosure;

[0012] FIG. 3 depicts small nerve proprioceptors in hands according to an embodiment of the present disclosure;

[0013] FIG. 4 depicts small nerve proprioceptors in feet according to an embodiment of the present disclosure;

[0014] FIG. 5A depicts a top view of a pyramid-shaped node according to an embodiment of the present disclosure;

[0015] FIG. 5B depicts a side view of a pyramid-shaped node according to an embodiment of the present disclosure;

[0016] FIG. 6 depicts a stabilized user stance of a material in-use and secured to a supporting surface according to an embodiment of the present disclosure;

[0017] FIG. 7 depicts a yoga mat provided to stimulate proprioceptors according to an embodiment of the present disclosure;

[0018] FIG. 8 depicts flooring provided to stimulate proprioceptors according to an embodiment of the present disclosure; and

[0019] FIG. 9 depicts a top view of an insole provided to stimulate proprioceptors according to an embodiment of the present disclosure.

DETAILED DESCRIPTION

[0020] The present disclosure generally provides a proprioceptor stimulation material that may target and activate small nerve proprioceptors on the bottom of feet and on the palms of hands. The proprioceptor stimulation material may provide a plurality of pyramid-shaped nodes that may be integrated along a top surface of the material and in which the plurality of nodes may be arranged in diamond-shaped patterns.

[0021] As shown in FIG. 1, according to an embodiment of the present disclosure, proprioceptor stimulation material (hereinafter, “material”) 100 may provide a plurality of nodes 110 that may be integrated along top surface 130 of material 100. Each node 110 may provide pyramid-shape 500A and 500B (FIGS. 5A and 5B) and may be made of a material including, but not limited to, a thermoplastic elastomer (TPE). Each node 110 may provide length and width 540 that may be approximately 2.5 millimeters (mm) and height 530 that may be approximately 1 mm. It should be appreciated that length and width 540 and height 530 may have any distance without departing from the present disclosure. Material 100 may provide a plurality of nodes 110 arranged along top surface 130 in diamond-shaped patterns 120. It should be appreciated that each of the plurality of nodes 110 may provide a pattern and/or a texture that may be customized to enhance stretching of a user’s skin when the user applies pressure to node 110. It should further be appreciated that an arrangement of the plurality of nodes 110 may provide a pattern that may be customized to enhance stretching of a user’s skin when the user applies pressure to material 100.

[0022] Material 100 and/or the plurality of nodes 110 may provide a customized resin that may have a high coefficient of friction when pressure is applied by the user on material 100 and/or on the plurality of nodes 110, such as pressure from the user’s feet or hands. It should be appreciated that friction between the material and the user may stretch the user’s skin and may enhance nerve stimulation that may be precipitated by diamond-shaped pattern 120 or another pattern of the plurality of nodes 110.

[0023] Material 100 and/or the plurality of nodes 110 may provide a hardness that may maximize stimulation from the texture of material 100 and/or the plurality of nodes 110 on proprioceptors. The hardness of material 100 and/or the plurality of nodes 110 may be approximately 30 Shore A and/or a value on another Shore hardness scale that may be equivalent to approximately 30 A. For example, the hardness of material 100 and/or the plurality of nodes 110 may be approximately 17 Shore B, 9 Shore C, and/or 6 Shore D without departing from the present disclosure. It should be appreciated that the hardness may be or less than approximately 30 Shore A or an equivalent value without departing from the present disclosure. It should be appreciated that the hardness may be approximately 20 to 50 Shore A or an equivalent range without departing from the present disclosure.

[0024] It should be appreciated that material 100 may improve balance of the user and may provide proprioceptive feedback in the user. It should further be appreciated that proprioceptive feedback may stimulate small nerve proprioceptors that may be located in plantar foot skin, palmar hand skin, and within user fascia. It should also be appreciated that proprioceptors can be located within joint capsules, skin, tendons, and ligaments and can provide the nervous system with information regarding joint position shifts in center of gravity and impact forces. It should be appreciated that skin on the bottom of the feet may contain thousands of small nerve proprioceptors, and material 100 may stimulate thousands of small nerve proprioceptors. It should also be appreciated that dense small proprioceptive tissue may be found in user fascia, and material 100 may stimulate dense small proprioceptive tissue in user fascia.

[0025] It should be appreciated that small nerve proprioceptors may be sensitive to different stimuli including, but not limited to, texture, vibration, skin stretching, deep pressure, and light touching. It should be appreciated that proprioceptive feedback from nerve endings in a user’s hands, feet, and/or other areas of the body may stimulate four major types of intrasensory mechanoreceptors including golgi, pacini, ruffini, and interstitial, and material 100 may stimulate golgi, pacini, ruffini, and interstitial intrasensory mechanoreceptors.

[0026] It should be appreciated that material 100 may be beneficial in barefoot training and/or where user movement may require rapid stabilization. It should be appreciated that a different texture and/or shape of plurality of nodes 110 may throw off a user’s balance or cause the user to become less stable.
It should also be appreciated that material 100 may be provided in any form and may have any shape, size, and weight without departing from the present disclosure. It should also be appreciated that the plurality of nodes 110 may have any shape, size, and weight without departing from the present disclosure.

Back ing layer 220 may provide backside 140 which may include a texture and/or pattern that may prevent material 100 from sliding along surface 610 (FIG. 6) in which material may be placed. Backside 140 may have a texture and/or pattern that may provide a zigzag shape without departing from the present disclosure. Backing layer 220 may provide backing length 150 that may be longer than top length 160 of top surface 130. Backing layer 220 may extend beyond opposite sides 132 of top surface 130. It should be appreciated that users may not utilize backing layer 220 extending beyond opposite sides 132 of top surface 130 which may facilitate maintaining a position of material 100 against ground or surface 610 (FIG. 6) when material 100 is in use.

As shown in FIG. 2, according to an embodiment of the present disclosure, side view 200 of material 100 may provide a stacked arrangement of the plurality of nodes 110, insulating layer 210, and backing layer 220. Insulating layer 210 may be provided adjacent top surface 130 (FIG. 1) between the plurality of nodes 110 and backing layer 220. Insulating layer 210 may be arranged to reflect and absorb vibration external to material 100. Insulating layer 210 may also maximize exposure of material 100 to beneficial vibration.

It should be appreciated that a degree of vibration of material 100 may be dependent upon the hardness or a stiffness of each node 110 and material 100. It should further be appreciated that vibration that between approximately 5 and 15 hertz (Hz) may facilitate nerve stimulation. The hardness of material 100 and/or the plurality of nodes 110 may be approximately 30 Shore A. It should be appreciated that the material hardness may be more or less than approximately 30 Shore A without departing from the present disclosure. It should further be appreciated that the material hardness may reverberate a frequency of vibration. Backing layer 220 may be provided adjacent insulating layer 210 and may provide traction or a non-slip mechanism on backside 140 that may prevent material 100 from sliding along surface 610 (FIG. 6) in which material 100 may be placed and utilized. It should be appreciated that the stacked arrangement, as shown in side view 200, may provide a stable surface that may enable optimal proprioceptive training and fast proprioceptive responses of a user’s small nerves. It should be appreciated that a rate at which nerves and/or proprioceptors are stimulated may be based on corrections in shifts in center of gravity. For example, a faster rate or response time in which nerves and/or proprioceptors may be stimulated may be reflected by a decrease in medial and/or lateral sway of a user.

According to an embodiment of the present disclosure, FIG. 3 depicts how a user’s hands 300 may contain small nerve proprioceptors 310 that may be provided on palms 320 of hands 300. It should be appreciated that palms 320 of hands 300 may be rich in small nerve proprioceptors 310. Material 100 may specifically target small nerve proprioceptors 310 on palms 320 of hands 300.

According to an embodiment of the present disclosure, FIG. 4 depicts how a user’s feet 400 may contain small nerve proprioceptors 310 that may be provided on soles 420 of feet 400. It should be appreciated that soles 420 of feet 400 may be rich in small nerve proprioceptors 310. Material 100 may specifically target small nerve proprioceptors 310 on soles 420 of feet 400 (FIG. 4).

As shown in FIG. 5A, according to an embodiment of the present disclosure, top view 500A of each node 110 of a plurality of nodes may provide a pyramid shape. Each side 510 of node 110 may be angled or slope downward to provide proprioceptor stimulation and stretch the skin of the user.

As shown in FIG. 5B, according to an embodiment of the present disclosure, side view 500B of each node 110 of a plurality of nodes may provide a pyramid shape. Each side 510 of node 110 may be angled or slope downward to provide proprioceptor stimulation and stretch the skin of the user. Rounded top 520 of each node 110 may provide a shape that may not injure or irritate a user’s hand or foot upon contact.

As shown in FIG. 6, according to an embodiment of the present disclosure, material 100 may be in-use in which a user may maintain a stable stance. When material 100 is in-use, a user’s palms 320 and soles 420 may contact a plurality of nodes 110 in which friction may stretch the user’s skin. Material 100 may provide a surface in which the user may activate postural muscles and reduces lateral sway. Material 100 may contact ground or surface 610 and may remain in place while in-use. It should be appreciated that material 100 may provide a surface for a user to maintain a stable stance, position, or pose.

As shown in FIG. 7, according to an embodiment of the present disclosure, material 100 (FIG. 1 and FIG. 6) may be provided in the form of yoga mat 700. It should be appreciated that yoga mat 700 may provide increased stability and neuro-feedback during exercises, such as during yoga poses. Yoga mat 700 may include securing mechanism 710 that may assist when placing yoga mat 700 in storage, rolled, or non-use position 720.

Yoga mat 700 may provide a plurality of nodes 110 arranged along top surface 130 (FIG. 1) in diamond-shaped patterns 120 (FIG. 1). Each node 110 may provide pyramid-shaped 500A and 500B (FIGS. 5A and 5B) and may be made of a material including, but not limited to, a thermoplastic elastomer (TPE). It should be appreciated that each of the plurality of nodes 110 may provide a pattern and/or a texture that may be customized to enhance stretching of a user’s skin when the user applies pressure to node 110. It should further be appreciated that an arrangement of plurality of nodes 110 may provide a pattern that may be customized to enhance stretching of a user’s skin when the user applies pressure to yoga mat 700.

Yoga mat 700 and/or the plurality of nodes 110 may provide a customized resin that may have a high coefficient of friction when pressure is applied by the user on yoga mat 700 and/or on the plurality of nodes 110, such as pressure from a user’s feet or hands. It should be appreciated that friction between the material and the user may stretch a user’s skin and may enhance nerve stimulation that may be precipitated by diamond-shaped pattern 120 (FIG. 1) or another pattern of the plurality of nodes 110. Yoga mat 700 and/or the plurality of nodes 110 may provide a hardness that may maximize stimulation from the texture of yoga mat 700 and/or the plurality of nodes 110 on proprioceptors. The hardness of material and/or plurality of nodes 110 may be
approximately 30 Shore A. It should be appreciated that the hardness may be more or less than approximately 30 Shore A without departing from the present disclosure. It should be appreciated that yoga mat 700 may improve balance of the user and may provide proprioceptive feedback in the user.

[0039] As shown in FIG. 8, according to an embodiment of the present disclosure, material 100 (FIG. 1 and FIG. 6) may be provided in the form of flooring 800. It should be appreciated that flooring 800 may provide a stacked arrangement of a plurality of nodes 110, insulating layer 210, and backing layer 220. Insulating layer 210 may be provided adjacent to surface 130 between the plurality of nodes 110 and backing layer 220. Insulating layer 210 may be arranged to reflect and absorb vibration external to material 100. Insulating layer 210 may also maximize exposure of flooring 800 to beneficial vibration.

[0040] It should be appreciated that a degree of vibration of flooring 800 may be dependent upon the hardness or a stiffness of each node 110 and flooring 800. It should further be appreciated that vibration between approximately 5 and 15 hertz (Hz) may facilitate nerve stimulation. The hardness of material and/or the plurality of nodes 110 may be approximately 30 Shore A. It should be appreciated that the material hardness may be more or less than approximately 30 Shore A without departing from the present disclosure. It should further be appreciated that the material hardness may reverberate a frequency of vibration.

[0041] It should be appreciated that flooring 800 provide a stable surface that may enable optimal proprioceptive training and fast proprioceptive responses of a user’s small nerve proprioceptors. It should be appreciated that flooring 800 may be made of a material including, but not limited to, a thermoplastic elastomer (TPE). It should be appreciated that flooring 800 may provide thickness 810 of approximately 3 millimeters without departing from the present disclosure. It should be appreciated that flooring 800 may provide thickness 810 of approximately 5 millimeters without departing from the present disclosure. It should be appreciated that changes in the thickness of flooring 800 may significantly change the feel of flooring 800 against a user’s skin. It should further be appreciated that changing the order in which layers of flooring 800 are stacked may significantly change the feel of flooring 800 against a user’s skin.

[0042] As shown in FIG. 9, according to an embodiment of the present disclosure, material 100 (FIG. 1 and FIG. 6) may be provided in the form of insole 900. Inssole 900 may be provided inside of footwear and may stimulate small nerve proprioceptors of a user when the user applies pressure to insole 900. It should be appreciated that inssole 900 may provide a thickness that may be approximately 3 mm and a hardness that may be approximately 20 to 50 Shore A or an equivalent range without departing from the present disclosure. It should be appreciated that the hardness may be less than approximately 20 Shore A or more than approximately 50 Shore A without departing from the present disclosure.

[0043] In an embodiment of the present disclosure, material 100 may provide improved physical training compared to conventional training materials. Material 100 and/or a plurality of nodes 110 may provide fast proprioceptive response times for small nerve stimulation, especially when compared to unstable surfaces that may provide slow response times and large nerve proprioceptive training. Material 100 and/or the plurality of nodes 110 may improve quiet stance of a user. Material 100 and/or the plurality of nodes 110 may help a user to maintain an upright stance by reducing medial lateral sway, activating postural muscles, and dynamically controlling impact forces. Material 100 and/or plurality of nodes 110 may create a resistance that may increase strength of a user.

[0044] In an embodiment of the present disclosure, material 100 may provide dimensions that may be approximately 72 inches by 24 inches by 5 millimeters. Material 100 may provide a weight of approximately 4 pounds, but may weigh more or less than approximately 4 pounds without departing from the present disclosure. Material 100 and/or the plurality of nodes 110 may activate and keep proprioceptors from being blocked. Material 100 and/or the plurality of nodes 110 may enhance user grip with material 100 and/or the plurality of nodes 110 upon contact. Material 100 may provide a weight of approximately 4 pounds without departing from the present disclosure. Material 100 may provide a shape, weight, and properties that may provide mobility and ease of traveling with material 100. Material 100 may provide a simulated barefoot training surface in which proprioceptor stimulation and/or biofeedback may be beneficial during exercise and rehabilitation. Material 100 may be provided in a plurality of forms including, but not limited to, flooring tile and yoga mats.

[0045] It should be appreciated that material 100 may be provided in different shapes without departing from the present disclosure. It also should be appreciated that material 100 may be provided in items including, but not limited to, clinical flooring, water sports, and paddleboards. It should be appreciated that material 100 may be provided in items used for water sports and may enhance skin stretching and gripping ability of the user against a wet surface.

[0046] It may be advantageous to set forth definitions of certain words and phrases used in this patent document. For the purposes of the discussion herein, the terms “electronic meter reading equipment,” “utility equipment,” and “transmitter means” encompass any type of meter reading device including, but not limited to, remote devices, stationary devices, and handheld devices. The terms “include” and “comprise,” as well as derivatives thereof, mean inclusion without limitation. The term “or” is inclusive, meaning and/or. The phrases “associated with” and “associated therewith,” as well as derivatives thereof, mean to include, be included within, interconnect with, contain, be contained within, connect to or with, couple to or with, be communicable with, cooperate with, interleave, juxtapose, be proximate to, be bound to or with, have, have a property of, or the like.

[0047] While this disclosure has described certain embodiments and generally associated methods, alterations and permutations of these embodiments and methods will be apparent to those skilled in the art. Accordingly, the above description of example embodiments does not define or constrain this disclosure. Other changes, substitutions, and alterations are also possible without departing from the spirit and scope of this disclosure, as defined by the following claims.
nodes provided to target and stimulate small nerve proprioceptors of a user when the user applies pressure to the top surface of the material.

2. The material of claim 1, further comprising: an insulating layer provided adjacent the top surface, the insulating layer arranged to reflect and absorb external vibration; and

a backing layer provided adjacent the insulating layer, the backing layer arranged to prevent the material from sliding along a surface in which the material is placed and utilized.

3. The material of claim 1, wherein the plurality of pyramid-shaped nodes stretch the user’s skin when the user applies pressure to the top surface of the material, and wherein proprioceptors in the user’s feet and hands are stimulated.

4. The material of claim 1, wherein the plurality of pyramid-shaped nodes create resistance against the user’s skin when the user applies pressure to the top surface of the material.

5. The material of claim 1, wherein the backing layer provides a backing length that is longer than a top length of the material, and wherein the backing layer extends beyond opposite sides of the top surface.

6. The material of claim 1, further comprising: a material hardness of each node of the plurality of pyramid-shaped nodes provided to reverberate a frequency of vibration.

7. The material of claim 6, wherein the material hardness of each node of the plurality of pyramid-shaped nodes is approximately 30 Shore A.

8. The material of claim 1, wherein the material activates postural muscles of the user and reduces lateral sway of the user’s stance.

9. The material of claim 1, wherein the material is in the form of a yoga mat.

10. The material of claim 1, wherein the material is in the form of an insole material.

11. A yoga mat, comprising:

a proprioceptor stimulation material integrated along a top surface of the yoga mat;

a plurality of pyramid-shaped nodes integrated with the proprioceptor stimulation material along the top surface of the yoga mat, the plurality of pyramid-shaped nodes provided to stimulate small nerve proprioceptors of a user when the user applies pressure to the top surface of the yoga mat;

an insulating layer provided adjacent the top surface, the insulating layer arranged to reflect and absorb external vibration; and

a backing layer provided adjacent the insulating layer, the backing layer arranged to prevent the yoga mat from sliding along a surface in which the yoga mat is placed and utilized.

12. The yoga mat of claim 11, wherein the plurality of pyramid-shaped nodes stretch the user’s skin when the user applies pressure to the top surface of the yoga mat.

13. The yoga mat of claim 11, wherein the plurality of pyramid-shaped nodes create resistance against the user’s skin when the user applies pressure to the top surface of the yoga mat.

14. The yoga mat of claim 11, wherein the backing layer provides a backing length that is longer than a top length of the yoga mat, and wherein the backing layer extends beyond opposite sides of the top surface.

15. The yoga mat of claim 1 further comprising: a material hardness of each node of the plurality of pyramid-shaped nodes provided to reverberate a frequency of vibration.

16. (canceled)

17. The yoga mat of claim 11, wherein the material activates postural muscles of the user and reduces lateral sway of the user’s stance.

18. A flooring material, comprising:

a plurality of pyramid-shaped nodes integrated with a proprioceptor stimulation material along the top surface of the flooring material, the plurality of pyramid-shaped nodes provided to stimulate small nerve proprioceptors of a user when the user applies pressure to the top surface of the flooring material;

an insulating layer provided adjacent the top surface, the insulating layer arranged to reflect and absorb external vibration; and

a backing layer provided adjacent the insulating layer, the backing layer arranged to prevent the flooring material from sliding along a surface in which the flooring material is placed and utilized.

19. (canceled)

20. An insole, comprising:

an insole material, comprising:

a plurality of nodes provided to stimulate small nerve proprioceptors of a user when the user applies pressure on the plurality of nodes, wherein the insole material activates postural muscles of the user and reduces lateral sway of the user’s stance.

21. The insole of claim 20, wherein each node of the plurality of nodes provides a pyramid-shape that stretches the user’s skin when the user applies pressure to the insole.

22. The insole of claim 20, further comprising: a material hardness of each node of the plurality of nodes provided to reverberate a frequency of vibration.