Claims

What is claimed is:

1. A device suitable for treatment of a subject afflicted with scoliosis, said device comprising a foot securing mean, a support member operably attached to said securing mean, and a relocatable anterior protuberance and a relocatable posterior protuberance, said anterior protuberance and said posterior protuberance being fixed to said support member and are ground engaging in use of the device; wherein said posterior protuberance and said anterior protuberance are calibratable to: a balanced position, said balanced position comprises a position wherein said device provides a reduced inversion, a reduced eversion, or both to said subject's foot during the stance phases; and wherein said posterior protuberance and said anterior protuberance are fixable to said support member; wherein said subject is able to walk, thereby treating a subject afflicted scoliosis, wherein each of said anterior protuberance and said posterior protuberance is characterized by : (a) convexity B of a base diameter of 70 to 100 mm and a height of 14 to 16 mm, said height is a perpendicular line connecting the highest point and said base; (b) convexity C of a base diameter of 70 to 100 mm and a height of 16 to 18 mm, said height is a perpendicular line connecting the highest point and said base; or (c) convexity D of a base diameter of 70 to 100 mm and a height of 19 to 22 mm, said height is a perpendicular line connecting the highest point and said base.

2. The device of claim 1, wherein said posterior protuberance and said anterior protuberance are calibratable to balance timing of heel rise.

3. The device of claim 1, wherein said calibratability comprises adjustability of: (a) a resilience of said anterior protuberance, said posterior protuberance, or a combination thereof; (b) a hardness of said anterior protuberance, said posterior protuberance, or a combination thereof; (c) an elasticity of said anterior protuberance, said posterior protuberance, or a combination thereof; (d) or any combination of (a), (b), and (c).

4. The device of claim 1, wherein said calibratability comprises adjustability of: (a) a height of said anterior protuberance, said posterior protuberance, or a combination thereof; (b) a convexity of said anterior protuberance, said posterior protuberance, or a combination thereof; (c) a weight of said anterior protuberance, said posterior protuberance, or a combination thereof (d) and a combination of (a), (b), and (c).

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5. The device of claim 1, wherein said balanced position further comprises a position wherein reduced valgus, varus, dorsal or plantar torque about the ankle is exerted by said device on said subject's foot.

6. The device of claim 1, wherein said posterior protuberance is a bulbous protuberance, said anterior protuberance is a bulbous protuberance, or both said posterior protuberance and said anterior protuberance are bulbous protuberances.

7. The device of claim 1, wherein said anterior protuberance, said posterior protuberance, or their combination comprise a cross-section with a shape of a conic section, said conic section comprising at least one of a circle, ellipse, parabola and hyperbola.

8. The device of claim 1, wherein said anterior protuberance is shaped differently from the outer contour of said posterior protuberance.

9. A device suitable for reducing low back pain in a subject, comprising securing means for securing the device to the subject's foot, ; a support member operably attached to said securing mean, and a relocatable anterior protuberance and a relocatable posterior protuberance, said anterior protuberance and said posterior protuberance are ground engaging when the device is in use, wherein said posterior protuberance and said anterior protuberance are calibratable to: a balanced position, said balanced position comprises a position wherein said device provides a reduced inversion, a reduced eversion, or both to said subject's foot during the stance phases; and wherein said posterior protuberance and said anterior protuberance are fixable to said support member wherein said subject is able to walk, thereby reducing low back pain in a subject, wherein each of said anterior protuberance and said posterior protuberance is characterized by : (a) convexity B of a base diameter of 70 to 100 mm and a height of 14 to 16 mm, said height is a perpendicular line connecting the highest point and said base; (b) convexity C of a base diameter of 70 to 100 mm and a height of 16 to 18 mm, said height is a perpendicular line connecting the highest point and said base; or (c)

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convexity D of a base diameter of 70 to 100 mm and a height of 19 to 22 mm, said height is a perpendicular line connecting the highest point and said base.

10. The device of claim 9, wherein said posterior protuberance and said anterior protuberance are calibratable to: balance timing of heel rise.

11. The device of claim 9, wherein said calibratability comprises adjustability of: (a) a resilience of said anterior protuberance, said posterior protuberance, or a combination thereof; (b) a hardness of said anterior protuberance, said posterior protuberance, or a combination thereof; (c) an elasticity of said anterior protuberance, said posterior protuberance, or a combination thereof; (d) or any combination of (a), (b), and (c).

12. The device of claim 9, wherein said calibratabilitycomprises adjustability of: (a) a height of said anterior protuberance, said posterior protuberance, or a combination thereof; (b) a convexity of said anterior protuberance, said posterior protuberance, or a combination thereof; (c) a weight of said anterior protuberance, said posterior protuberance, or a combination thereof (d) and a combination of (a), (b), and (c).

13. The device of claim 9, wherein said balanced position further comprises a position wherein reduced valgus, varus, dorsal or plantar torque about the ankle is exerted by said device on said subject's foot.

14. The device of claim 9, wherein said posterior protuberance is a bulbous protuberance, said anterior protuberance is a bulbous protuberance, or both said posterior protuberance and said anterior protuberance are bulbous protuberances.

15. The device of claim 9, wherein said anterior protuberance, said posterior protuberance, or their combination comprise a cross-section with a shape of a conic section, said conic section comprising at least one of a circle, ellipse, parabola and hyperbola.

16. The device of claim 9, wherein said anterior protuberance is shaped differently from the outer contour of said posterior protuberance.

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17. A set of footwear (10) components comprising:

a pair of support members, wherein each support member (12) having an upper surface (14) attachable to a foot and a lower surface (24) configured to hold two bulbous protuberances (22), an anterior protuberance and a posterior protuberance in a position-adjustable manner in an anterior area and a posterior area thereof, wherein the two bulbous protuberances are adjustable to a balanced position where the footwear provides a reduced inversion or a reduced eversion during stance phases, wherein said protuberances (22): (a) have a shore hardness of 30 to 90 Sh A; (b) are ground engaging; (c) are positioned on the centerline and the peaks positioned on opposite sides of the centerline (28) of said support member (12); and (d) are positioned on opposite sides of the latitudinal midline (30) and wherein each of said anterior protuberance and said posterior protuberance is characterized by : (a) convexity B of a base diameter of 70 to 100 mm and a height of 14 to 16 mm, said height is a perpendicular line connecting the highest point and said base; (b) convexity C of a base diameter of 70 to 100 mm and a height of 16 to 18 mm, said height is a perpendicular line connecting the highest point and said base; or (c) convexity D of a base diameter of 70 to 100 mm and a height of 19 to 22 mm, said height is a perpendicular line connecting the highest point and said base.

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