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).

According to some embodiments, the balanced position further comprises a position whereby a reduced valgus, varus, dorsal or plantar torque about the ankle is exerted by said device on said subject's foot.

According to additional embodiments, the 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.

In further embodiments, the posterior protuberance and the anterior protuberance are moveably mounted to said support member. In some embodiments, the posterior protuberance is movable within a calcaneus support portion of said support member. In further embodiments, the anterior protuberance is movable within phalanges or metatarsals support portion of said support member. In some embodiments, the 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. In another embodiment, the anterior protuberance is shaped differently from said posterior protuberance.

According to further embodiments, the neurological disorder is selected from: stroke, cerebrovascular accident (CVA), ischemic CVA, hemorrhagic CVA, Traumatic Brain Injury (TBI), Anoxic Brain Damage (ABD), Cerebral Palsy (CP), Parkinson's disease (PD), Multiple Sclerosis (MS), Spinal Cord Injury (SCI), Charcot-Marry-Tooth (CMT), Guillain–Barré syndrome (GBS) and Poliomyelitis.

In some embodiments, the improvement in neurological control comprises improvement in gait parameters of the subject. In some embodiments, the gait parameters are selected from: velocity, step length, single limb support, stability and combinations thereof.

In one aspect, there is provided a footwear comprising a foot securing mean, a support member operably attached to said securing mean, and a anterior protuberance and a posterior protuberance, said anterior protuberance and said posterior protuberance comprise: a convexity A protuberance having a base diameter of 70-100 mm and a height, which is a perpendicular line connecting the highest point and the base, of 10-13 mm, a convexity B protuberance having a base diameter of 70-100 mm and a height, which is a perpendicular line connecting the highest point and the base, of 14-16 mm, a convexity C protuberance having a base diameter of 70-100 mm and a height, which is a perpendicular line connecting the highest point and the base, of 16-18 mm, a convexity D protuberance having a base diameter of 70-100 mm and a height, which is a perpendicular line connecting the highest point and the base, of 19-22 mm, or any combination thereof, said anterior protuberance and said posterior protuberance comprise a ground engaging peak; wherein said posterior protuberance and said anterior protuberance are calibrated to a balanced position, said balanced position comprises: calibrating convexity, calibrating height, calibrating weight, calibrating position, calibrating base diameter, or any combination thereof.

In another aspect, there is provided the footwear as described herein, for use in treating a neurological disorder, improving and/or restoring neurological control.

CLAIMS

1. A footwear comprising a foot securing mean, a support member operably attached to said securing mean, and a anterior protuberance and a posterior protuberance, said anterior protuberance and said posterior protuberance comprise: a convexity A protuberance having a base diameter of 70-100 mm and a height, which is a perpendicular line connecting the highest point and the base, of 10-13 mm, a convexity B protuberance having a base diameter of 70-100 mm and a height, which is a perpendicular line connecting the highest point and the base, of 14-16 mm, a convexity C protuberance having a base diameter of 70-100 mm and a height, which is a perpendicular line connecting the highest point and the base, of 16-18 mm, a convexity D protuberance having a base diameter of 70-100 mm and a height, which is a perpendicular line connecting the highest point and the base, of 19-22 mm, or any combination thereof, said anterior protuberance and said posterior protuberance comprise a ground engaging peak; wherein said posterior protuberance and said anterior protuberance are calibrated to a balanced position, said balanced position comprises: calibrating convexity, calibrating height, calibrating weight, calibrating position, calibrating base diameter, or any combination thereof.

2. The footwear of claim 1, wherein calibration of said posterior protuberance and said anterior protuberance comprises (a) calibration of resilience of said anterior protuberance, said posterior protuberance, or a combination thereof; (b) calibration of hardness of said anterior protuberance, said posterior protuberance, or a combination thereof; (c) calibration of elasticity of said anterior protuberance, said posterior protuberance, or a combination thereof; or (d) any combination of (a) to (c).

3. The footwear of claim 1, wherein said balanced position further comprises a position in which a reduced valgus, varus, dorsal or plantar torque about the ankle is exerted.

4. The footwear of claim 1, wherein said posterior protuberance is movable within a calcaneus support portion of said support member and said anterior protuberance is movable within phalanges or metatarsals support portion of said support member.

5. The footwear of claim 1, for use in treating a neurological disorder, improving and/or restoring neurological control.

6. The footwear for use of claim 5, wherein said neurological disorder is selected from: stroke, cerebrovascular accident (CVA), ischemic CVA, hemorrhagic CVA, Traumatic Brain Injury (TBI),

Anoxic Brain Damage (ABD), Cerebral Palsy (CP), Parkinson's disease (PD), Multiple Sclerosis (MS), Spinal Cord Injury (SCI), Charcot-Marry-Tooth (CMT), Guillain–Barré syndrome (GBS) and Poliomyelitis.

7. The footwear for use of claim 5, wherein the improving neurological control comprises improving a gait parameter.