"The Clinical Advantage"™

Biodex Balance System SD

- **Meniscal Repairs**

Cincinnati SportsMedicine & Orthopaedic Center
A Nationally Recognized Center of Excellence

A cooperative effort by Biodex Medical Systems, Inc. and Cincinnati SportsMedicine & Orthopaedic Center

BIODEX
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Note: The balance progressions that follow are based on the protocols developed and provided by the Cincinnati Sports Medicine Center. The original protocols can be viewed at this link:

http://www.cincinnatisportsmed.com/csm/

All phases are broken down into training and testing possibilities related to these protocols and potential stances utilized.

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PHASE II – THREE-FOUR WEEKS

Balance begins in Phase II: peripheral repairs only

Activities

- Weight Shifting

Weight shifting side to side and forward to back

Use the **Percent Weight Bearing** training screens to perform static medial / lateral weight shifting *(fig.1)*, anterior / posterior weight shifting and to re-establish center of balance *(fig.2)*.

(fig.1)

(fig.2)

Use **Weight Shift** training screens to emphasize lateral shifting over the affected leg to prepare for full weight bearing ambulation *(fig.3)*.

(fig.3)

Positions and Conditions

Bilateral standing / holding on / static mode *(fig.4)*.

(fig.4)

PHASE III – FIVE-SEVEN WEEKS

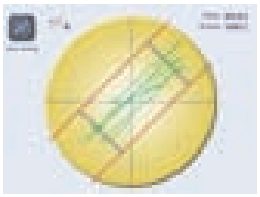
Activities
- **Weight Shifting**
- **Bilateral Standing / Dynamic**

Weight shifting side to side and forward to back

Use the **Weight Shifting** training screens in static mode to influence weight bearing to the affected side *(fig.1)* anterior / posterior *(fig.2)* and diagonally to prepare for ambulation *(fig.3)*.

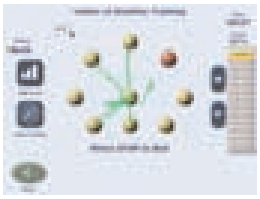
(fig.1)

(fig.2)



(fig.3)

Use the **Limits of Stability** training screen in static mode to explore the patient's sway envelope. Train their ability to move away from center, hit a target on the fringe of their allowable sway envelope and return to center *(fig.4)*.



(fig.4)

Positions and Conditions

Use bilateral standing / no holding / static mode for **Weight Shifting** training *(fig.5)*.

Use bilateral staggered stance / holding on / static mode for diagonal **Weight Shifting** training *(fig.6)*.

(fig.5)

(fig.6)

Bilateral Standing / Dynamic

Use the **Postural Stability** training screens in dynamic mode to establish postural stability on a moveable surface *(fig.1)* and to have the patient control dynamic movement away from their center of balance *(fig.2)*.

(fig.1)

(fig.2)

Positions and Conditions

Use bilateral standing / no holding / dynamic mode for **Postural Stability** training *(fig.3)*.

(fig.3)

PHASE IV - SEVEN-EIGHT WEEKS

Activities
– Bilateral Standing / Dynamic
– Single Leg Standing / Static

Bilateral Standing / Dynamic

Use the **Postural Stability** training screens in dynamic mode to establish postural stability on a moveable surface *(fig.1)* and to have the patient control dynamic movement away from their center of balance *(fig.2)*.

(fig.1)

(fig.2)

Use the **Maze Control** training screen to challenge the patient to control dynamic movement away from their center of balance *(fig.3)*.

(fig.3)

Use the **Random Control** training screen to facilitate control of movement around the patient's center of balance which is dictated by the machine *(fig.4)*.

(fig.4)

Positions and Conditions

Use bilateral standing / holding on / dynamic mode for Postural Stability, Maze Control and Random Control *(fig.5)*.

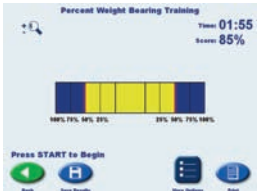
Progress to bilateral standing / no holding / dynamic mode for Postural Stability, Maze Control and Random Control *(fig.6)*.

(fig.5)

(fig.6)

Single Leg Standing / Static

Use **Percent Weight Bearing** training screens for single leg activities in static mode to facilitate center of balance on the affected leg medially / laterally *(fig.1)*, anteriorly / posteriorly and in combined planes *(fig.2)*.



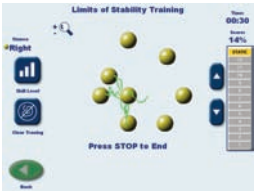
(fig.1)

(fig.2)

Use **Postural Stability** training screens for single leg activity in static mode to facilitate center of balance *(fig.3)*.

(fig.3)

Use **Limits of Stability** training screen to challenge the sway envelope of a single leg stance in static mode *(fig.4)*.



(fig.4)

Positions and Conditions

Single leg standing / holding *(fig.5)*.

(fig.5)

PHASE V - NINE-TWELVE WEEKS

Activities
- **Bilateral Standing / Dynamic**
- **Single Leg Standing / Static**
- **Postural Stability Test (12 weeks)**

Bilateral Standing / Dynamic

Use the **Postural Stability** training screens in dynamic mode to establish postural stability on a moveable surface *(fig.1)* and to have the patient control dynamic movement away from their center of balance *(fig.2)*.

(fig.1)

(fig.2)

Use the **Maze Control** training screen to challenge the patient to control dynamic movement away from their center of balance *(fig.3)*.

(fig.3)

Use the **Random Control** training screen to facilitate control of movement around the patient's center of balance which is dictated by the machine *(fig.4)*.

(fig.4)

Positions and Conditions

Use bilateral standing / holding on / dynamic mode for Postural Stability, Maze Control and Random Control *(fig.5)*.

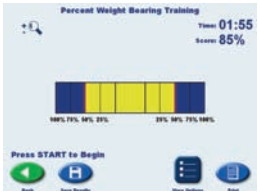
Progress to bilateral standing / no holding / dynamic mode for Postural Stability, Maze Control and Random Control *(fig.6)*.

(fig.5)

(fig.6)

Single Leg Standing / Static

Use **Percent Weight Bearing** training screens for single leg activities in static mode to facilitate center of balance on the affected leg medially / laterally *(fig.1)*, anteriorly / posteriorly and in combined planes *(fig.2)*.



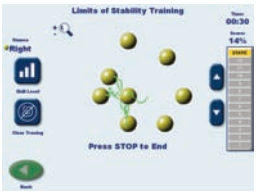
(fig.1)

(fig.2)

Use **Postural Stability** training screens for single leg activity in static mode to facilitate center of balance *(fig.3)*.

(fig.3)

Use **Limits of Stability** training screen to challenge the sway envelope of a single leg stance in static mode *(fig.4)*.



(fig.4)

Positions and Conditions

Single leg standing / holding *(fig.5)*.

(fig.5)

Testing:

Postural Stability / Dynamic Test vs. Normative Data using Fall Risk protocol at 12 weeks *(fig.6)*.

(fig.6)

PHASE VI - THIRTEEN-TWENTY SIX WEEKS

Activities
- **Bilateral Standing / Dynamic**
- **Single Leg Standing / Static**
- **Postural Stability Test (16, 20 and 24 weeks)**

Bilateral Standing / Dynamic

Use the **Postural Stability** training screens in dynamic mode to establish postural stability on a moveable surface *(fig.1)* and to have the patient control dynamic movement away from their center of balance *(fig.2)*.

-

(fig.1)

(fig.2)

Use the **Maze Control** training screen to challenge the patient to control dynamic movement away from their center of balance *(fig.3)*.

-

(fig.3)

Use the **Random Control** training screen to facilitate control of movement around the patient's center of balance which is dictated by the machine *(fig.4)*.

-

(fig.4)

Positions and Conditions

Use bilateral standing / holding on / dynamic mode for Postural Stability, Maze Control and Random Control *(fig.5)*.

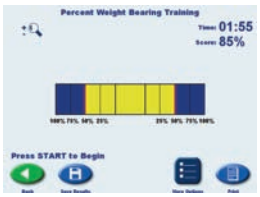
Progress to bilateral standing / no holding / dynamic mode for Postural Stability, Maze Control and Random Control *(fig.6)*.

(fig.5)

(fig.6)

Single Leg Standing / Static

Use **Percent Weight Bearing** training screens for single leg activities in static mode to facilitate center of balance on the affected leg medially / laterally *(fig.1)*, anteriorly / posteriorly and in combined planes *(fig.2)*.



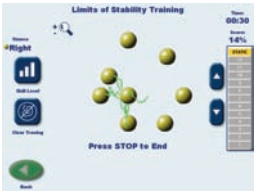
(fig.1)

(fig.2)

Use **Postural Stability** training screens for single leg activity in static mode to facilitate center of balance *(fig.3)*.

(fig.3)

Use **Limit of Stability** training screen to challenge the sway envelope of a single leg stance in static mode *(fig.4)*.



(fig.4)

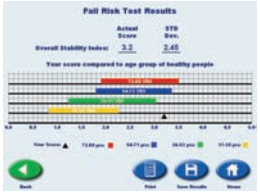
Positions and Conditions

Single leg standing / holding *(fig.5)*.

(fig.5)

Testing:

Postural Stability / Dynamic Test vs. Normative Data using Fall Risk protocol at 16, 20 and 24 weeks *(fig.6)*.



(fig.6)

PHASE VII - TWENTY SEVEN-FIFTY TWO WEEKS

Activities
- **Bilateral Standing / Dynamic**
- **Single Leg Standing / Static**
- **Postural Stability Test (28, 32, 36, 40, 44, 48, 52 weeks)**

Bilateral Standing / Dynamic

Use the **Postural Stability** training screens in dynamic mode to establish postural stability on a moveable surface *(fig.1)* and to have the patient control dynamic movement away from their center of balance *(fig.2)*.

(fig.1)

(fig.2)

Use the **Maze Control** training screen to challenge the patient to control dynamic movement away from their center of balance *(fig.3)*.

(fig.3)

Use the **Random Control** training screen to facilitate control of movement around the patient's center of balance which is dictated by the machine *(fig.4)*.

(fig.4)

Positions and Conditions

Use bilateral standing / holding on / dynamic mode for Postural Stability, Maze Control and Random Control *(fig.5)*.

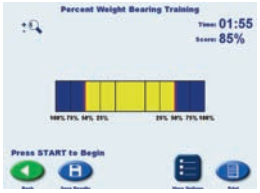
Progress to bilateral standing / no holding / dynamic mode for Postural Stability, Maze Control and Random Control *(fig.6)*.

(fig.5)

(fig.6)

Single Leg Standing / Static

Use **Percent Weight Bearing** training screens for single leg activities in static mode to facilitate center of balance on the affected leg medial / laterally *(fig.1)*, anterior / posteriorly and in combined planes *(fig.2)*.



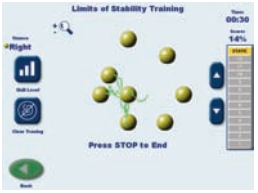
(fig.1)

(fig.2)

Use **Postural Stability** training screens for single leg activity in static mode to facilitate center of balance *(fig.3)*.

(fig.3)

Use **Limits of Stability** training screen to challenge the sway envelope of a single leg stance in static mode *(fig.4)*.



(fig.4)

Positions and Conditions

Single leg standing / holding *(fig.5)*.

(fig.5)

Testing:

Postural Stability / Dynamic Test vs. Normative Data using Fall Risk protocol at 28, 32, 36, 40, 44, 48, 52 weeks *(fig.6)*.

(fig.6)

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