

# Study: orthotic treatment for the patient with stroke outcomes



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## PROBLEMS:

- **Shoe not appropriate**= risk factor **for falls**
- **The high costs and time of personalized shoe's production** lengthen the **rehabilitation time**



**AIM OF THE PROJECT:** study of the efficacy of **ACTIVITY DCS PODartis shoes** in patients with **stroke outcomes**, with the aim of evaluating the variables that allow a **safer deambulation**



**Test on 20 patients** (males and females) with hemiparesis, ischemic and hemorrhagic stroke

# GAIT OF THE PATIENT WITH STROKE OUTCOMES



## CLINICAL PROBLEM:

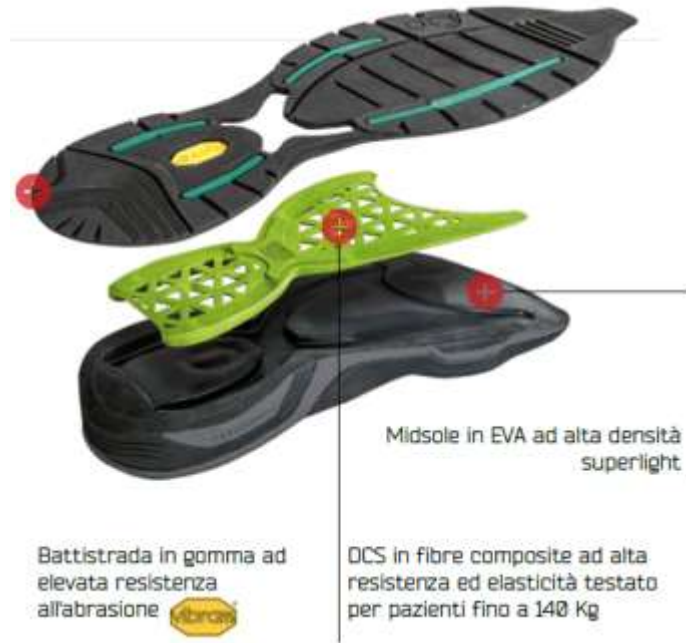
- Hypotonicity or muscles stiffness (spasticity -> contractures)
- Fear of falling or moving, due to the perception of having a foreign limb.
- Standing balance is impaired.
- The posture is changed: neck flexed towards the sick side, head rotated towards the healthy limb, external rotation of the hip and dangling foot.

## ORTHOTIC OBJECTIVE

- Recover safety during gait
- Prevent and avoid falls
- Improve the push-off phase
- Increase volume in order to insert a brace



# IDEAL SHOE: ACTIVITY DCS



## Plus:

- Pronation control
- Prevention of sole's collapse
- Extra Volume for overweight patients (13/14,5)
- DCS – Dynamic forefoot lever to: stabilize and facilitate neurological patients steps.

## Technique:

2 measures -> 13 / 14.5  
DCS insert  
3 level of density

# DYNAMIC WALKING SYSTEM - DCS



## DCS AFO

Unwinding support orthoses of the step



**DCS insert**, thanks to its configuration, behaves like a dynamic orthoses that helps muscular deficiency due to neurological problems.

**IMPROVE THE PUSH-OFF PHASE**