

# NEURO SWING System Ankle Joint

**Characteristics**

**Adjustments**

**Advantages**

**Guides: CP Guide, Apoplexy Guide**

**Example : CP Gait Type 4 / case poster**

**Patient case video**

**Fior & Gentz configurator and website**

**Conclusion**

# Video gait analysis without orthosis and BEFORE physiotherapeutic treatment

## Free-walk

- ✓ Diparetic spastic-ataxic gait pattern
- ✓ Asymmetric orthostatic and orthodynamic trunk attitude
- ✓ Abnormal hip antiversion in stance with an evident core instability and an high care-giving need during gait
- ✓ A fairly good hip control in swing phase with a related abnormal up and down and lateral tilt of it, facilitated by a related knee hyperextension in stance
- ✓ With an high care-giving need, abnormal eccentric bilateral knee control in stance secondary to the proximal hip antiversion, the quadriceps weakness and the constant hyperextension lower limb attitude
- ✓ Constant valgus-pronated ankle attitude in stance bilaterally with a flat foot gait schema distally and a related knee recurvatum proximally during gait

TYPES OF GAIT	Type 1	Type 2	Type 3	Type 4	Type 5
KNEE	normal	hyperextended	hyperextended	flexed	flexed
FOOT CONTACT	complete	complete	incomplete	incomplete	complete



With Codivilla after physiotherapeutic treatment



With Toe-Off after physiotherapeutic treatment



## FAFONS

### (Forefoot carbon shell)

Orthosis features →

Thermoplastic material used: PVC coated with carbon inserts

Quantity of carbon used: 3 layers of carbon 200gr/mq 3K on the foot; 2 unidirectional support layers in carbon on the foot; 2 layers of carbon 200gr/mq 3K on the leg; 2 unidirectional support layers in carbon on the PVC inserts

Quantity of kevlar used on the forefoot: 6 layers of kevlar 170gr/mq in progressive way

Quantity of Lycra and/or perlon knitting: no one

Stiffening: metal staff connected with an ankle joint system and integrated in the resin skeleton

**Ankle joint system used: Neuroswing by FIOR and GENTZ**

Quantity and resin type used: 260gr of epossidic bicomponent resin 100.30 (200gr of resin, 60gr of reactant)

Total weight of the orthosis realized: 500gr

	Normal	Medium	Strong	Very strong	Extra strong
Dorsal spring unit		•			
Ventral spring unit				•	

### Gait pattern with DAFONS bilaterally and after physiotherapy

- Decreased hip antversion in stance with an amelioration of core stability and decrease of care-giving need during gait;
- A better hip control in swing phase with a related amelioration of up and down and lateral tilt of it, facilitated by a better knee control in stance
- Normalized the knee hyperextension secondary to the orthotic tibialis pivot remodulation of the orthostatic and orthodynamic limb alignment
- Fairly care giving need, recover of a correct orthostatic and ortodynamic trunk-hip and lower limb alignment in stance and swing phase
- Physiological recovery of the stance feet control during gait performance (1°-2°-3° rocker) and ankle alignment in the heel contact phase

