



## Analysis of the static postural balance at 3 months after Hallux Valgus surgery: Controlled Study

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### Abstract:

**Introduction :** Hallux valgus (HV) is the most common condition found in the foot. It is a progressive failure of the means of stabilization of the first ray. The hallux is deflected into valgus, the first metatarsal into varus and their association leads to a subluxation of the metatarsal-phalangeal joint of the first ray. Surgery is a treatment often used to correct this condition. Thus, is the static postural balance altered after corrective surgery? A stabilometric study was conducted to answer this question.

**Materials and Methods :** 23 subjects participated in the study. These were divided into two groups: healthy control and hallux valgus. The evaluation of the hallux valgus group was done 3 months postoperatively. Bipodal tests were performed on a stabilometry platform. The pressure centre parameters and plantar pressures were recorded. A statistical analysis was carried out.

**Results :** The results obtained showed major and statistically significant differences between the two groups. Pressure centre values were higher in the hallux valgus group.

**Discussion :** Some of the results found in the literature are consistent with the results of this study. There are significant deficits in static postural balance 3 months after corrective surgery. Further studies with a larger sample could be conducted to confirm or not the results of this study.

**Conclusion:** There are disturbances in postural balance in patients operated on with a hallux valgus 3 months after corrective surgery. Furthermore, there are no disturbances in the analysis of plantar pressures of HV subjects compared to those of healthy subjects.

### Biography:

Maude Traulle is a physiotherapist specializing in the re-



habilitation of the foot and ankle in traumatology and orthopedics and in the foot and ankle assessment after surgery. She works in the functional exploration unit of the Clinic of Domont where she evaluates 150 patients per year after foot and ankle surgery. She is specialized in the field of gait and posture analysis and return to sport assessment after foot and ankle surgery. She is also teacher in several institutes in various fields of rehabilitation and publishes many articles on lower limbs rehabilitation..

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### Publication of speakers:

1. Implication of Biomechanical Factors in the Knee Dynamic Alignment: Case of Femoropatellar Pain Syndrome
2. Identification of Methods for Estimating Knee Rotation Axis
3. Identification des critères de retour au sport après chirurgie ligamentaire de la cheville
4. Integration of Postural Alterations in the Assessment and Neuromotor Rehabilitation after Anterior Cruciate Ligament Surgery: A Narrative Review
5. Influence of Anterior Cruciate Ligament Surgery with Semitendinosus and Gracilis Graft on Static Postural Balance at 3 Months Postoperatively: Randomized Controlled Study

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