Standing and walking are complex activities which require integral skeletal-muscular and central nervous systems. Body is usually, evenly distributed between both the lower limbs with 40% on the ball of the foot and 60% on the heel, therefore, the body's centre of gravity falls between the feet in correspondence to Chopart's articulation. Some diseases can influence standing and walking including cardiovascular diseases (chronic edema, claudication, cardiopathies etc.) neurosensory ones (cataract, Meniere's disease, Parkinson's disease etc.) and orthopedic ones (kyphosis, scoliosis, hallux valgus, metatarsalgia, osteoarthritis etc.). In this study arthritis was considered the main cause of changes in posture and deambulation. An electric baropodometer with a modular platform 240 cm long and 40 cm wide was used which provided the pressure information for each in three distinct phases: static, dynamic and postural Baropodometric step analysis was performed on ten healthy, elderly subjects and ten elderly subjects with arthritis of the knee. The latter group was evaluated both pre- and post prosthetic knee surgery. The data revealed that the ten healthy subjects with arthritis who, prior to surgery presented unequal weight distribution on the diseased side which was slowly redistributed after surgery.