

Case Study

Elderly person who has had a stroke

Medical History

This lady is 81 years of age. She had a stroke which affected her right side but does not fall. She regularly attends a balance class. The balance class comprises of a number of different exercises to strengthen muscles all carried out in the sitting position. Her gait was first measured using GaitSmart in November 2010. She now feels very confident in her walking and in October 2011 she started to attend the Tai Chi class every other week.

Results

The table below shows the progress made by the regular exercise. When the GaitSmart system has indicated a negative change, the balance class leader was able to apply different exercises to improve the gait, which can be seen in the following table. Overleaf are the range of knee motion graphs that show how the range was altering during the monitoring period. The GaitSmart test is quick and simple to carry out, and they were undertaken during the balance class. Feedback on the test results was given to the lady at each class enabling her to make changes to her exercise regime if required.

Week from start	Walking aid	Medical condition	Stride duration (s)	Left knee ROM (°)	Right knee ROM (°)	Left/right asymmetry (°)
	None	Healthy	1.2	60	60	(-5 to +5)
0	None	Healthy	1.3	63	54	-9
10	None	Healthy	1.1	61	57	-4
20	None	Healthy	1.1	61	51	-10
28	None	Healthy	1.1	65	57	-8
38	None	Healthy	1.1	60	59	-1
43	None	Healthy but new shoes	1.1	65	51	-14
52	None	Healthy	1.1	64	56	-8
66	None	Healthy	1.1	62	57	-5
76	None	Healthy	1.1	63	58	-5
82	None	Healthy	1.1	59	55	-4

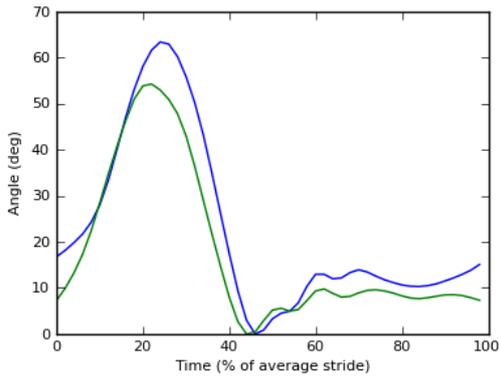
These values are normal health over 70 years of age.

These values are within range

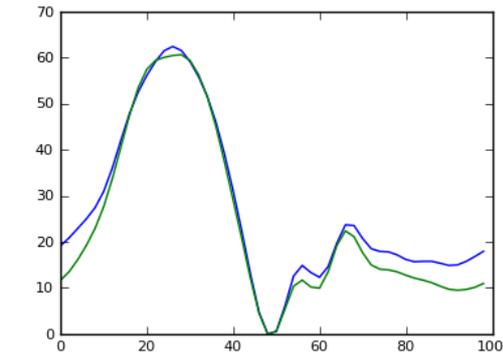
These values are out of normal range and need attention.

If your score is -ve there is less movement on the left than the right, +ve means less movement on the right than left.

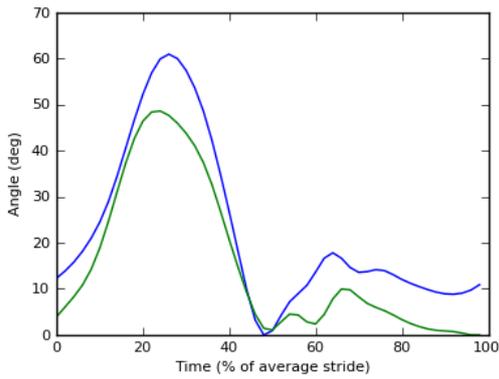
Week 0



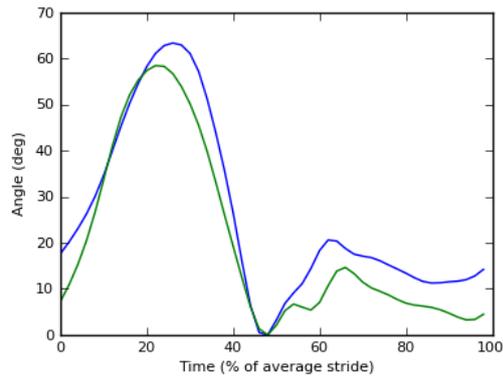
Week 10



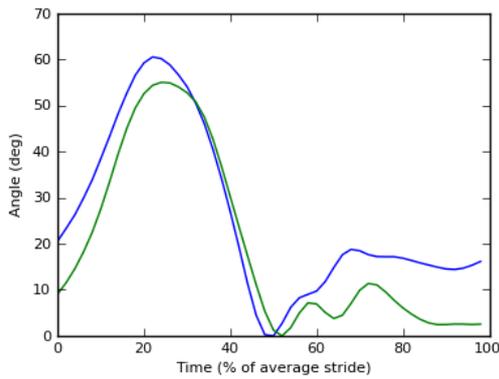
Week 20



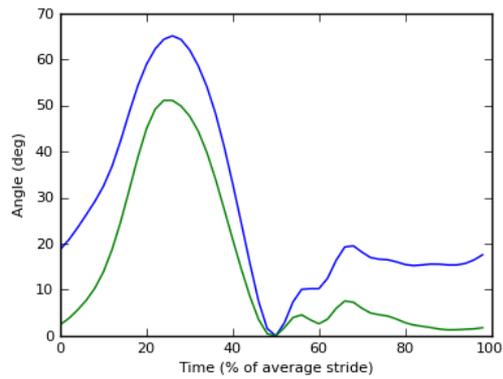
Week 28



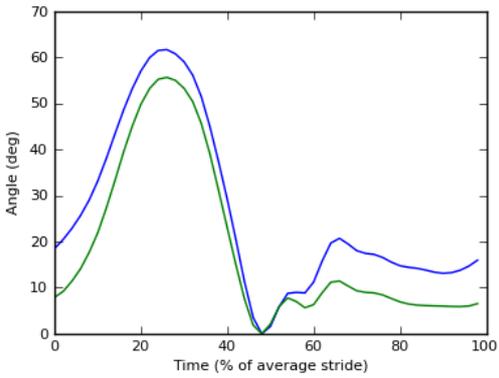
Week 38



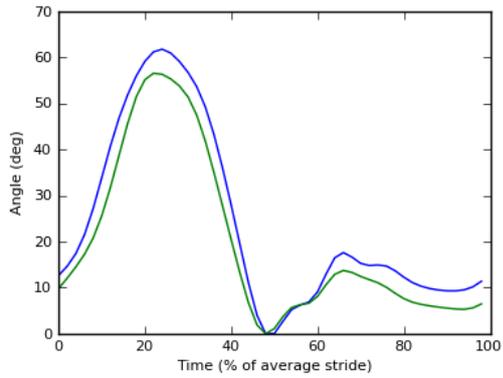
Week 43



Week 52



Week 66



GaitSmart is revolutionising sensor based motion analysis, allowing you to better understand the biomechanics of mobility. **Mobility is life.**
GaitSmart is a product of ETB

