PHYSICAL ACTIVITY IN ADULT PATIENT WITH HAEMOPHILIC ARTHROPATHY MONITORED BY FITBIT CHARGE HR

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1. Introduction and Objectives:

According to the World Health Organization (WHO), physical inactivity is the fourth leading risk factor for global mortality. To be healthy, the WHO and experts recommend to adults aged 18–64 accumulate at least 150 minutes a week of moderate-intensity aerobic physical activity and perform 10,000 steps a day. In the other hand, physical activity is recommended to mitigate functional limitations associated with knee osteoarthritis. In a recent research, more walking was associated with less risk of functional limitation over 2 years.

The objective of this study is to quantify the amount of daily physical activity performed by adults with haemophilic arthropathy in profilaxis treatment.

2. Materials and Methods:

20 adult haemophilic patients from the Haemostasis and Thrombosis Unit of the Hospital La Fe, Valencia, Spain were recruited. The Fitbit Charge HR activity wristband was used to quantify the amount and level of daily physical activity. The patients wear the fitbit during all day and they must take away during swimming activities because the wristband isn't waterproof. The wristband shows the steps, covered distance, heart rate and calories.

3. Results:

A group of 20 patients with severe A haemophilia [Age: 33.55 (9.61) years old; Weight: 77.40 (14.75) Kg; Height: 1.75 (0.08) m; IMC: 25.29 (4.18) Kg/m^2; HJHS Score in Elbows: 4.13 (4.59), Kness: 2.40 (3.85) and Ankles: 4.98 (3.17)] were recruited. All of them were in profilaxis and the average dosis were 26.3 (9.15) IU/kg. Table 1 shows the results from Fitbit Charge HR. No patient reported any bleeding.

4. Conclusions:

The patients were able to walk about 10,000 steps a day and perform 424 minutes of moderate-intensity activity a week without risk of bleeding. The results suggest that severe patients in prophylaxis treatment, despite haemophilic arthropathy, are able to comply with the recommendations of WHO and experts.

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Hemophilic arthropathy affects daily activities. Walking is a target.

Table 1. Results of activity data from Fitbit Charge HR. Daily average of the first 30 days of follow up data.

	Mean	SD	Min	Max
Activity data				
Calories	2924.79	477.78	2229.97	4077.23
Activity Calories	1447.05	524.45	705.33	2423.27
Steps	9978.28	3309.82	4840.37	15903.90
Distance (km)	7.26	2.41	3.58	12.34
Sedentary (min)	871.84	219.43	620.00	1296.47
Lightly Active (min)	243.02	60.32	120.70	332.47
Fairly Active (min)	34.35	33.82	3.57	142.87
Very Active (min)	26.23	20.69	0.63	84.57

SD: Standard Deviation; Min: minimum; Max: maximum

Figure 1. Average daily steps of the first 30 days. (Error bars indicate the 95% CI of the mean and red line is the number of recommended daily steps).

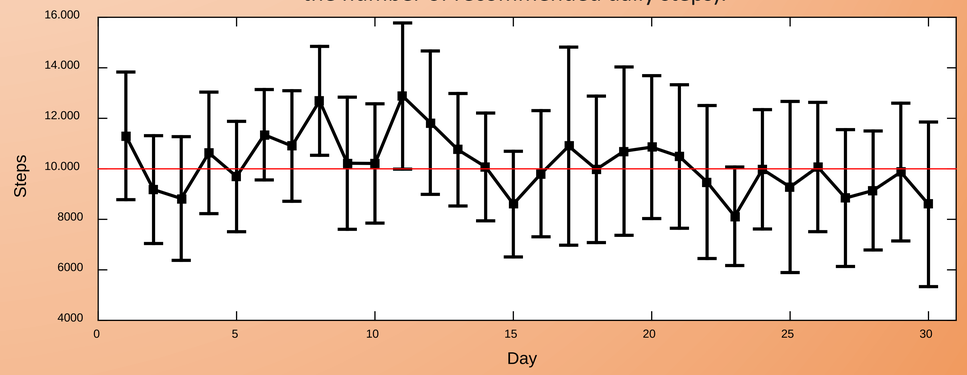
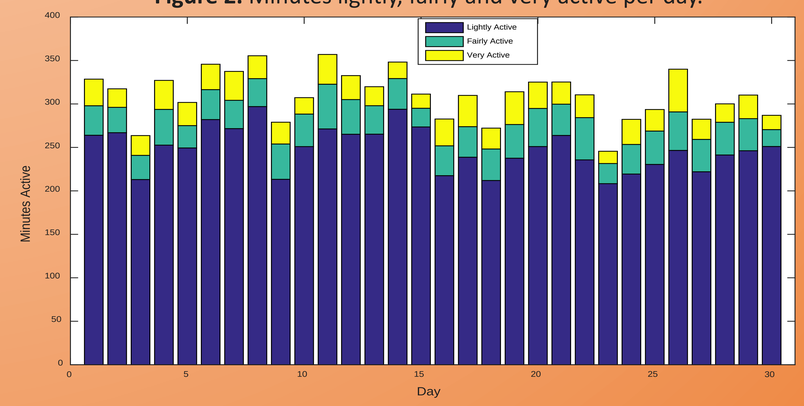


Figure 2. Minutes lightly, fairly and very active per day.



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