

Physical activity patterns in the French 18-74-year-old population The French nutrition and health survey (ENNS, 2006-2007)

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Introduction

- Assessing health-related physical activity is a global concern for public health strategies aiming at improving health status of populations.
- The 'International Physical Activity Questionnaire' (IPAQ) was developed to measure physical activity in a population.
- Identifying dimensions which are variable between IPAQ categories ('low', 'moderate' and 'high') for gender could help to define targets for public health actions.
- **Our objective was to describe detailed physical activity and sedentary behaviour in French adults by IPAQ categories.**

Methods

- National cross-sectional survey including 3,115 18-74-year-old adults; random sample selection based on a three-phase design.¹ Demographic, physical activity and sedentary lifestyle data were collected at home *via* face-to-face interviews.
- The French short form of the IPAQ was used to describe physical activity in 2,971 participants. Data processing rules, calculation of metabolic equivalent task (MET-min/week) and classification by IPAQ categories were strictly undertaken as recommended by the IPAQ group.²
- Time spent in a sitting position and time spent in front of a screen (television, computer, video game) were used as markers of sedentary behavior.
- The complex survey design and weighting were accounted for in all analyses.

Results

- About 6% of adults declared no physical activity at all.
- **Figure:** According to IPAQ categories, 29.5% [95%CI: 25.9-33.1] of men and 23.6% [21.1-26.6] of women were classified in the **high-IPAQ category**, while 36.1% [32.2-39.9] of men and 37.5% [34.7-40.3] of women were in the **low-IPAQ category**.
- Men were more physically active than women (median total MET-min/week: 1,893 *versus* 1,434; $p < 10^{-3}$) but they spent more time in front of a screen than did the latter (mean time: 3h04 *versus* 2h51, $p < 10^{-3}$).

Figure: Distribution according to IPAQ categories (men: 1st bar; women: 2^d bar)

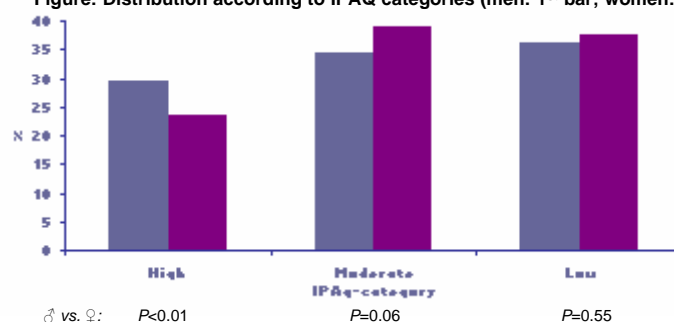


Table: Median days, durations and MET by physical activity intensity level, IPAQ category and gender

IPAQ category	Men			Women		
	High	Moderate	Low	High	Moderate	Low
Vigorous intensity						
Number of active days/week	4	1	1	3	2	1
Daily duration (h:min)	2:00	1:00	1:15	1:45	1:00	1:00
MET-min/week	3240	960	960	2160	720	480
Moderate intensity						
Number of active days/week	5	4	2	5	3	2
Daily duration (h:min)	3:00	1:00	1:30	2:30	1:00	1:00
MET-min/week	2400	900	480	2880	720	480
Walking						
Number of active days/week	7	6	2	6	5	2
Daily duration (h:min)	1:00	0:45	0:30	1:00	0:45	0:35
MET-min/week	990	693	198	990	693	297
Total MET-min/week	5139	1893	462	4662	1554	462

Medians for each PA intensity level were calculated in adults who practiced activities of that intensity level at least one day per week, while total MET-min/week medians were calculated for the whole population.

Differences were all statistically significant ($p < 0.05$) between high- and moderate-, high- and low-, and moderate- and low-IPAQ categories *except for*:
*: no statistical difference between moderate- and low-IPAQ categories;
\$: no statistical difference between high- and moderate-IPAQ categories.

- **Table:** For each physical activity intensity level (vigorous intensity, moderate intensity or walking), the number of active days per week significantly decreased from a **high-** to a **low-IPAQ category**.
- Daily durations of physical activity were longer in the **high-IPAQ category** than in other categories, while there was no difference between **moderate-** and **low-IPAQ categories**.

Conclusion

- Despite limitations, the reliability and validity of the short IPAQ version have been underlined.³ IPAQ is particularly useful for the follow-up of public health plans such as the French 'Programme national nutrition santé'.⁴ However, scrupulous application of data processing rules recommended by the IPAQ group and quality of data collection are needed in order to minimize physical activity overestimation.
- For most adults in the **low-IPAQ category**, an increasing number of moderately active days per week would be sufficient to attain a **moderate-IPAQ category**. Yet, the gap between **moderate-** and **high-IPAQ categories** was much greater than between **moderate** and **low categories**, particularly in terms of daily duration of physical activity. Variations across IPAQ-categories by gender rather differed, underlying the need for sex-adapted public health messages and actions.

References

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