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Getting children active: the contribution of active transportation

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The British Government's concerns about children's travel

- In the last 10 years:
  - The proportion of journeys to school by car has increased from 16% to 30%
  - The average length of the journey to school for secondary schools has gone up by well over a third

Cette présentation a été effectuée le 17 novembre 2005, au cours de la journée « Le santé par le transport : encourager le transport actif en alliant l'aménagement urbain à la santé publique » dans le cadre des Journées annuelles de santé publique (JASP) 2005. L'ensemble des présentations est disponible sur le site des JASP, à l'adresse http://www.inspq.qc.ca/jasp/archives/.

Impacts of these changes

- Traffic and congestion increase, leading to a vicious circle of fears about safety in traffic leading to less cycling and walking and more car use
- Deterioration in
  - Local air quality
  - Journey times
  - Competitiveness of local business

Perceived benefits of changing the situation

- Giving children more freedom and independence
- More exercise for children and so improving fitness
- Reduction in local pollution and congestion

What the Government is doing

- Promoting minimum standards for school travel plans (STPs)
- Providing capital grants to schools to spend on measures identified in STPs (£5000 (Can$10500) for primary schools, £10000 (Can$21000) for secondary schools)
- Funding more school travel advisers

Actions to improve travelling to school

- Set up safer routes for walking and cycling
- Traffic calming such as 20 mph (32 km/h) zones near schools
- School infrastructure and policies, such as lockers for cyclists
- School crossing patrols
- Walking buses
- Cycle trains
- Training in cycling and pedestrian skills

For more information on the British Government's policies and actions

- Go to :http://www.dft.gov.uk/stellent/groups/dft_about/documents/page/dft_about_026788.hcsp
- Or, click on http://www.dft.gov.uk/, and then on 'Information for Parents, Teachers and Schools'

The research at UCL

- Part of project: 'Reducing children's car use: the health and potential car dependency impacts'
- 3-year project funded by EPSRC under the FIT programme
- Started January 2001
- Relevant sub-projects: 'Monitoring of children's activity patterns using motion sensors' and 'Evaluation of interventions - walking buses'

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The RT3 motion sensor

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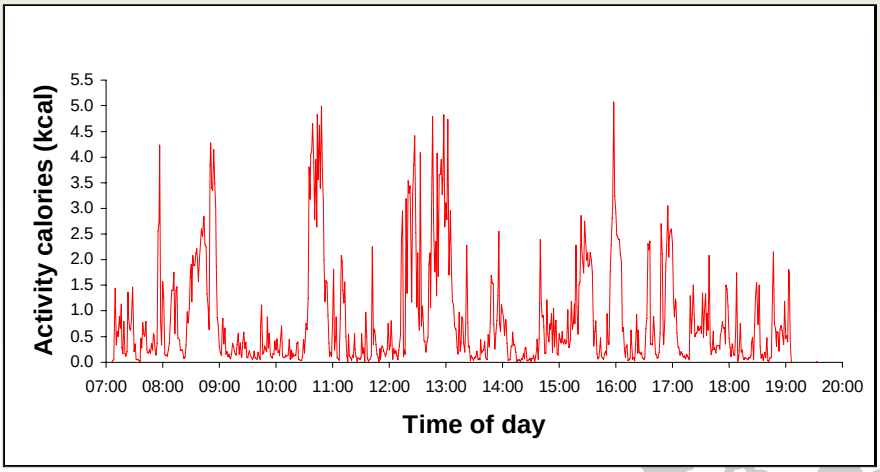
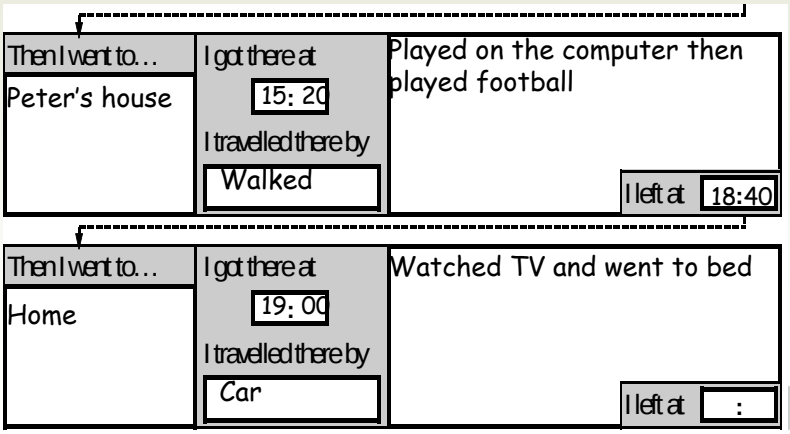
An example output from an RT3



A child's travel and activity diary



The numbers of children involved

	Male	Female	Total
Year 6 (age 10-11)	54	58	112
Year 8 (age 12-13)	42	41	83
Total	96	99	195

Five other children did not supply enough information to be included

The classification of activities

- Based on the children's responses
- 3 level classification:
  - 8 categories at the broad level
  - 18 categories at the middle level
  - 56 categories at the narrow level
- Intensities in activity calories per minute can be calculated for each category

Children's activities (broad level)

- School
- Structured out-of-home activities (clubs and tuition)
- Unstructured out-of-home activities (playing)
- Out-on-trips to activities with parents
- At their own home
- At other people's homes
- Travel
- Other (physical work and waiting)

Disaggregation of activities

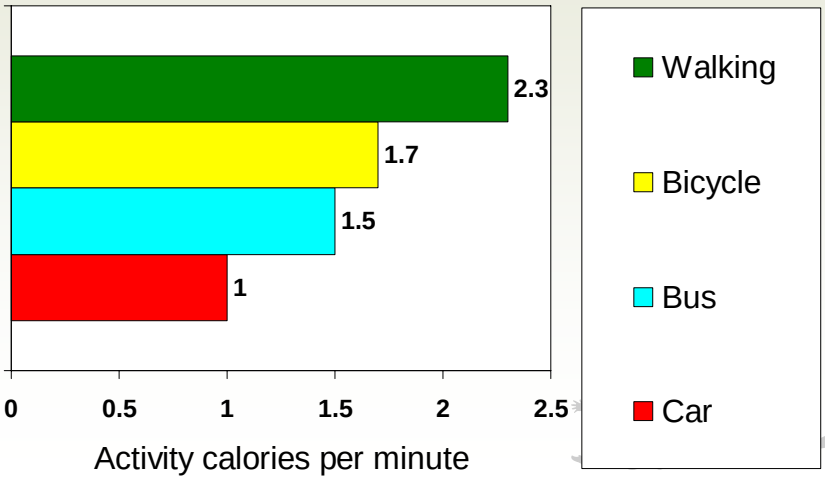
Structured activities (clubs and tuition)

- Structured ball games
- Other structured sport
- Organisations
- Tuition

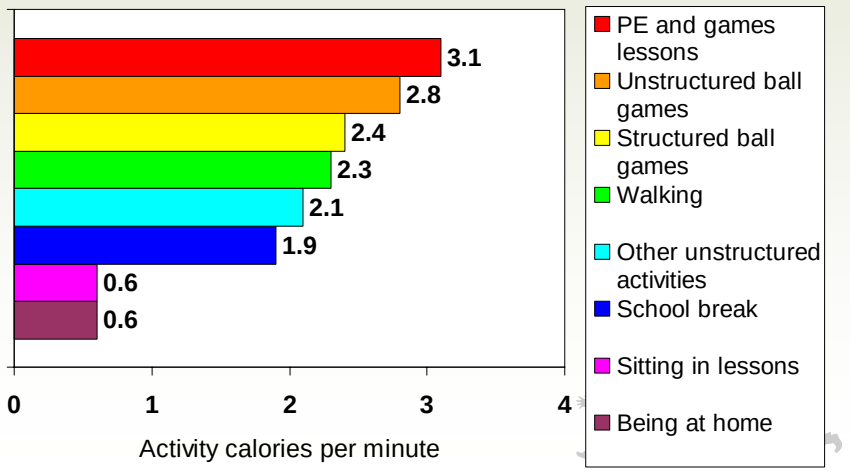
Unstructured activities (playing)

- Unstructured ball games
- Other unstructured sport
- Other outdoor play

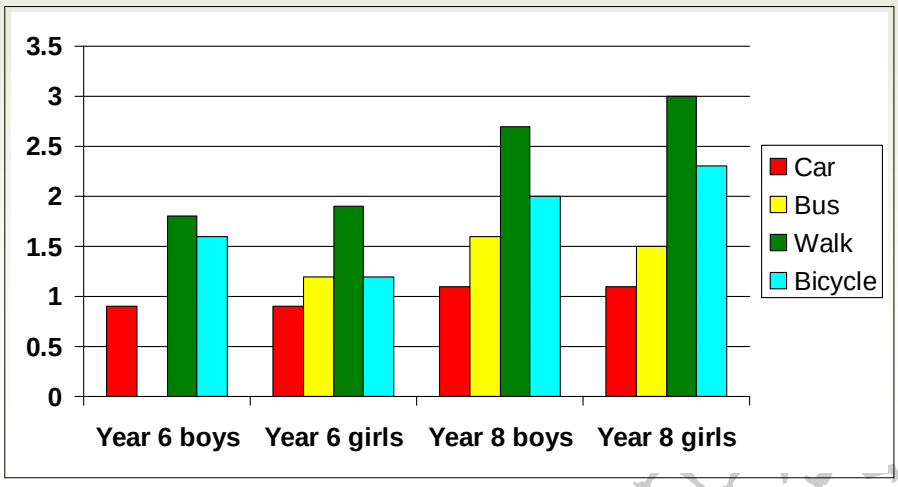
Intensity of modes of travel used by children



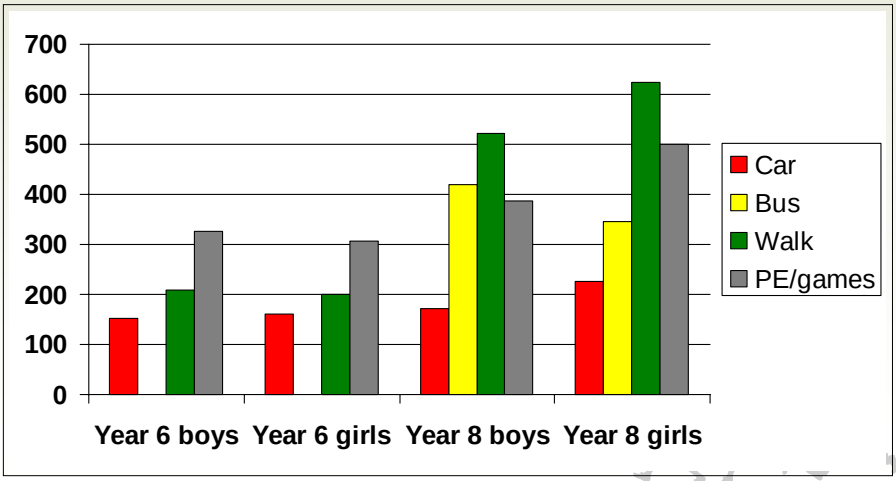
The extremes of physical activity in children's lives (middle level of classification)



Intensity of children's travel (activity calories per minute)



Energy used in a week in school travel compared with PE/games



Activities per week classified by method of travel

	Walk	Car	Other	Total
School	2.6	1.4	0.5	4.6
Clubs & tuition	0.3	0.8	0.0	1.2
Playing	0.7	0.4	0.0	1.2
Out on trips	0.6	1.7	0.2	2.4
Other homes	1.5	1.4	0.2	3.1
Other	0.3	0.3	0.0	0.7
Total	5.9	6.1	1.1	13.1

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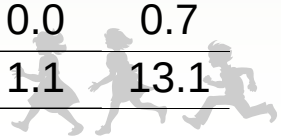

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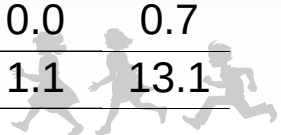
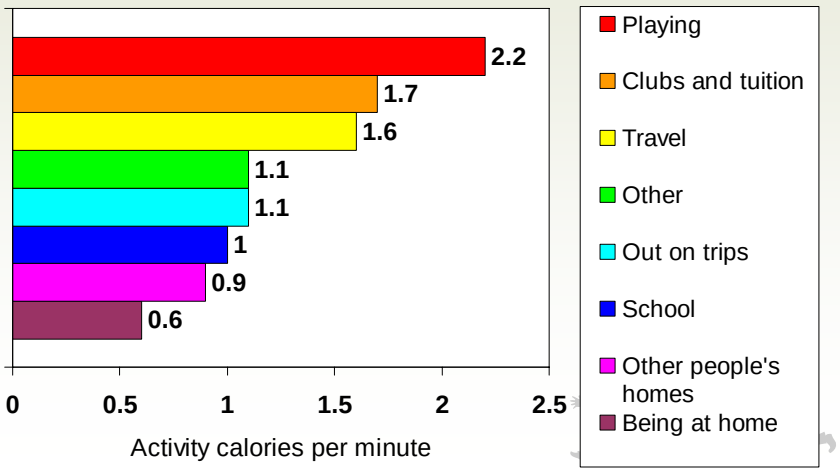


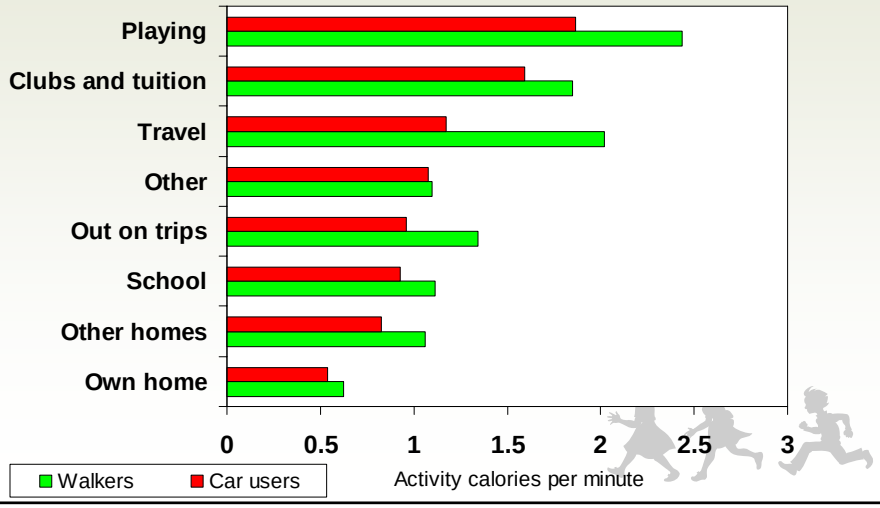
Intensity of children's activities (broad level of classification)



Intensity of activities classified by method of travel used

	Walk	Car
PE and games	3.5	2.4
Other lessons	0.6	0.5
School break	2.0	1.7
Clubs & tuition	1.7	1.6
Playing	2.4	2.0
Out on trips	1.5	1.0
Other homes	1.1	0.8
Overall	1.7	1.3

Intensities for children spending more time walking or more time in the car



The impact of walking buses

- An evaluation framework was developed using walking buses as the example
- Two surveys carried out:
  - Postal survey of all primary schools in Hertfordshire with a walking bus, and of those which could have one but did not
  - Detailed study over one year of five walking buses

The impact of walking buses - topics covered

- The process of setting up the walking bus
- The perceived benefits and disbenefits from the point of view of the school, the co-ordinator, the volunteers and the children
- The attitudes of the children using it and those who had ceased using it
- The barriers to setting up walking buses

Key findings on walking buses

- 62% of the children said they previously travelled by car
- But, not all used it every day, and some still did sometimes
- So, we estimate that about half the trips on walking buses were previously by car
- Those who previously travelled by car, walk an extra 1.5km each day they use the walking bus
- This is an extra 22 minutes a day, or 110 minutes a week of physical activity
- There is not likely to be much reduction in traffic because many parents drop children at school in the course of a longer journey

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Conclusions

- The British government has a increasing walking and cycling to school as an explicit objective
- It is funding a number of initiatives to achieve this
- It is possible to establish children's activity levels over the day objectively
- Children can obtain significant quantities of physical activity during their everyday lives
- Walking to school can provide significant quantities of exercise
  - comparable in scale to PE lessons

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More conclusions

- Most of children's car use is not to school but on other trips, often for the benefit of parents
- Children tend to go by car to structured activities and walk to play
- Hence, the shift from unstructured to structured out-of-home activities may have led to less walking

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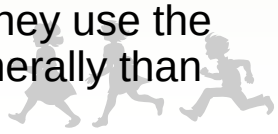
More conclusions

- Unstructured physical activities tend to use more calories than the equivalent structured ones
- Children are least active when they are at home, hence they should be encouraged to be out of the home
- Children who walk to activities are more active when they arrive than those who travel by car
- Children who walk more than they use the car, tend to be more active generally than those who use the car more



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More conclusions

- About half the children on walking buses previously travelled by car
- Children who switched from using the car to using a walking bus were found to be having nearly two hours of extra physical activity a week
- But, there is likely to be little effect on traffic levels

For more information:

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- Phone: +44 20 7679 1554

Suggestions for further dissemination welcome