

## **Supplementary material**

Supplement to: Dalene KE, Kolle E, Steene-Johannessen J, et al. Device-measured sedentary time in Norwegian children and adolescents in the era of ubiquitous internet access: Secular changes between 2005, 2011 and 2018

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Supplemental Figure 8. Morning sedentary time accumulation patterns in 15-year old boys and girls

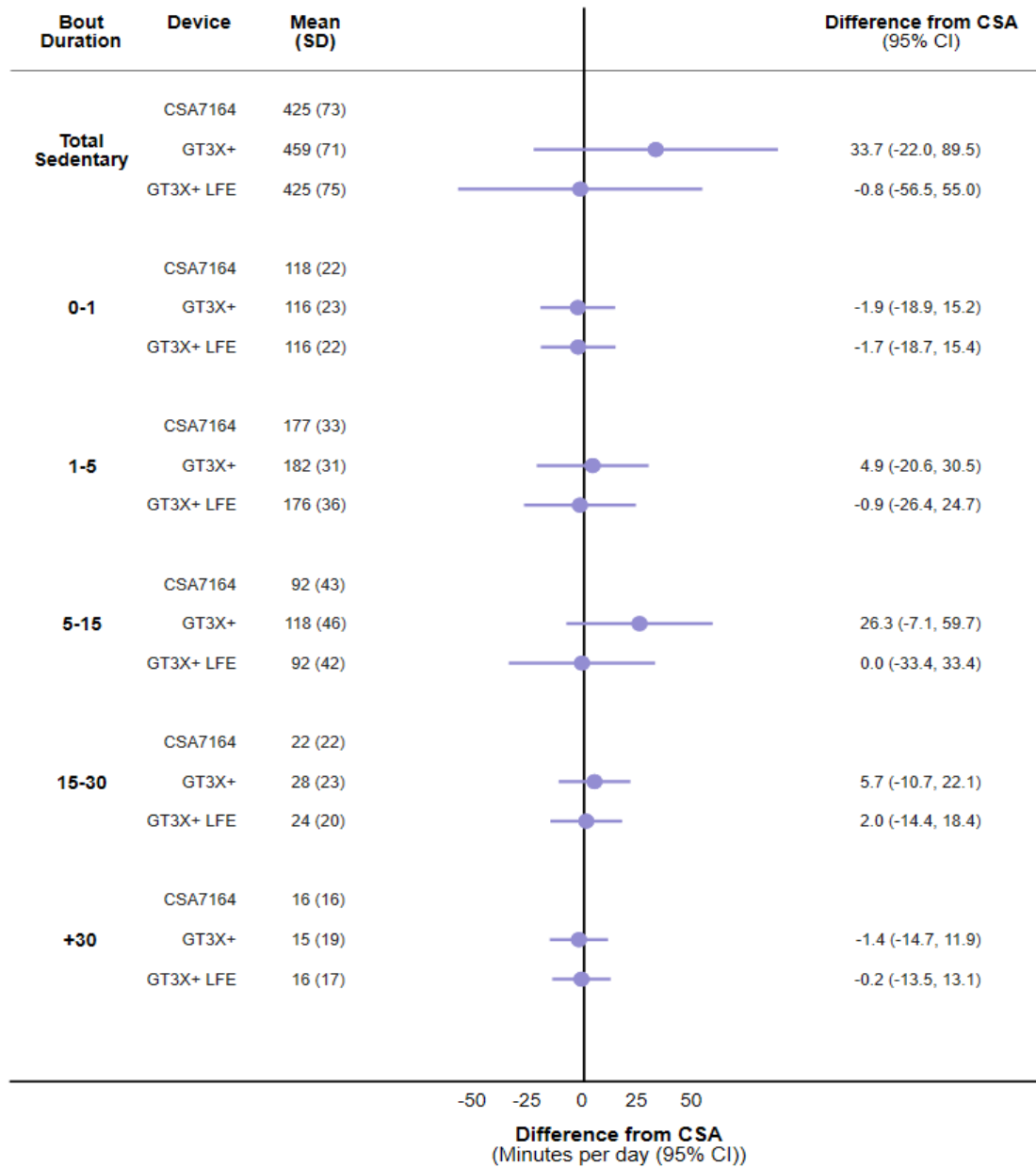
Supplemental Figure 9. School sedentary time accumulation patterns in 9-year old boys and girls

Supplemental Figure 10. School sedentary time accumulation patterns in 15-year old boys and girls

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## Supplemental Figure 1. Analysis of sedentary time and sedentary bouts using different Actigraph monitors and filtering

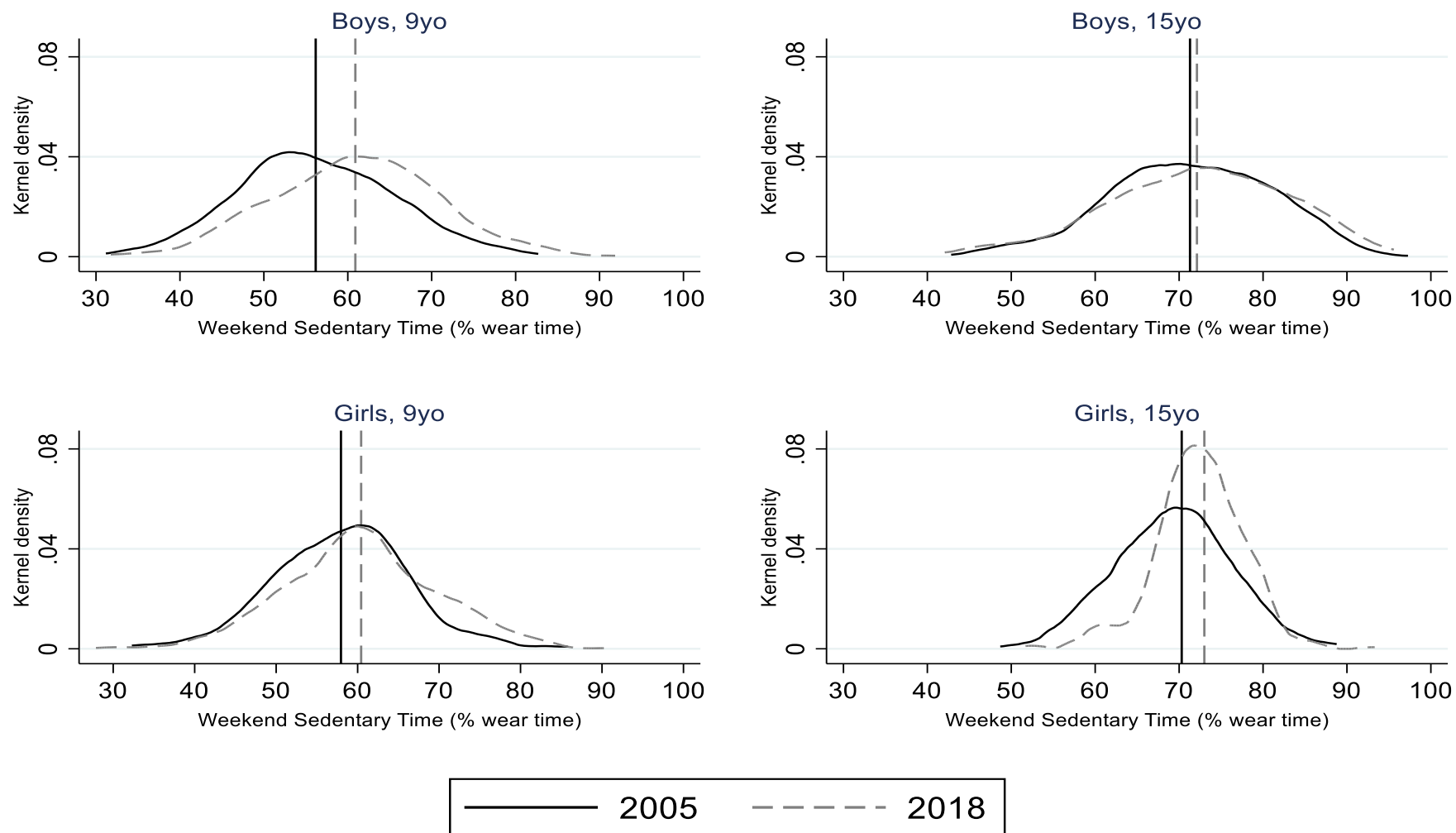


N = 14. Data was collected for three days in ten-year old Norwegian children as described in Grydeland et al. (2014).<sup>1</sup> Data-reduction was performed as detailed in the present manuscript. Actigraph CSA7161 monitors were used in PANCS1. Versions of the GT3X+ were used in PANCS2 and PANCS3. Data from GT3X+ monitors were analysed with (GT3X+ LFE) and without (GT3X+) activating the low-frequency extension (LFE) filter option. Using the LFE results in almost complete attenuation of inter-generation differences in sedentary time.

**Supplementary Table 1. Accelerometer data inclusion criteria**

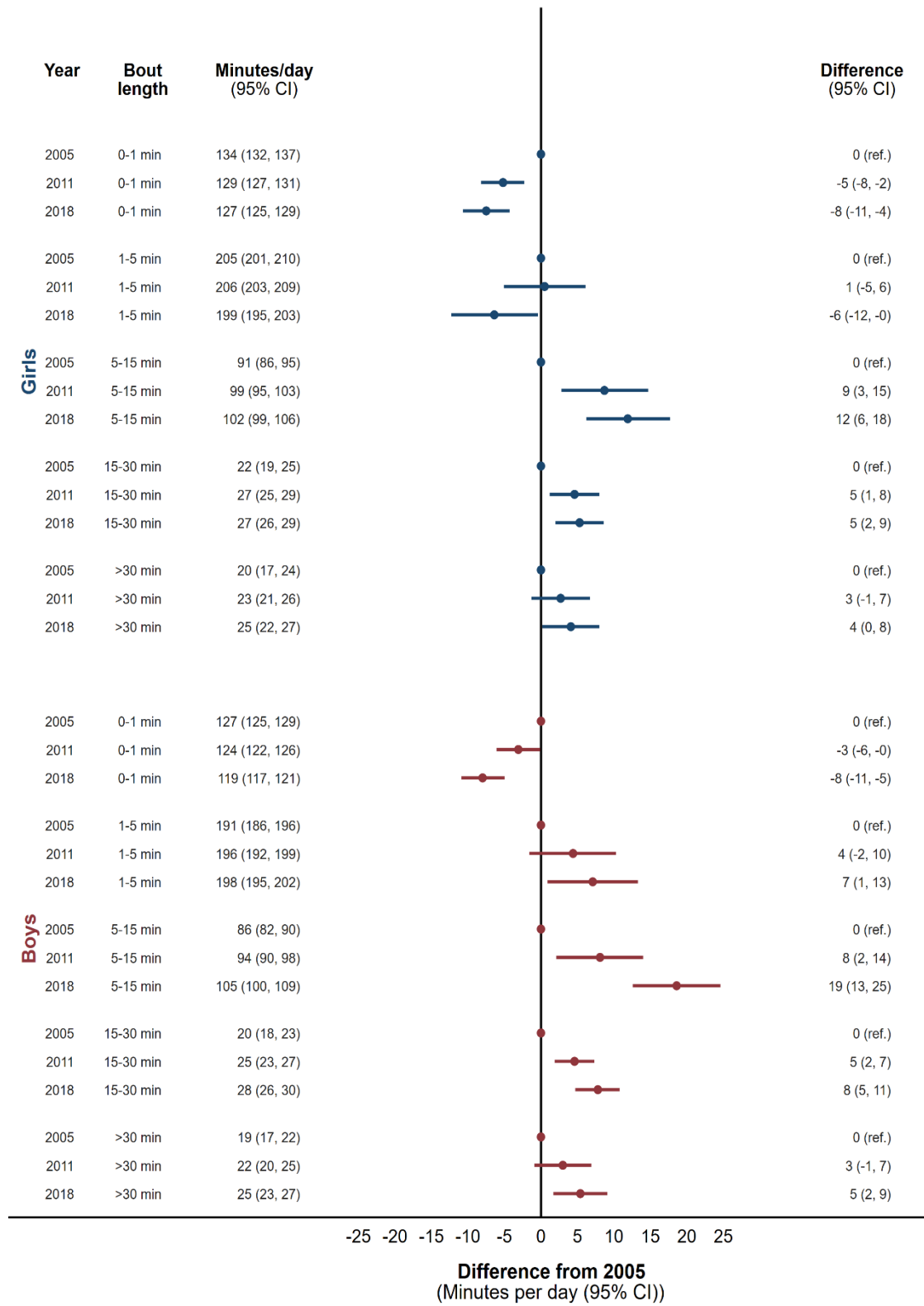
	<b>Time</b>	<b>Valid day/segment (% of day/segment)</b>	<b>Included if # of valid days/segments:</b>
Weekdays	06:00:00- 00:00:00	≥480 minutes (44%)	≥1
Weekend days	06:00:00- 00:00:00	≥480 minutes (44%)	≥1
<b>School day segments</b>			
Morning	06:00:00- 08:59:50	≥90 minutes (50%)	≥1
School 9-year olds	09:00:00- 13:00:00	≥180 minutes (75%)	≥1
Afterschool 9-year olds	13:00:10- 22:00:00	≥270 minutes (50%)	≥1
School 15-year olds	09:00:00- 14:00:00	≥240 minutes (75%)	≥1
Afterschool 15-year olds	14:00:10- 23:00:00	≥270 minutes (50%)	≥1

**Supplemental Figure 2. Crude distribution of sedentary time on weekend days by age-group and sex**



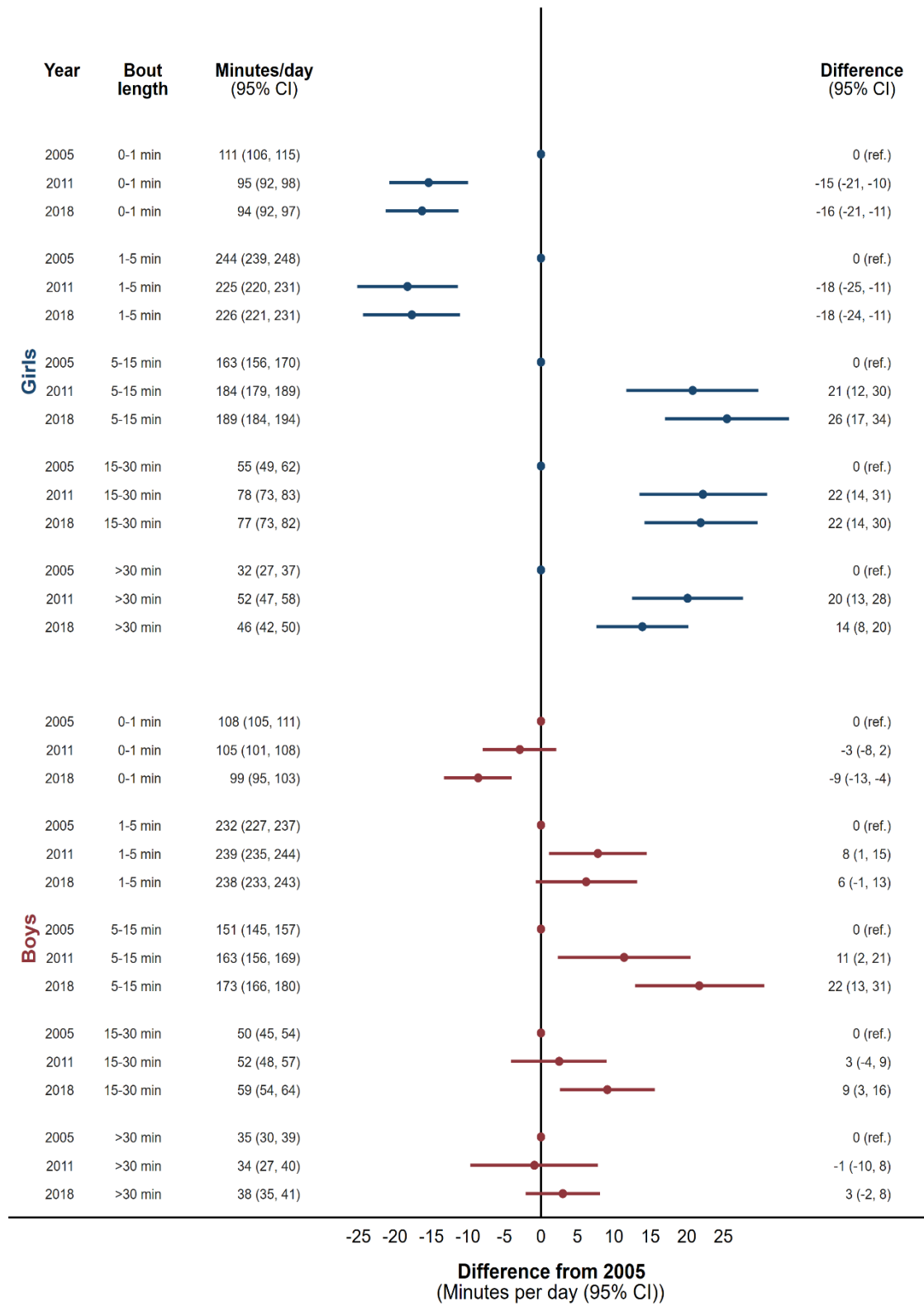
Data are normalized to total weekend wear-time. The distribution is not adjusted for age or minutes of daylight. Vertical lines are survey medians.

### Supplemental Figure 3. Weekday sedentary time accumulation patterns in 9-year old boys and girls



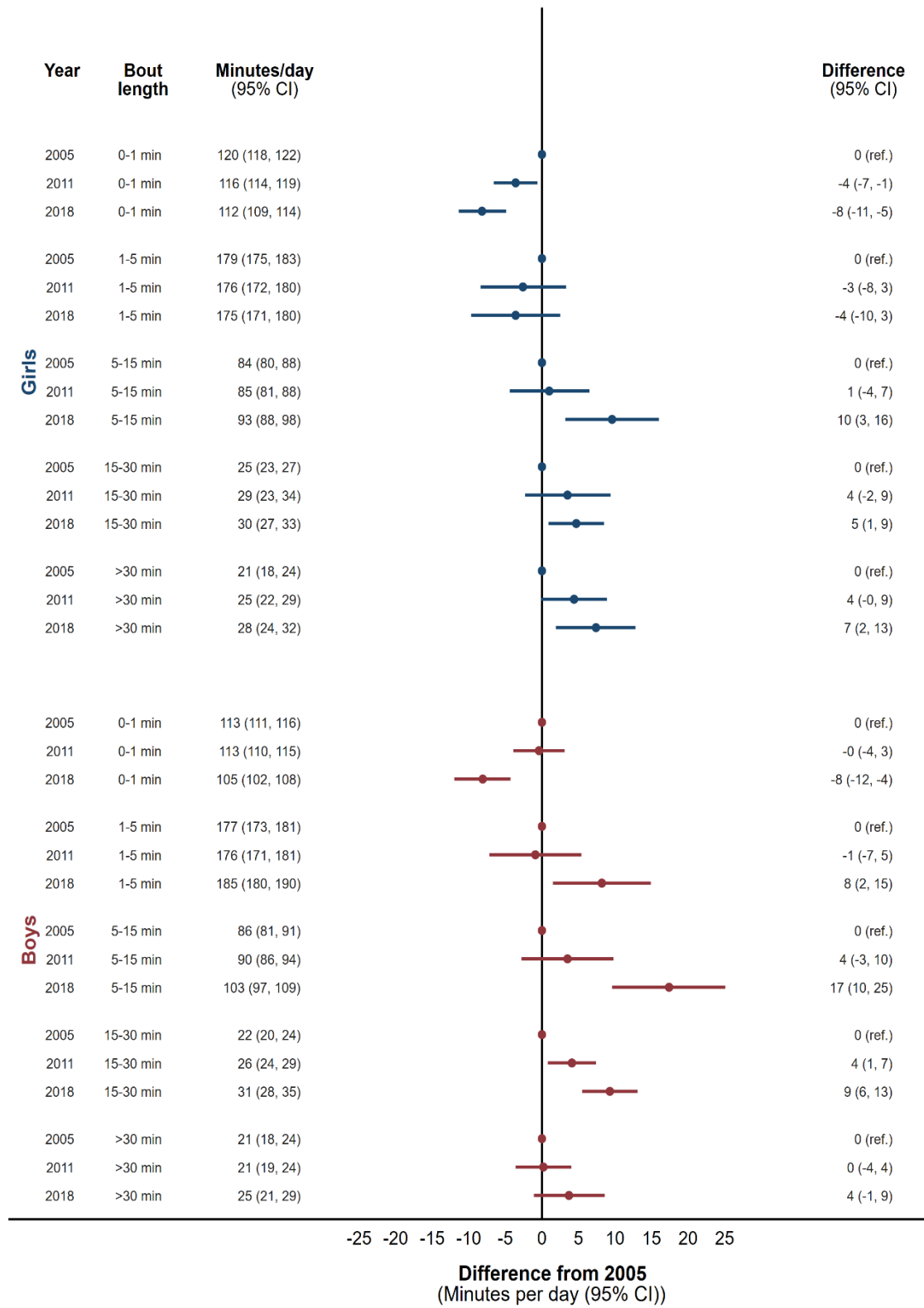
Adjusted for age, minutes of daylight, and weekday wear-time.

**Supplemental Figure 4. Weekday sedentary time accumulation patterns in 15-year old boys and girls**



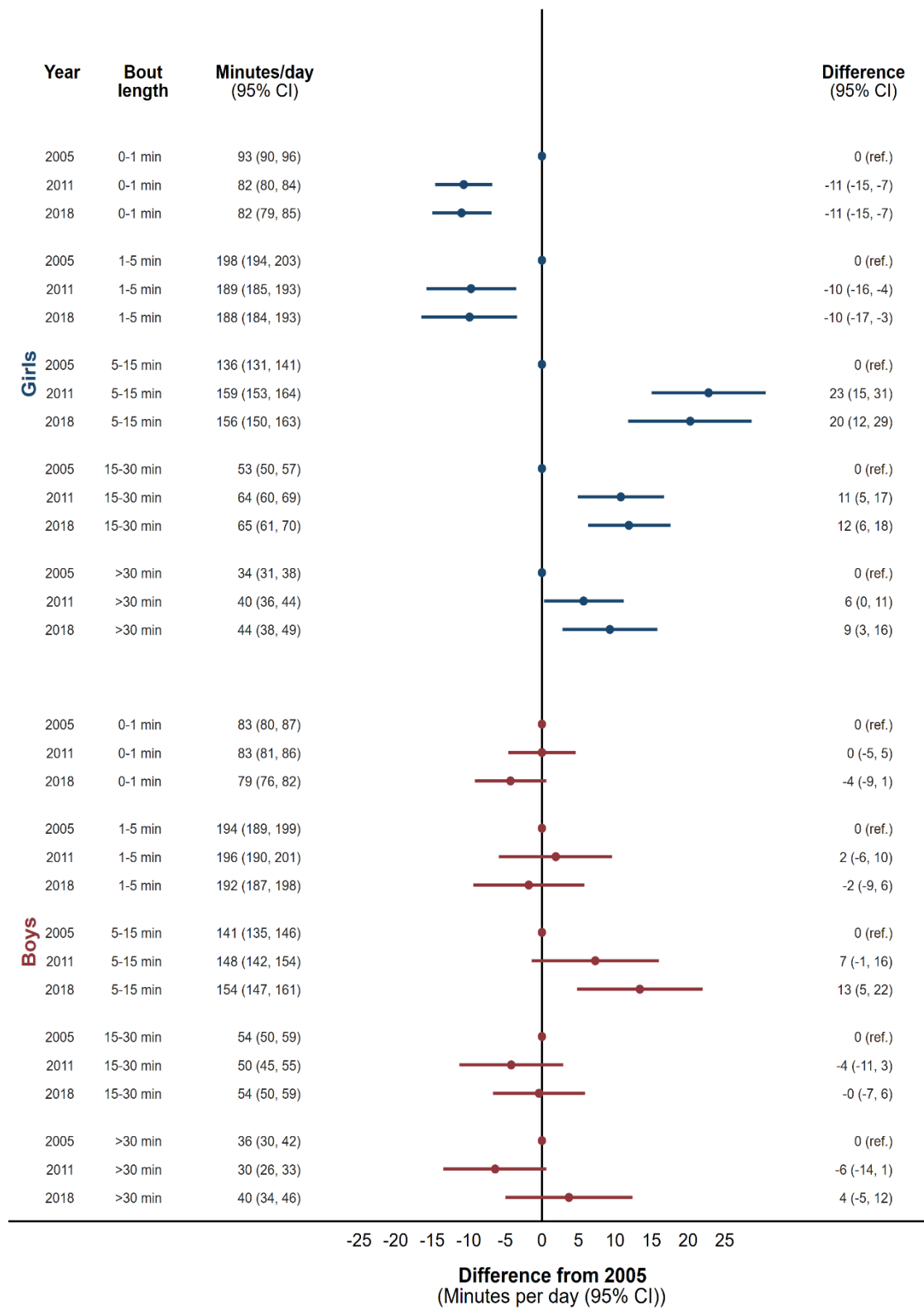
Adjusted for age, minutes of daylight, and weekday wear-time.

**Supplemental Figure 5. Weekend sedentary time accumulation patterns in 9-year old boys and girls**



Adjusted for age, minutes of daylight, and weekend wear-time.

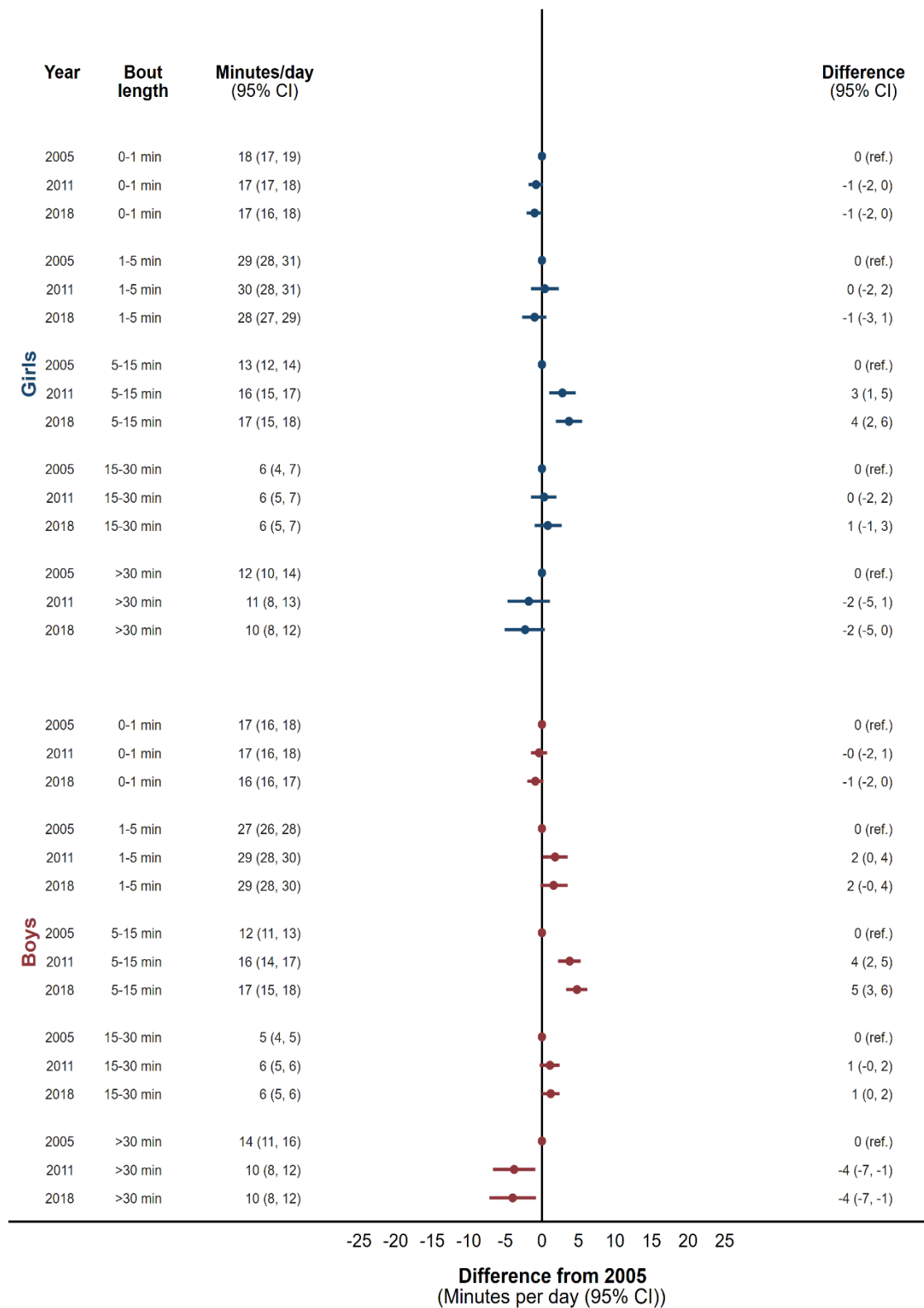
**Supplemental Figure 6. Weekend sedentary time accumulation patterns in 15-year old boys and girls**



Adjusted for age, minutes of daylight, and weekend wear-time.

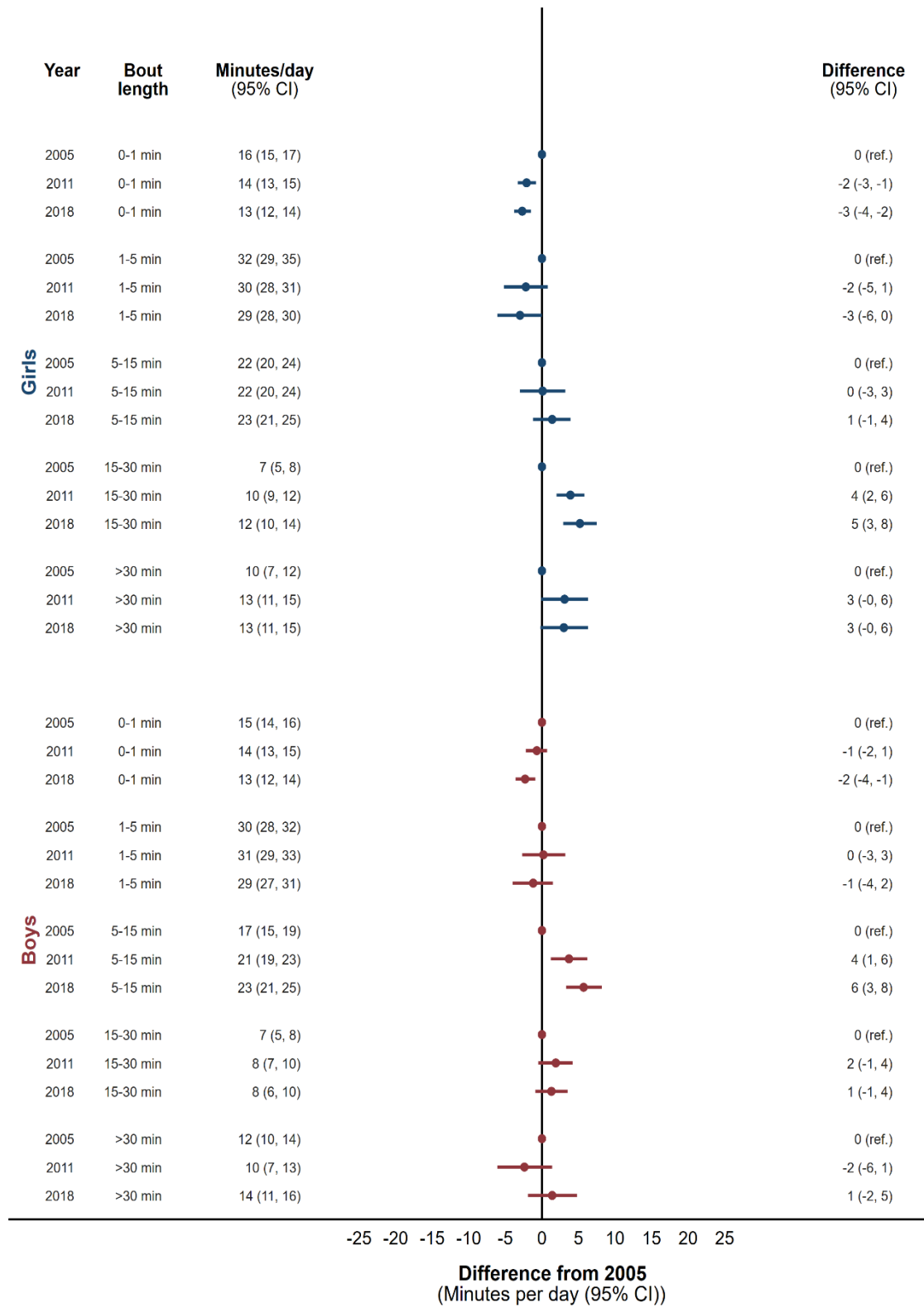


### Supplemental Figure 7. Morning sedentary time accumulation patterns in 9-year old boys and girls



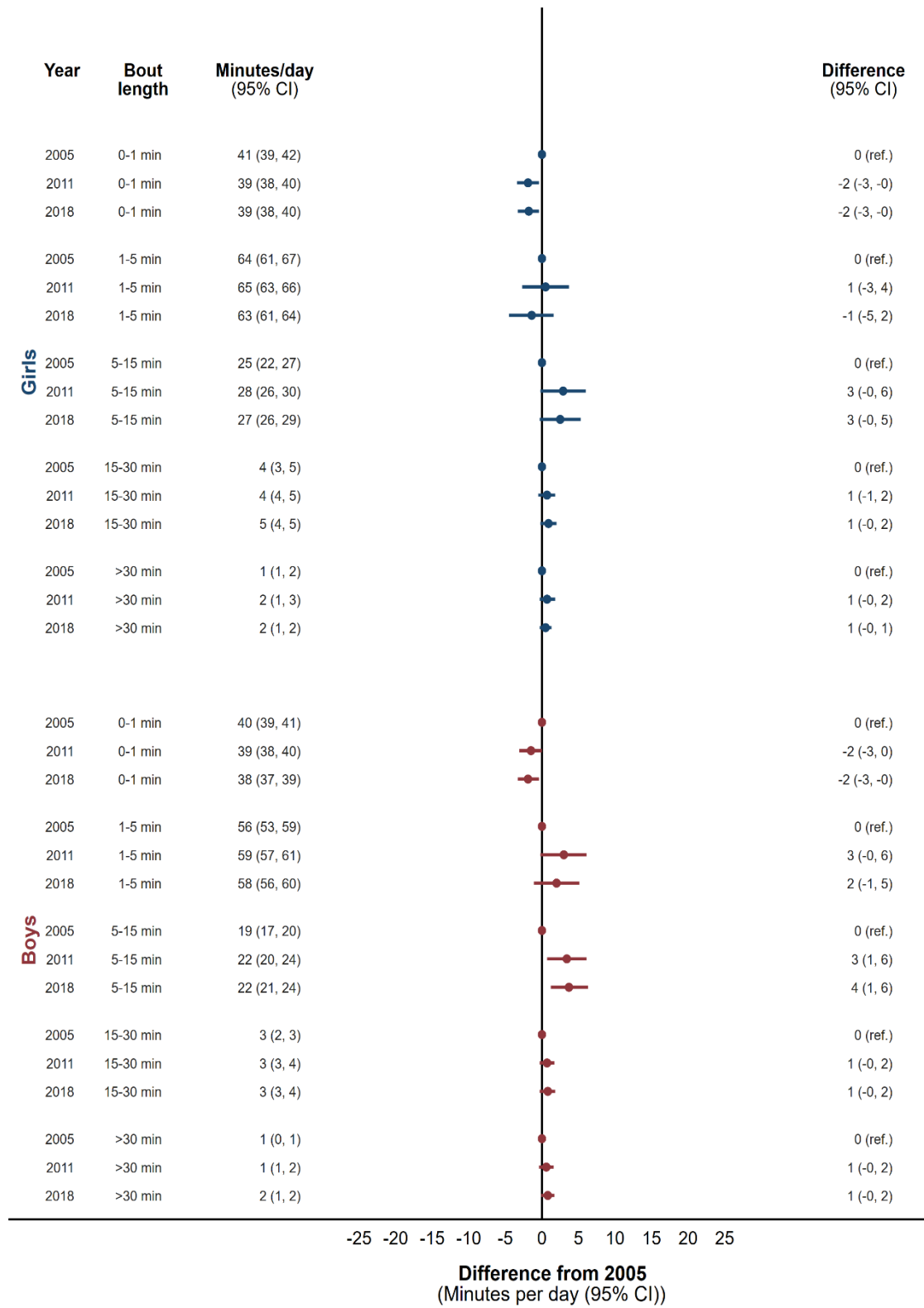
Girls; n = 1253, boys; n = 1224. Adjusted for age, minutes of daylight, and wear-time during mornings. Inclusion criteria shown in Supplemental Table 1.

### Supplemental Figure 8. Morning sedentary time accumulation patterns in 15-year old boys and girls



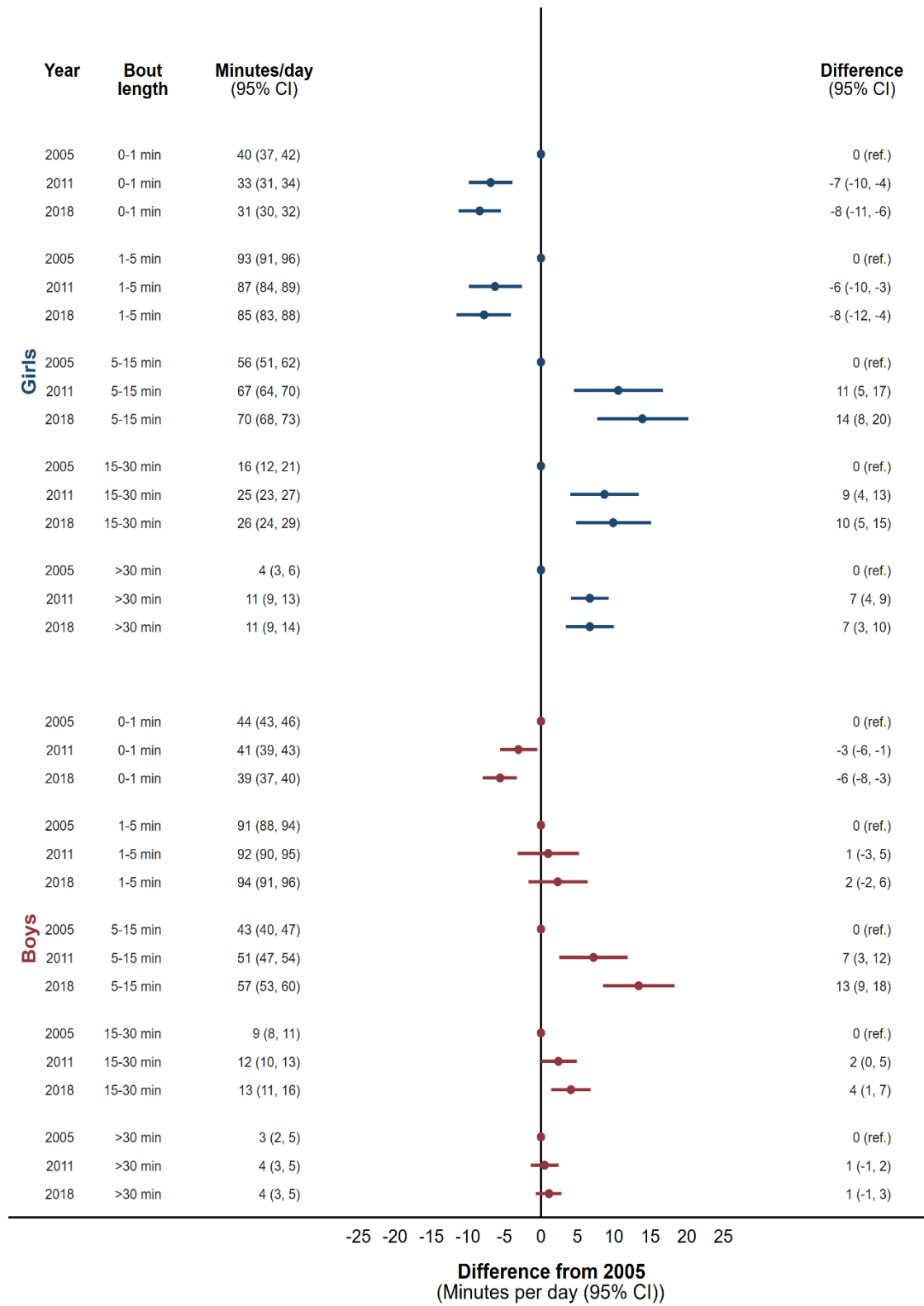
Girls; n = 787, boys; n = 607. Adjusted for age, minutes of daylight, and wear-time during mornings. Inclusion criteria shown in Supplemental Table 1.

### Supplemental Figure 9. School sedentary time accumulation patterns in 9-year old boys and girls



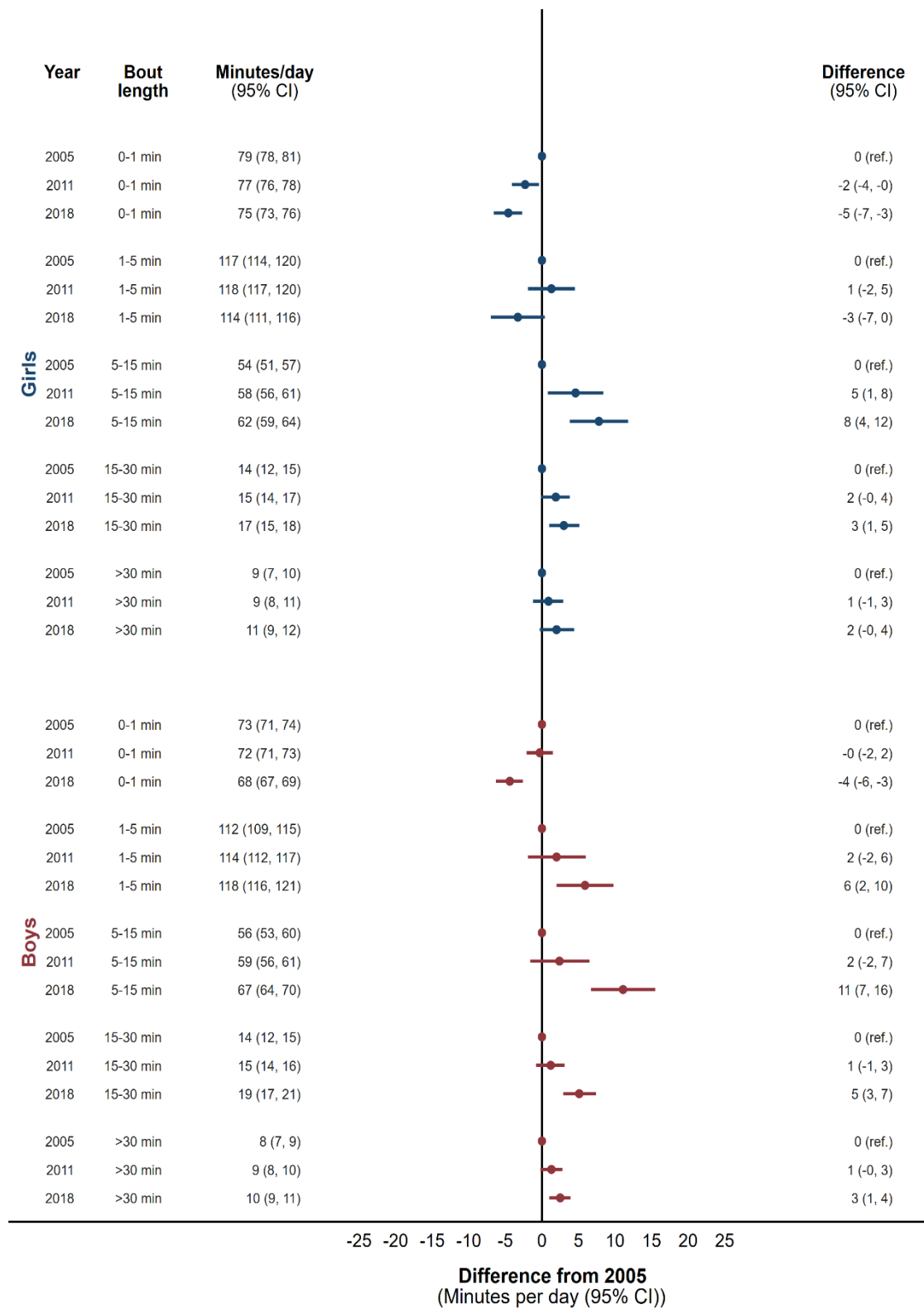
Girls; n = 1557, boys; n = 1589. Adjusted for age, minutes of daylight, and wear-time during school. Inclusion criteria shown in Supplemental Table 1.

### Supplemental Figure 10. School sedentary time accumulation patterns in 15-year old boys and girls



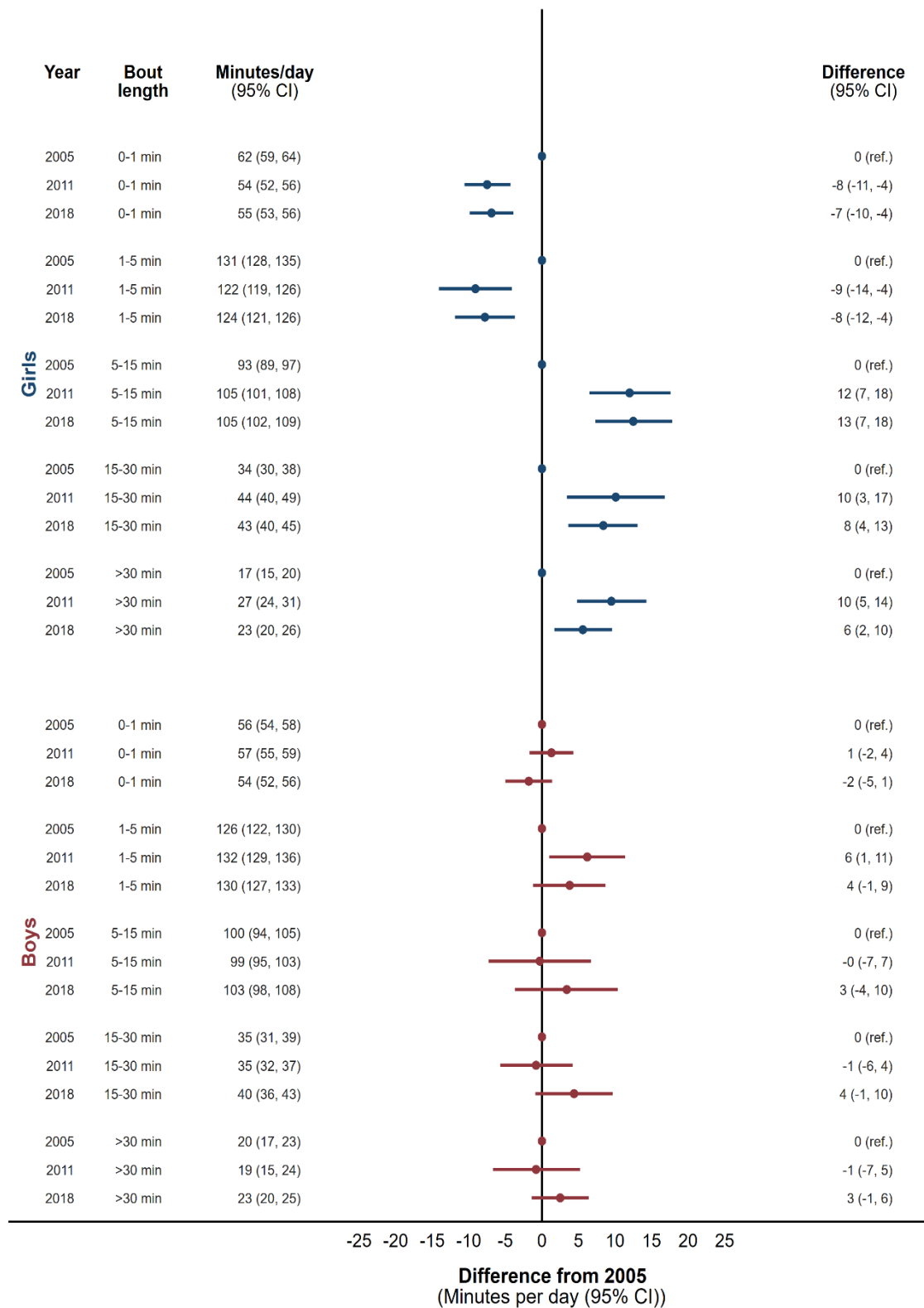
Girls; n = 1051, boys; n = 937. Adjusted for age, minutes of daylight, and wear-time during school. Inclusion criteria shown in Supplemental Table 1.

**Supplemental Figure 11. Afterschool sedentary time accumulation patterns in 9-year old boys and girls**



Girls; n = 1562, boys; n = 1594. Adjusted for age, minutes of daylight, and wear-time after school. Inclusion criteria shown in Supplemental Table 1.

## Supplemental Figure 12. Afterschool sedentary time accumulation patterns in 15-year old boys and girls



Girls; n = 1054, boys; n = 933. Adjusted for age, minutes of daylight, and wear-time after school. Inclusion criteria shown in Supplemental Table 1.

## References

1. Grydeland M, Hansen BH, Ried-Larsen M, Kolle E, Anderssen SA. Comparison of three generations of ActiGraph activity monitors under free-living conditions: do they provide comparable assessments of overall physical activity in 9-year old children? *BMC Sports Sci Med Rehabil* 2014; **6**: 26.