Description of Additional Supplementary Files

File name: Supplementary Data 1

File description: All physical activity metrics are averaged daily values measured over 7 consecutive days. The correlation coefficients (r or ρ) are reported, along with p-values adjusted for false discovery rate (FDR). FA-ADL LL: Lower limb subdomain score of FA-ADL (summation of items 6. Falling, 7. Walking, and 8. Sitting). Bold text highlights significant results ($p<0.05$).

File name: Supplementary Data 2

File description: All GDM metrics are averaged daily values measured over 7 consecutive days. The correlation coefficients (r or ρ) are reported, along with p-values adjusted for false discovery rate (FDR). All GDM metrics are averaged daily values measured over 7 consecutive days. The correlation coefficients (r or ρ) are reported, along with p-values adjusted for false discovery rate (FDR). FA-ADL UL: Upper limb subdomain scores of FA-ADL (summation of items 3. Food, 4. Dressing, and 5. Hygiene). Bold text highlights significant results ($p<0.05$).

File name: Supplementary Data 3

File description: analysis of sensor-derived physical activity metrics demonstrated generally high reliability across various measures of posture and locomotion as reported in Supplementary Data 3.

File name: Supplementary Data 4

File description: Estimated average values of the sensor-derived metrics for the GDM and physical activity. Values are represented as the Average (SE).

File name: Supplementary Data 5

File description: Model 1 uses demographics information, disease duration, and GAA as the input features. Model 2 uses sensor-derived physical activity metrics as the input features. Model 3 uses demographics information, disease duration, and GAA, as well as sensor-derived physical activity metrics as the input features. Model 4 uses demographics information, disease duration, and GAA, as well as sensor-derived GDM metrics as the input features. Model 5 uses demographics information, disease duration, and GAA, as well as both sensor-derived physical activity and GDM metrics as the input features. MAE, Mean absolute error; r, Correlation coefficient; R2, coefficient of determination. * The model predictions were performed without including GAA.

File name: Supplementary Data 6

File description: List of variables underwent feature selection using the wrapper exhaustive approach. The model predictions were performed without including GAA.

File name: Supplementary Data 7

File description: Source data with numerical values for plotting figures.

File name: Supplementary Data 8

File description: De-Identified Data