

# Supplemental Materials - Figures

## Control Subjects 31 - 35

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This document contains figures for the model-based analysis described. Figures 1 - 17 display data and model outputs for each data set with the following indicators: (a) electrocardiogram (ECG) trace, (b) measured intrathoracic (ITP) trace, (c) pulse pressure trace with systolic blood pressure (BP) in dark blue, (d) heart rate (HR) calculated from the R-R intervals in the ECG trace with the maximum HR in phase III and minimum HR in phase IV indicated with red dots, (e) ECG-derived respiratory signal, (f) combined thoracic pressure ( $P_{th}$ ) curve, (g) systolic BP with the line of regression through the increasing portion of the systolic BP curve in late phase II whose slope is  $\alpha$ , (h) HR trace overlaid with the optimized model output  $H$ , (i) predicted aortic and carotid baroreceptor strains, (j) predicted baroreflex-mediated parasympathetic ( $T_{p,b}$ ) and sympathetic ( $T_s$ ) outflows, and (k) respiratory-mediated parasympathetic ( $T_{p,r}$ ) outflow. The patients were not part of the study which measured ITP, so a FE of 40 mmHg was assumed in these cases. The ITP plots for the patients in panel (b) are left blank.

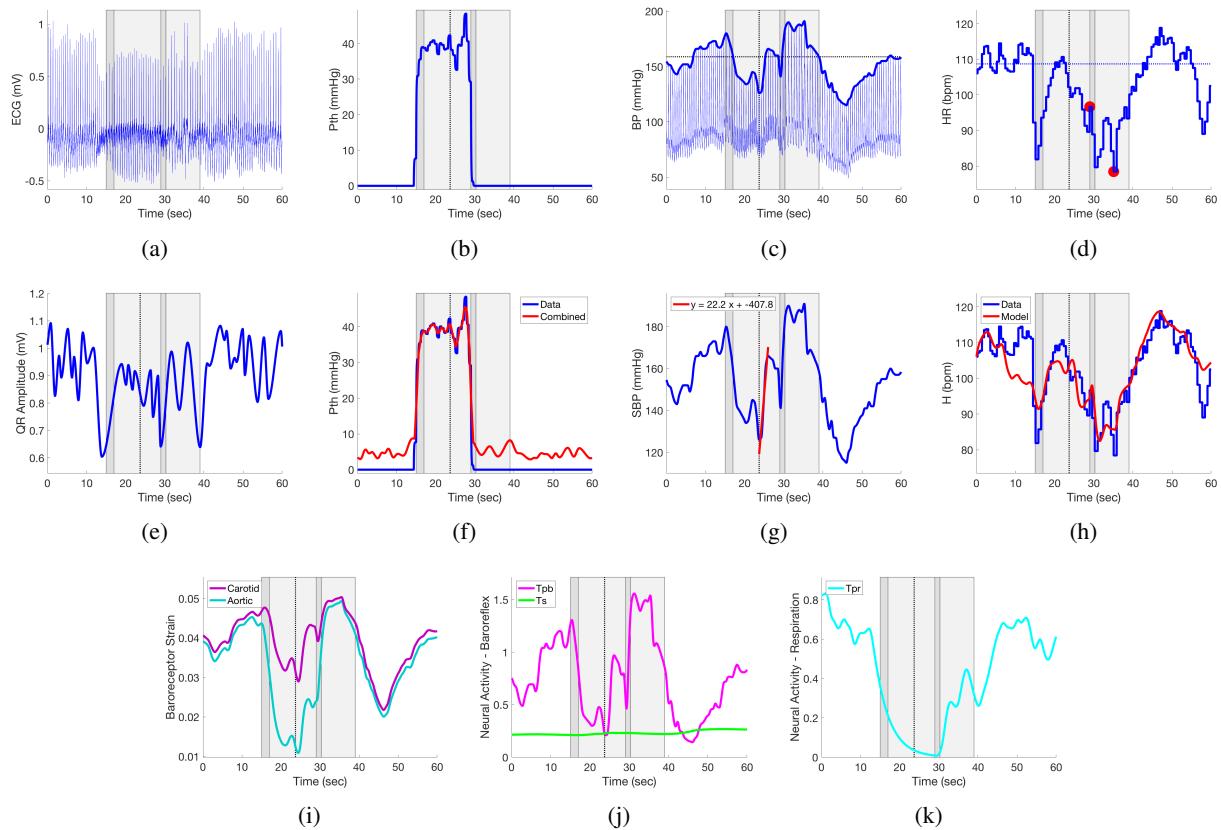


Figure 1: Control Subject 31 VM 3.

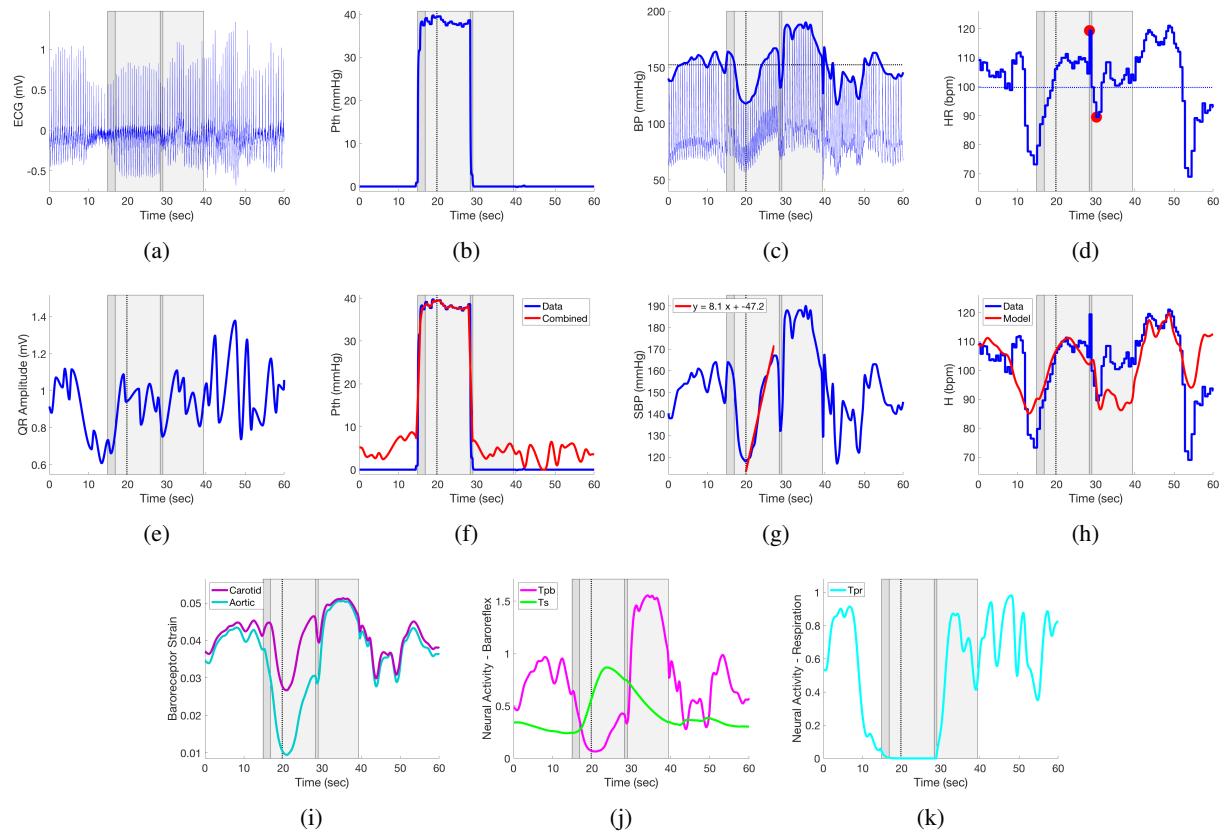


Figure 2: Control Subject 31 VM 4.

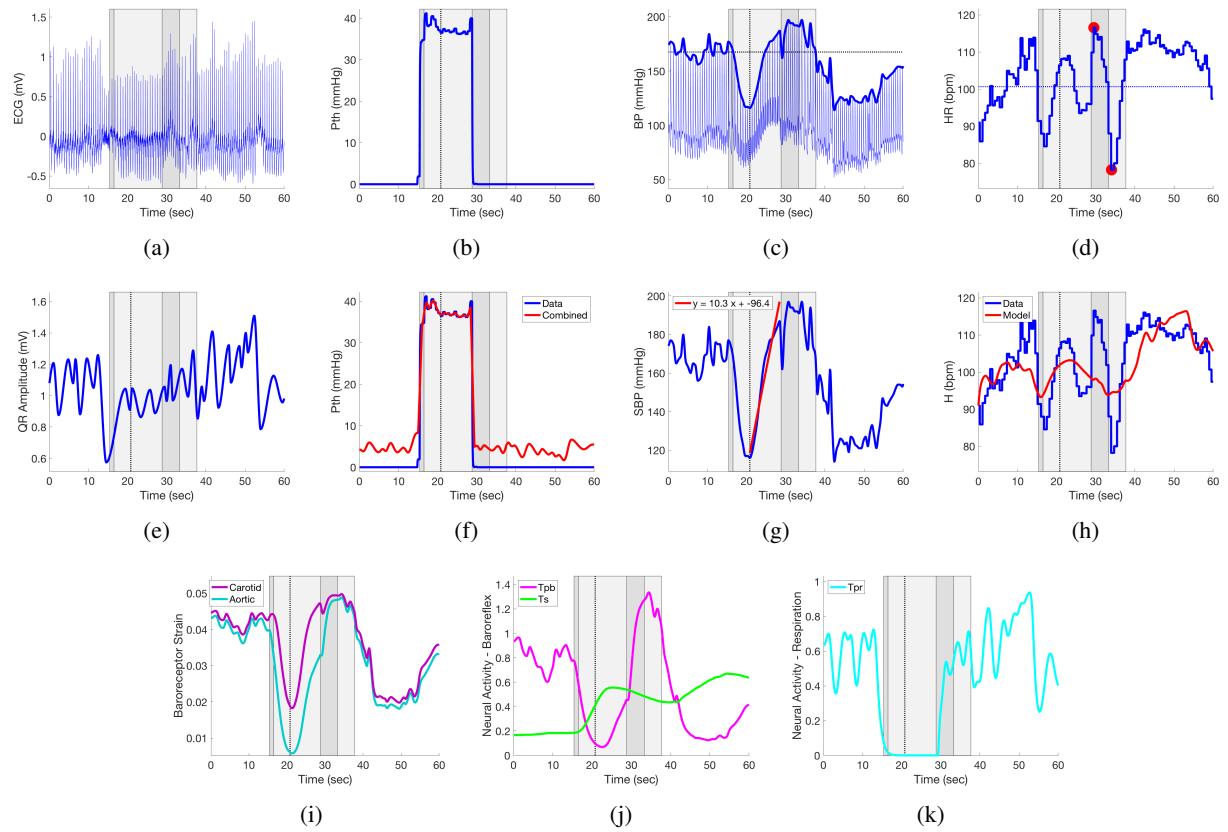


Figure 3: Control Subject 31 VM 6.

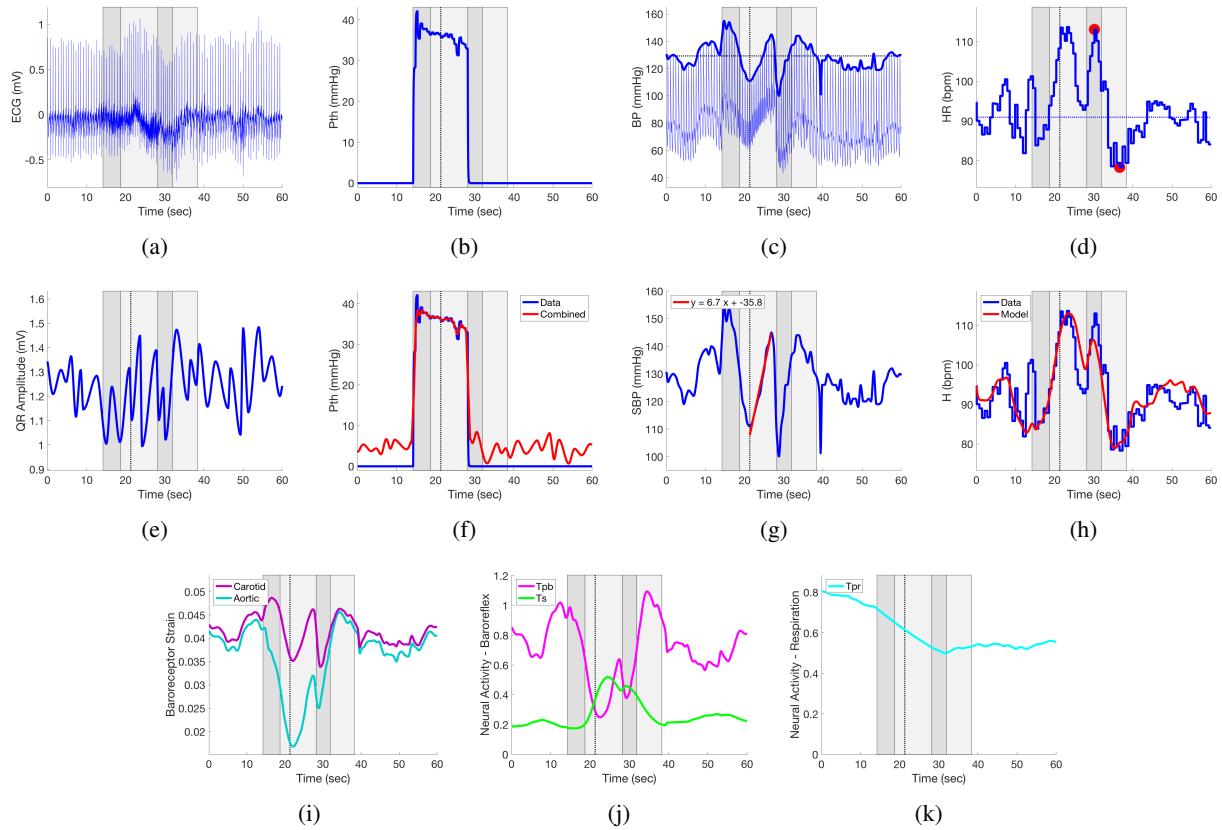


Figure 4: Control Subject 32 VM 3.

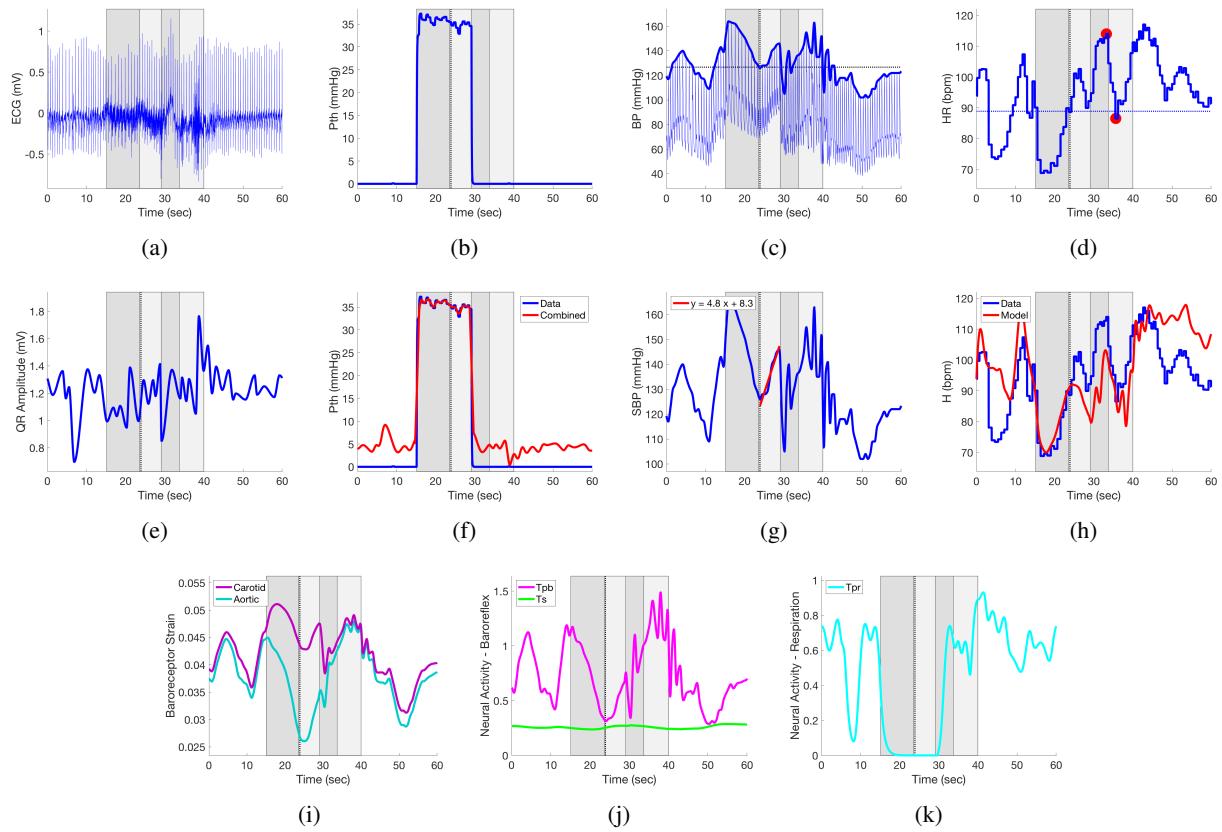


Figure 5: Control Subject 32 VM 4.

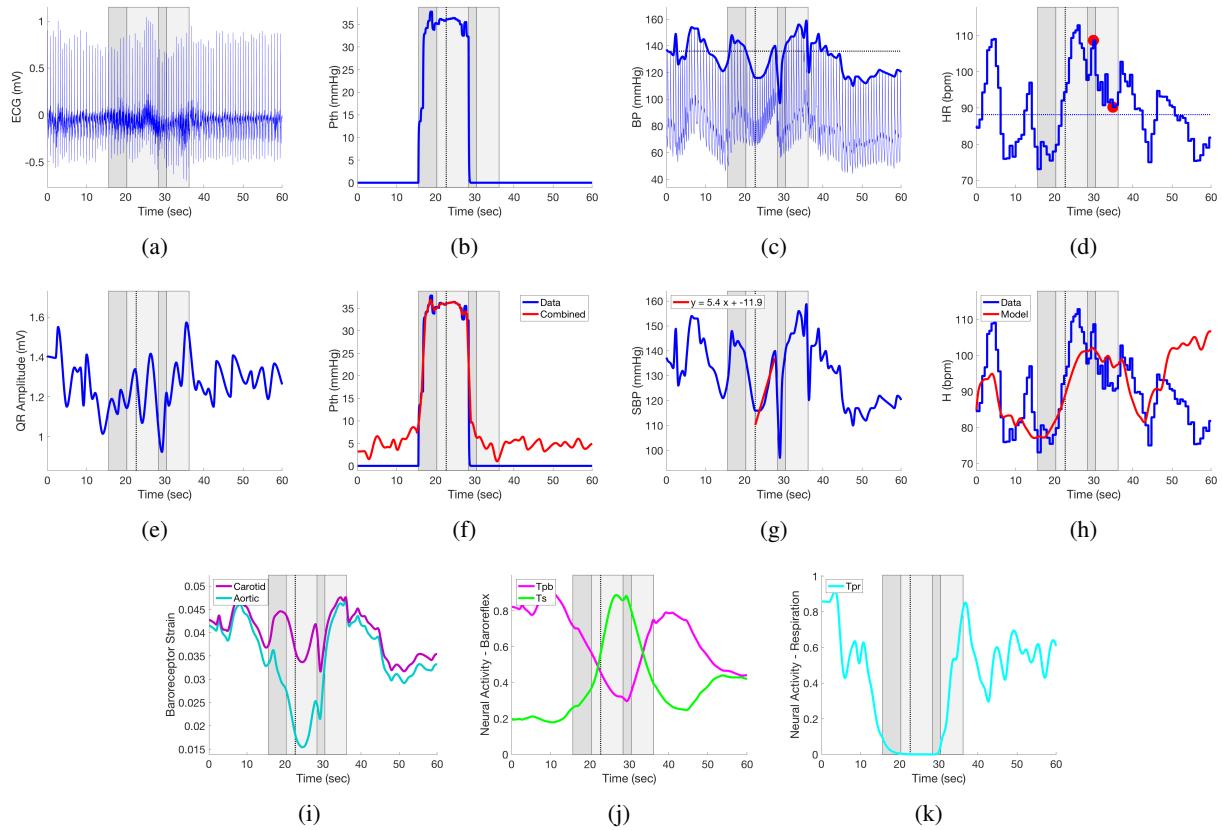


Figure 6: Control Subject 32 VM 5.

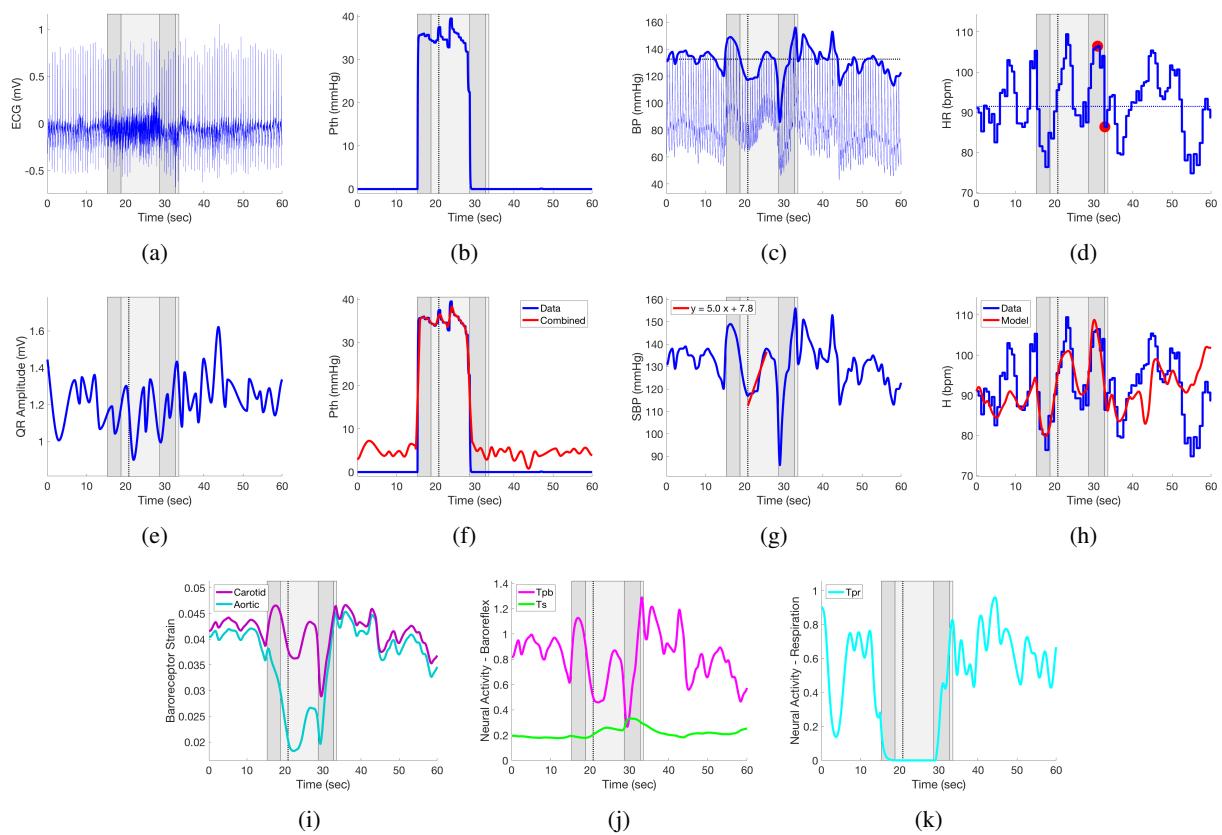


Figure 7: Control Subject 32 VM 6.

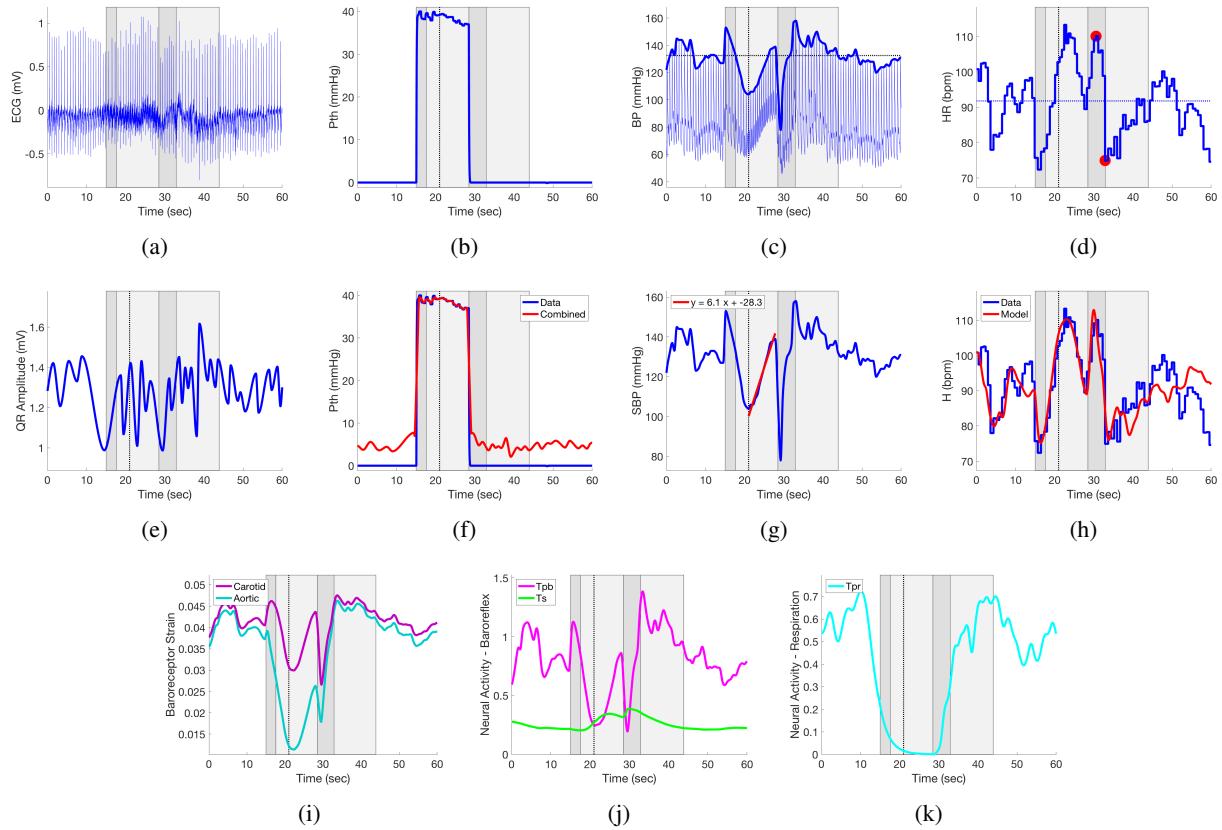


Figure 8: Control Subject 32 VM 7.

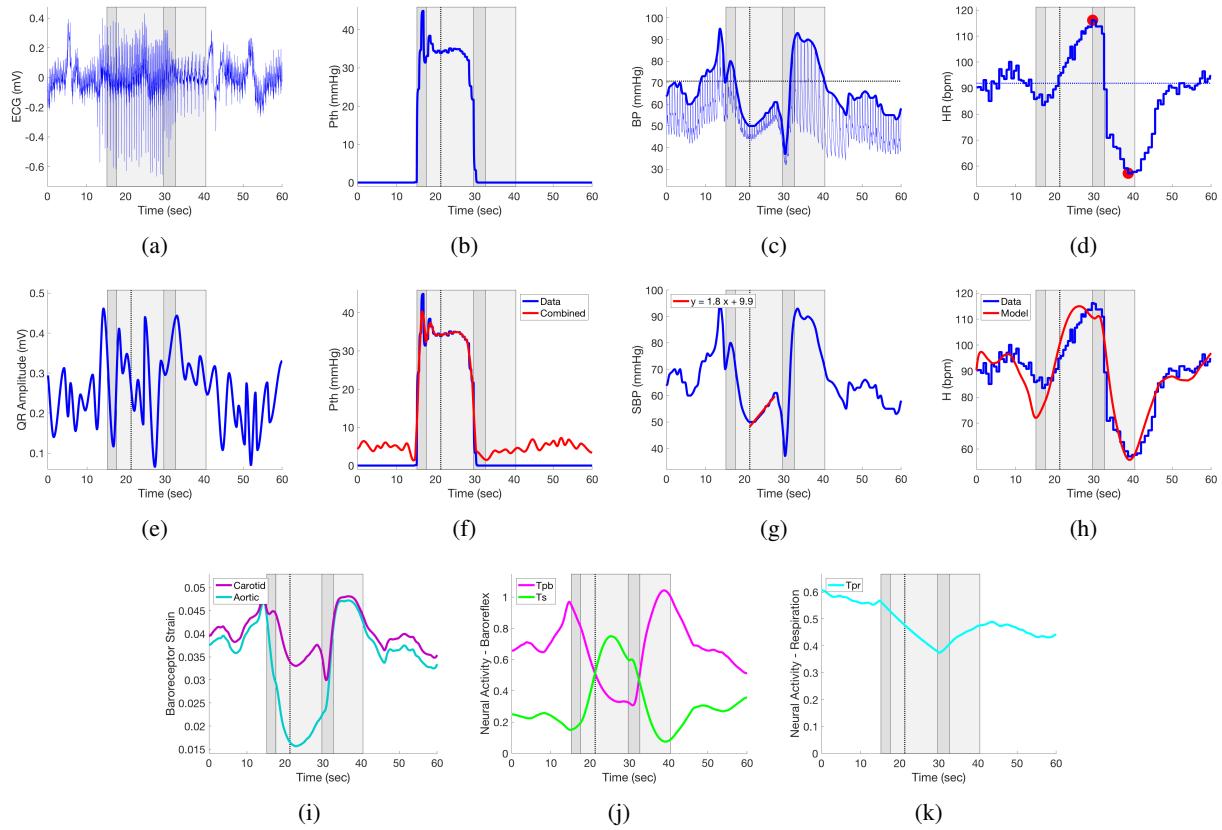


Figure 9: Control Subject 33 VM 6.

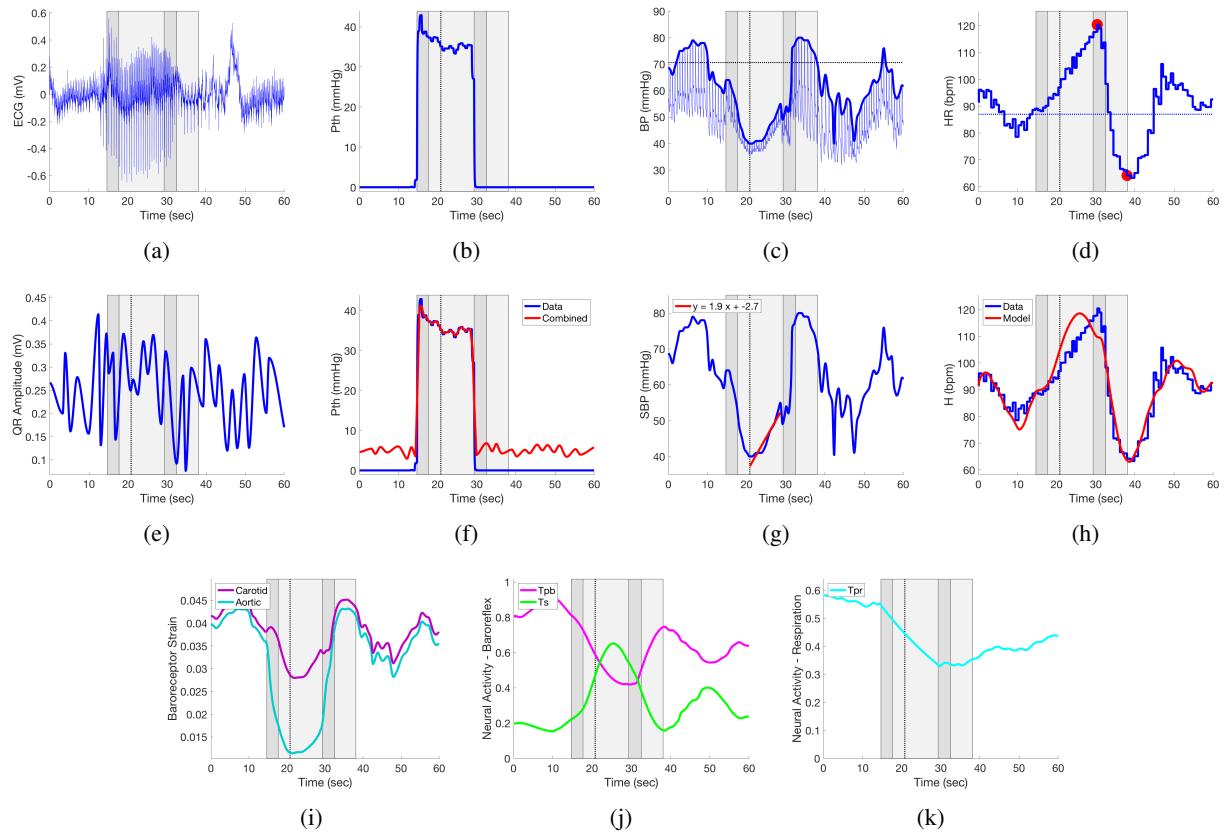


Figure 10: Control Subject 33 VM 10.

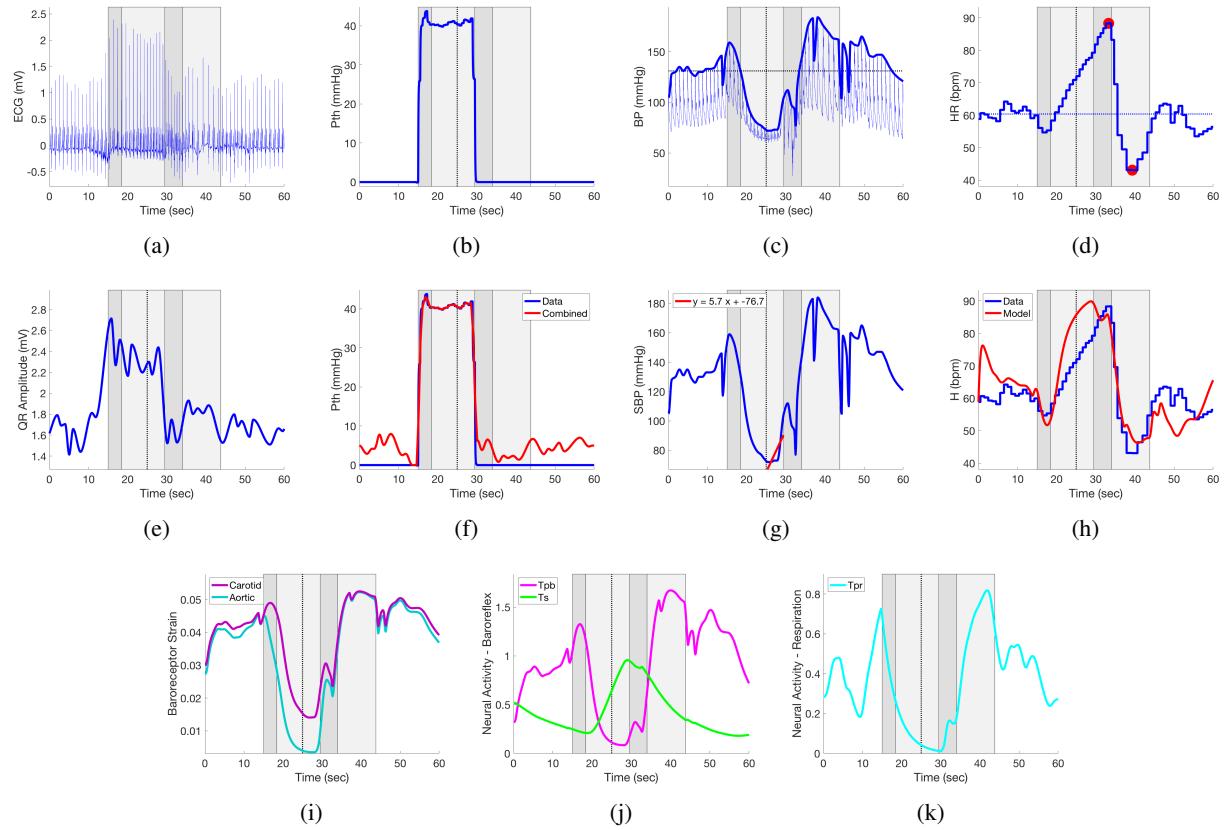


Figure 11: Control Subject 34 VM 4.

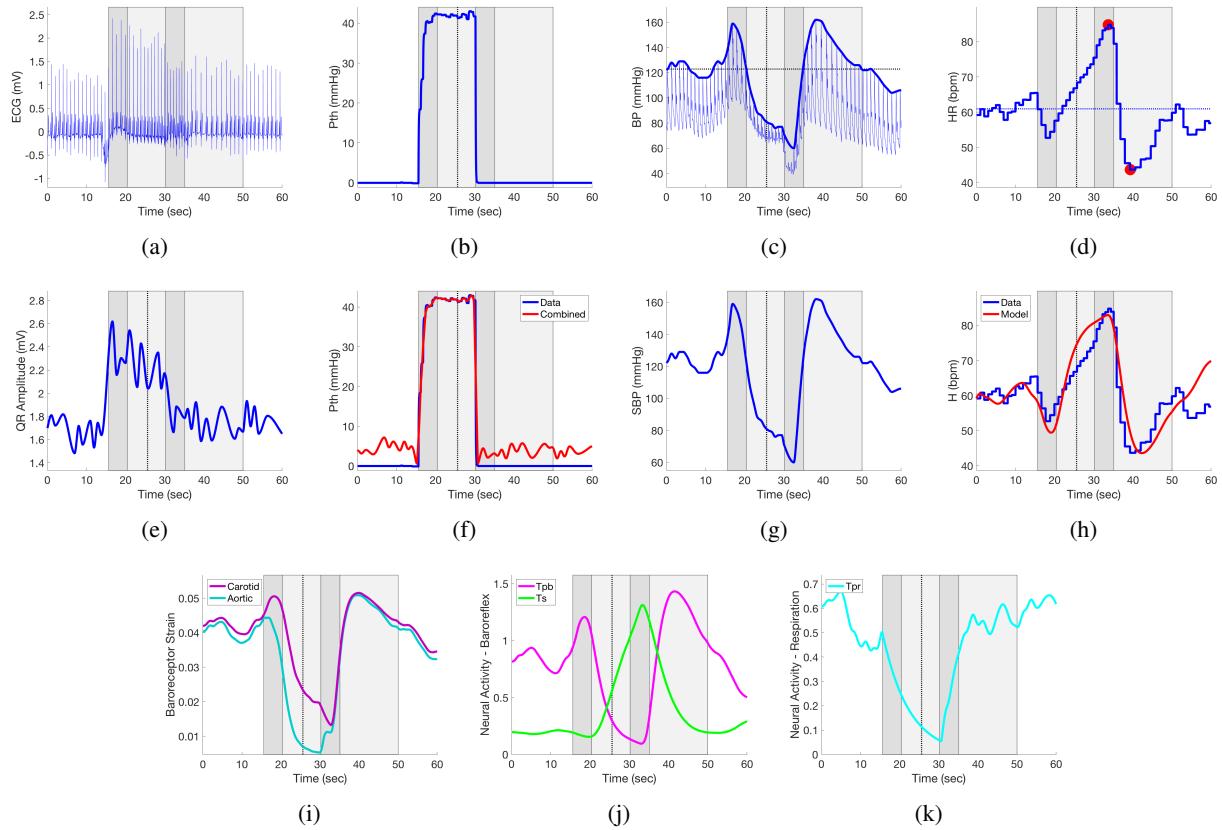


Figure 12: Control Subject 34 VM 6.

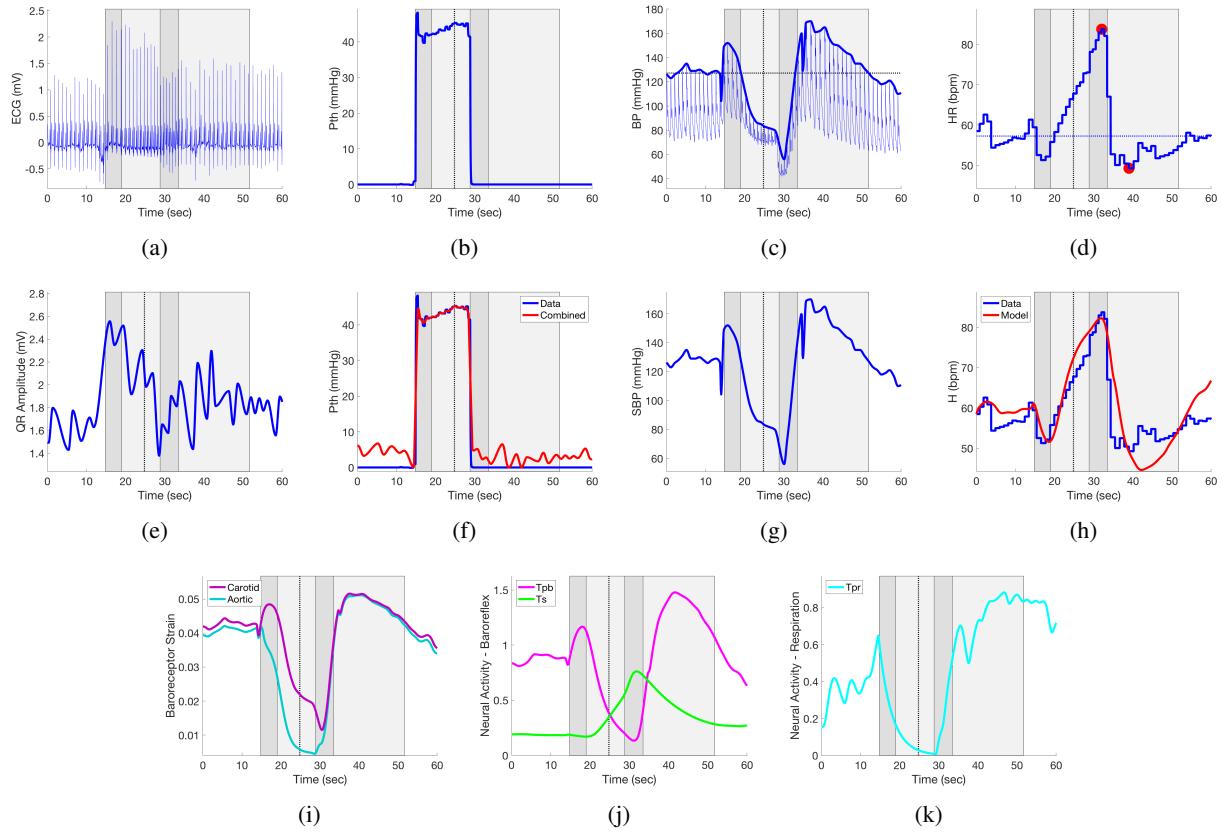


Figure 13: Control Subject 34 VM 7.

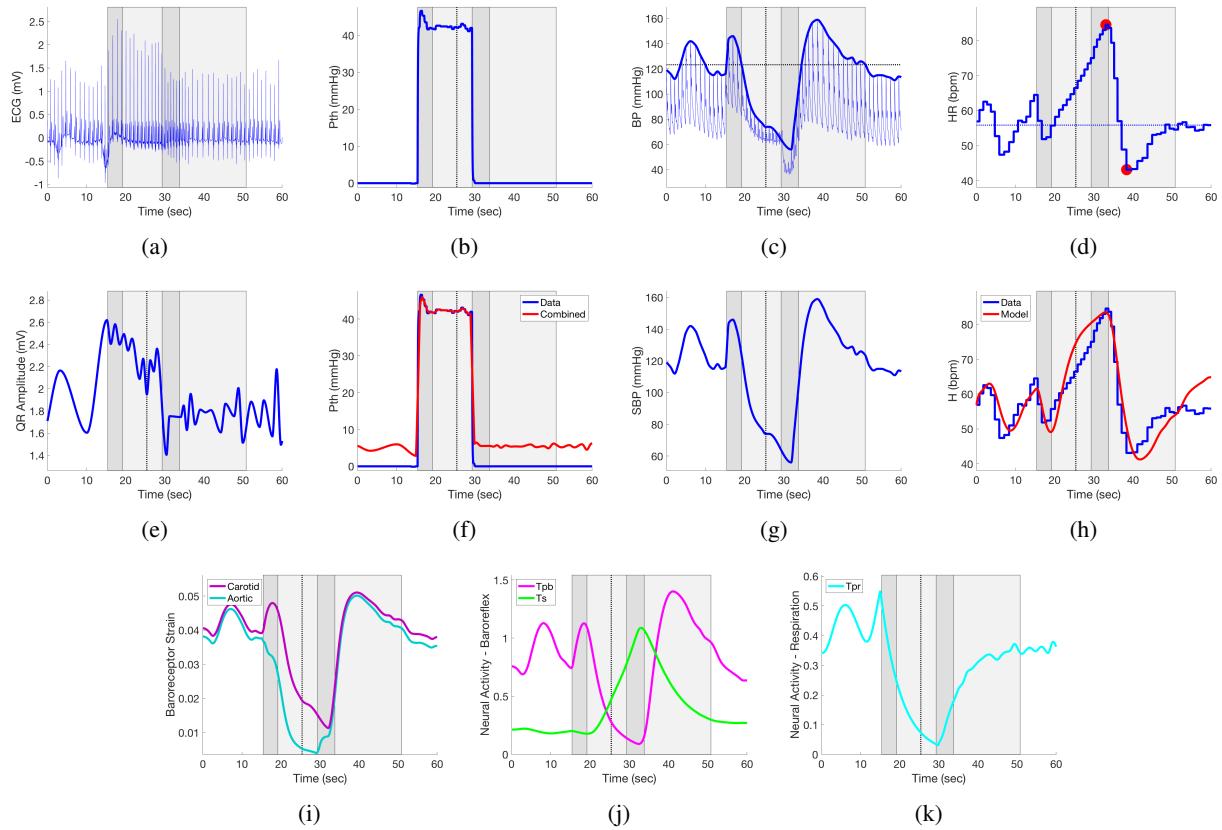


Figure 14: Control Subject 34 VM 8.

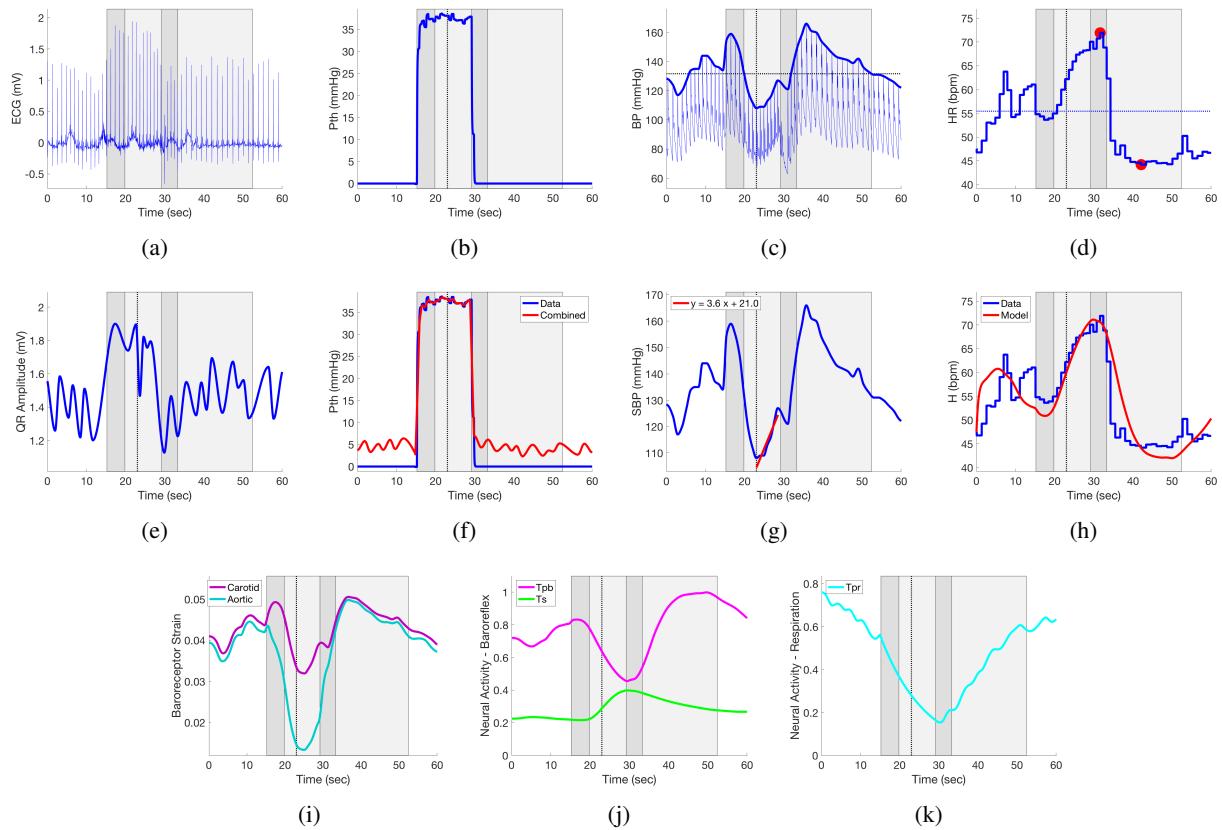


Figure 15: Control Subject 35 VM 3.

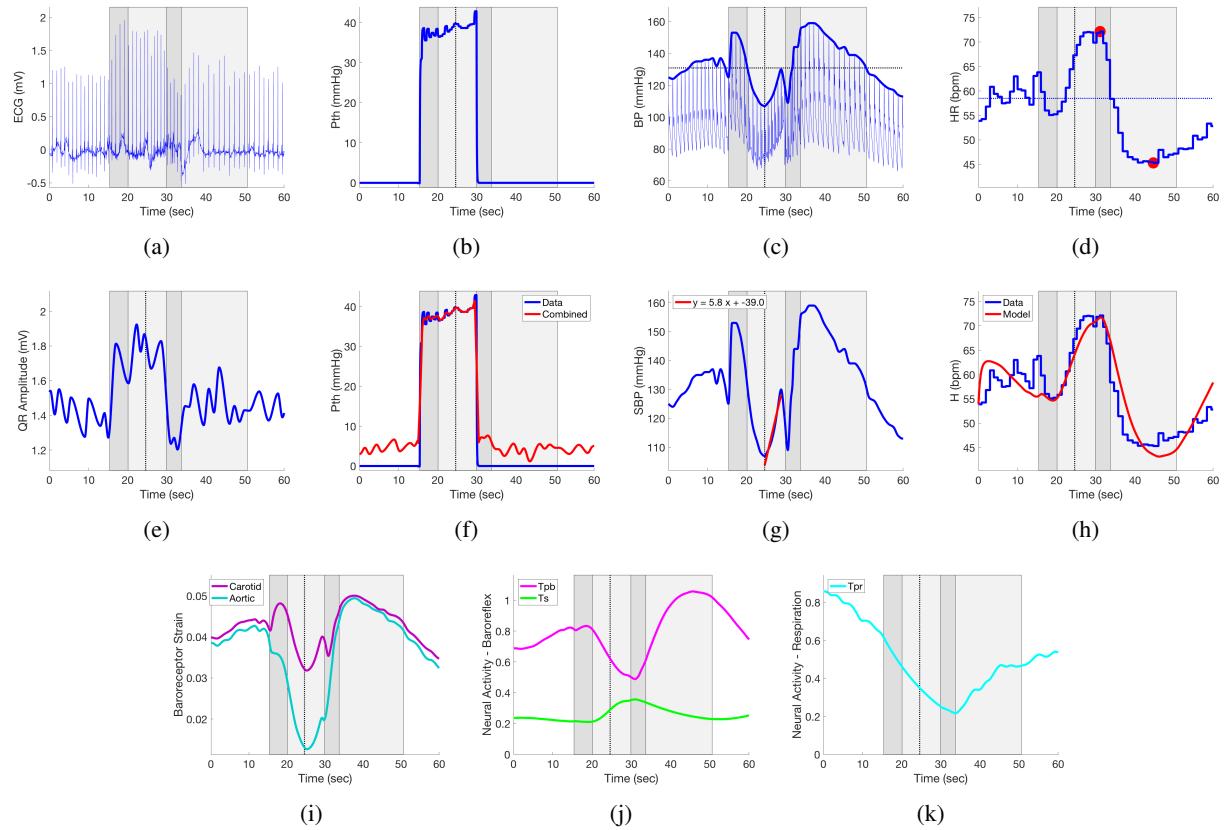


Figure 16: Control Subject 35 VM 4.

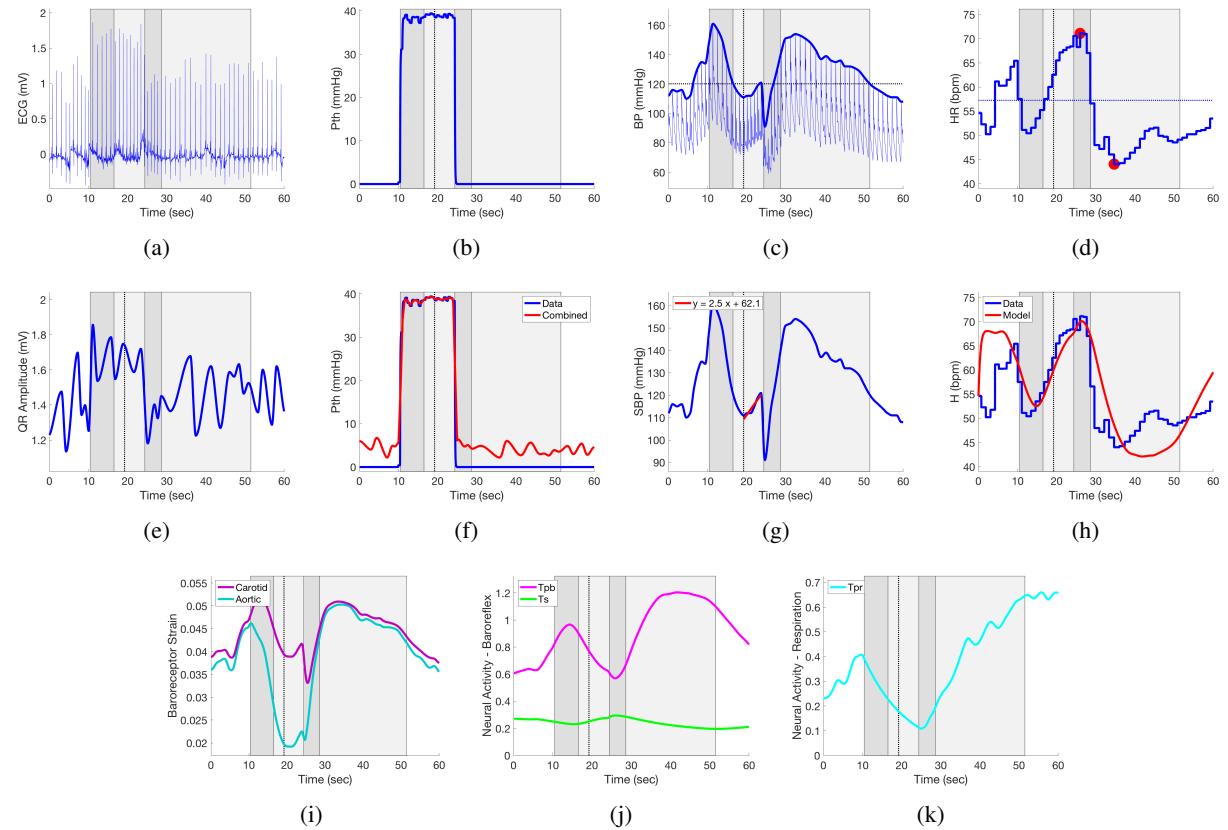


Figure 17: Control Subject 35 VM 7.