Supplemental Material

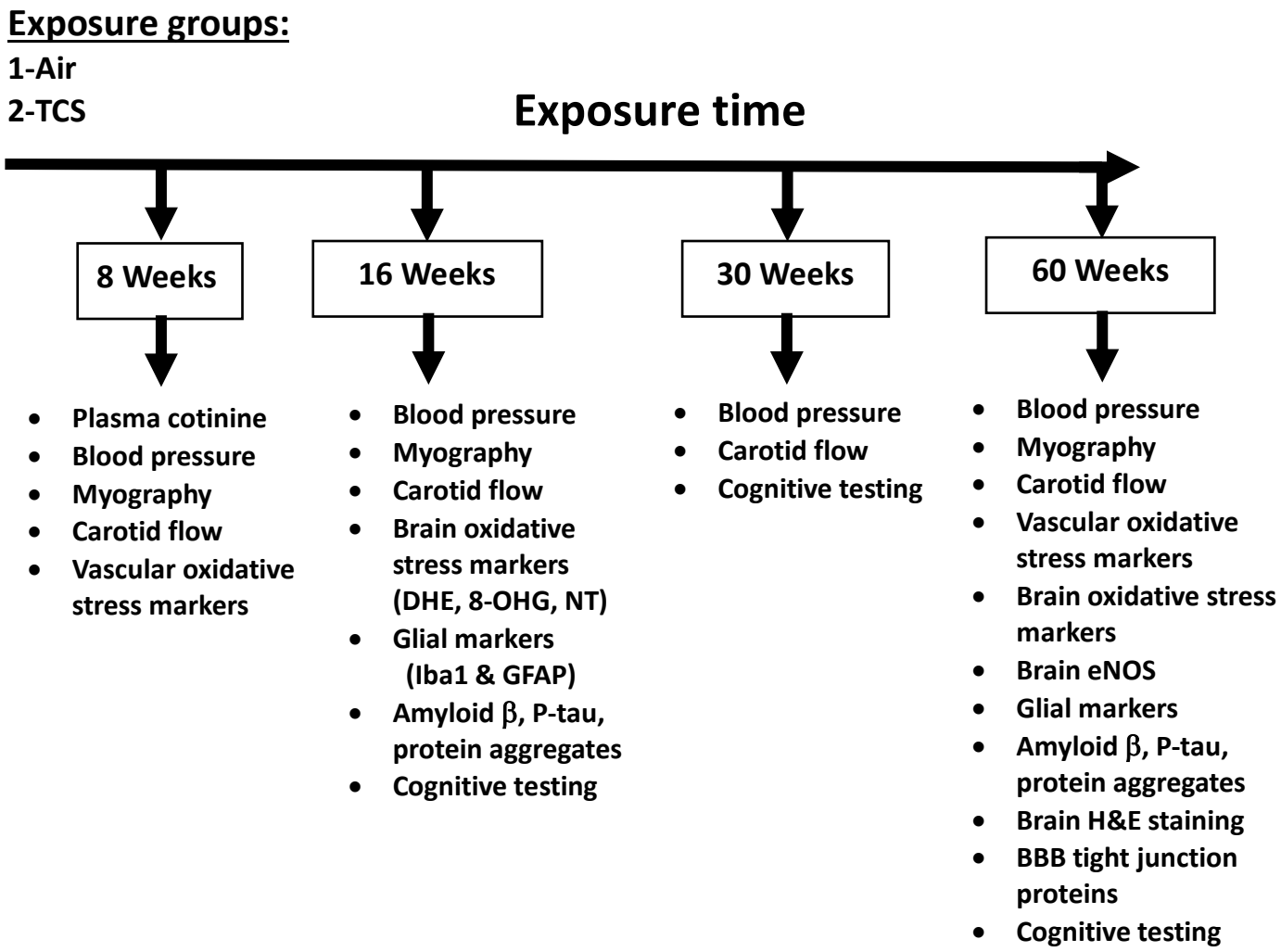

Figure S1: Experimental design showing exposure timeline with parameters measured at each time.

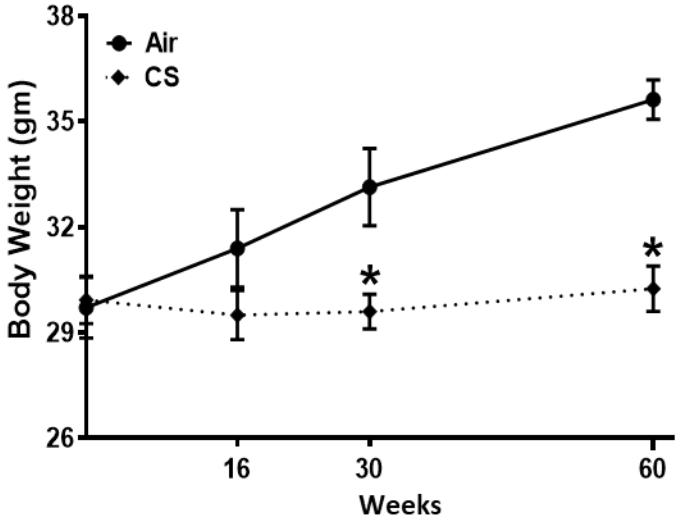

Figure S2: Effect of cigarette smoke (CS) exposure on mice body weight. CS inhibited the normal weight gain of the mice that occurs with age.

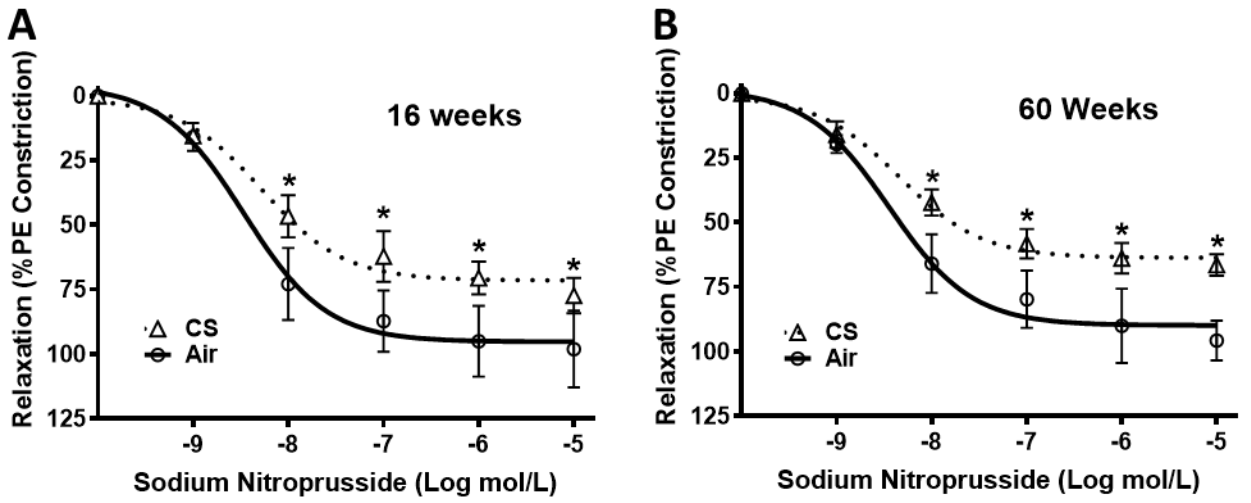

Figure S3: Effect of 16 or 60 weeks of cigarette smoke (CS) exposure on endothelial-independent relaxation. CS impaired endothelial-independent relaxation at 16 (**A**) and 60 (**B**) weeks of exposure. With 16 weeks of exposure with the 50% relaxation values were 11.7±2.2 and 4.1±0.95 nM in CS-exposed and air-exposed vessels, respectively. With 60 weeks of exposure the 50% relaxation values were 16.2±2.7 and 4.7±0.98 nM in CS-exposed and air-exposed vessels, respectively. Data points are represented as mean±SD.

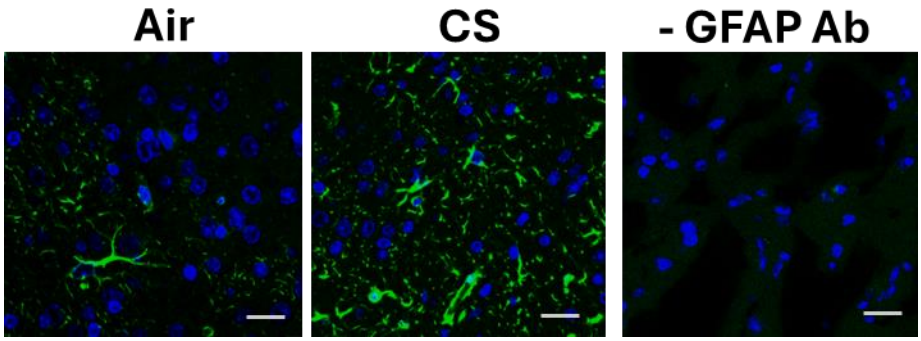

Figure S4: GFAP immunofluorescence with no GFAP primary antibody. The right panel shows minimal autofluorescence background. Scale bar = 20 um.

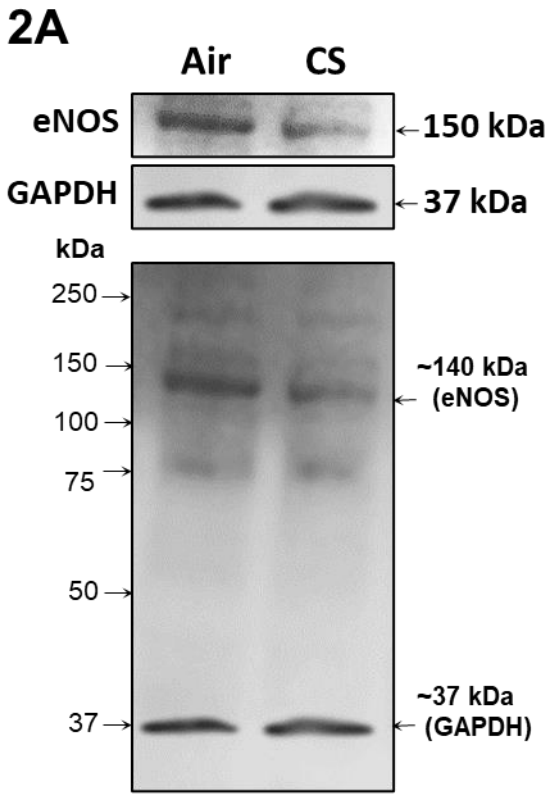

Figure S5: Complete western blots bands shown in figure 2A. Target proteins and GAPDH for the same gel were developed separately. Bands were captured using KwikQuant imager and merged with the protein ladder using KwikQuantImage Manager Software. Images were resized for fitting inside figures.

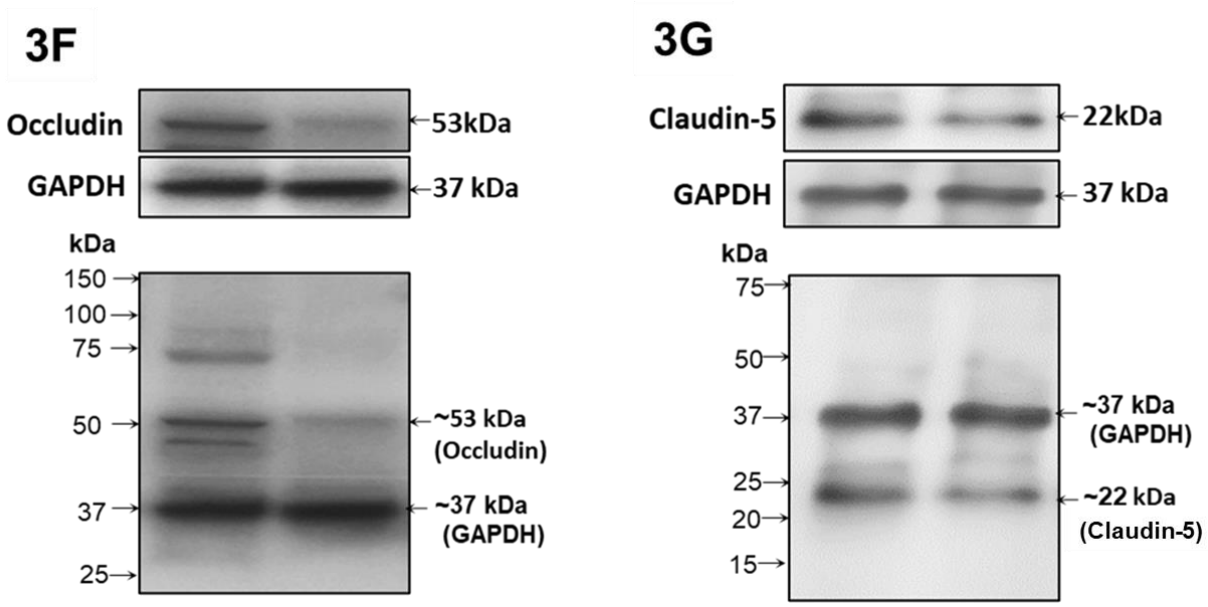

Figure S6: Complete western blots bands shown in figure 3F and 3G. Target proteins and GAPDH for the same gel were developed separately. Bands were captured using KwikQuant imager and merged with the protein ladder using KwikQuantImage Manager Software. Images were resized for fitting inside figures. In 3F the membrane was cut between 37 and 50 kDa and incubated with each antibody separately then assembled before capturing by the imager.

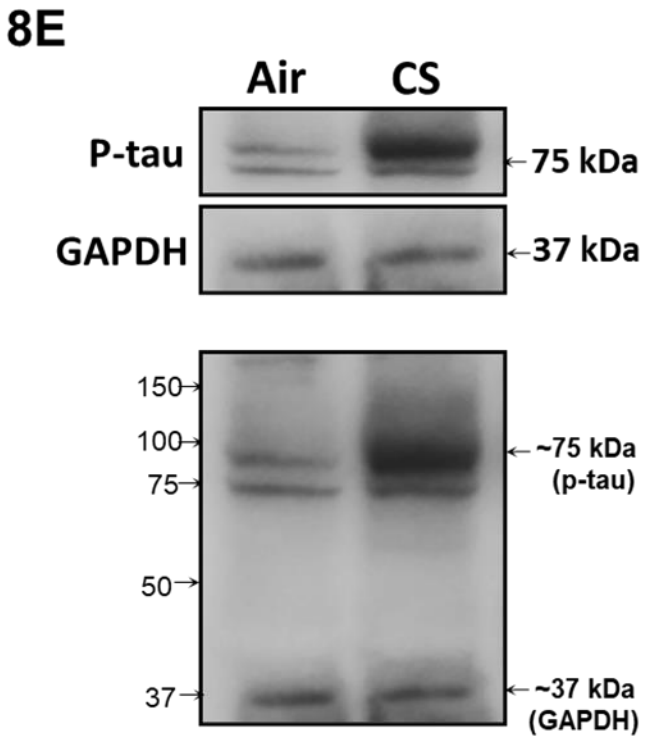

Figure S7: Complete western blots bands shown in figure 6E. Target proteins and GAPDH for the same gel were developed separately. Bands were captured using KwikQuant imager and merged with the protein ladder using KwikQuantImage Manager Software. Images were resized for fitting inside figures.

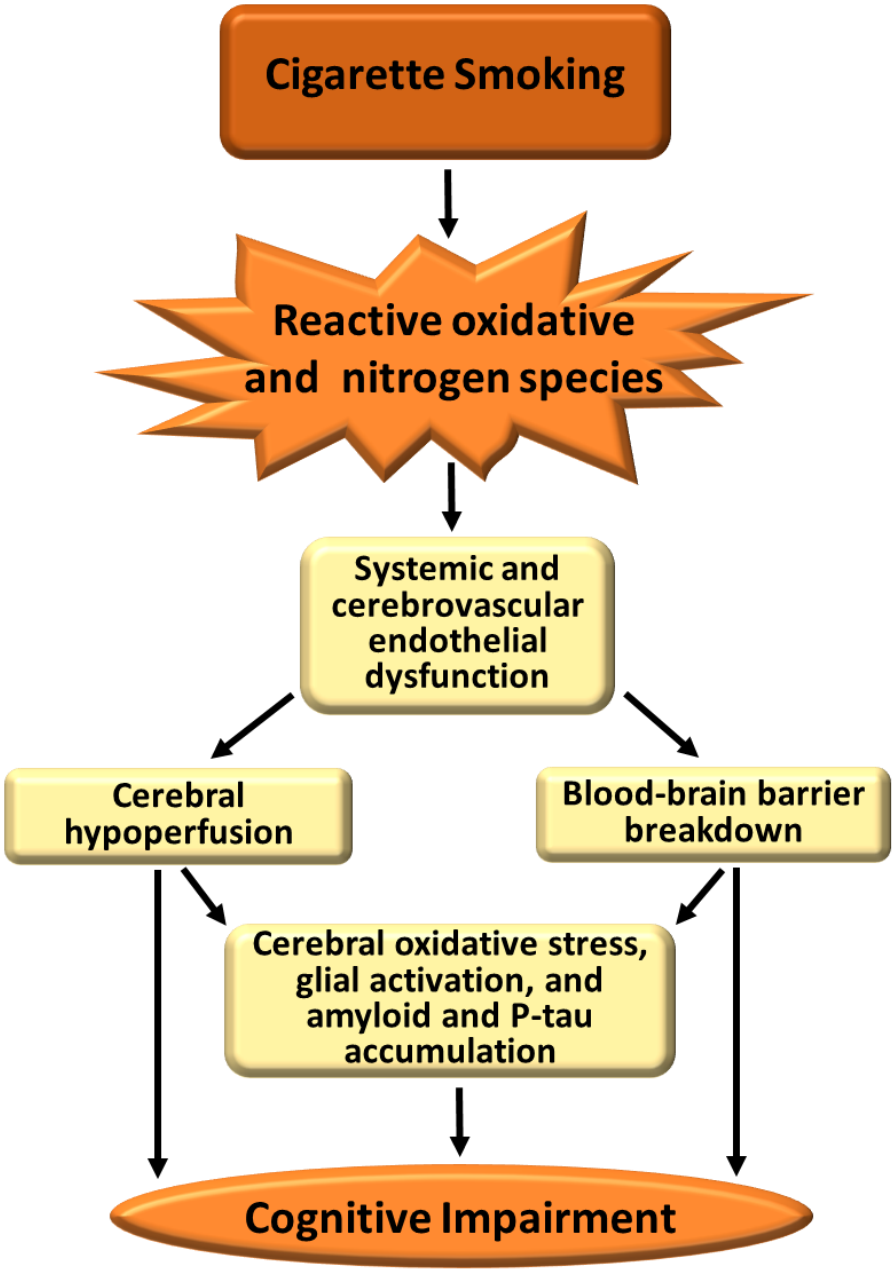

Figure S8: Proposed mechanism of cigarette smoking-induced cognitive dysfunction.

Table 1: Effect of cigarette smoke exposure on mean blood pressure, carotid blood flow, and carotid bed vascular resistance

	Air Exposure			Smoke Exposure		
	MBP *(mmHg)*	***CBF*** *9mm^3/s)*	***CVR*** *(mmHg/mm^3/s)*	***MBP*** *(mmHg)*	***CBF*** *(mm^3/s)*	***CVR*** *(mmHg/mm^3/s)*
30 Weeks	86±11.1	70±8.5	1.2±0.13	126±11.1*	56±8*	2.3±0.22*
60 Weeks	92±6.6	72±10.5	1.3±0.22	134±9.8*#	49±6.3*#	2.8±0.36*#

MBP; mean blood pressure, CBF; carotid blood flow, CVR; carotid bed vascular resistance. Data shown are mean±SD. * significant difference from air exposure at P < 0.05. # significant difference from smoke exposure at 30 weeks at $p < 0.05$.