Figure	p, F, and ηp2 stats: Interaction (Genotype X Exposure)	p, F, and ηp2 stats: Genotype	p, F, and ηp2 stats: Exposure	Multiple comparison Sidak adjusted p value with 95% CI and Hedges' *g*: Exposure effect in val/val	Multiple comparison Sidak adjusted p value with 95% CI and Hedges' *g*: Exposure effect in met/met	Multiple comparison Sidak adjusted p value with 95% CI and Hedges' *g*: Genotype effect in air exposed animals
Supplemental Figure 2a Pup weights P2	p = 0.8294 F(1,52) = 0.0469 ηp2 = 0.001	p = 0.2147 F(1,52) = 1.578 ηp2 = 0.029	p = 0.0808 F(1,52) = 3.171 ηp2 = 0.057	p = 0.3575 CI = -0.2222 to 0.06164 g = 0.51	p = 0.4050 CI = -0.1817 to 0.05598 g = 0.34	p = 0.7110 CI = -0.08818 to 0.1718 g = 0.34
Supplemental Figure 2a Pup weights P5	p = 0.2618 F(1,52) = 1.287 ηp2 = 0.024	p = 0.0899 F(1,52) = 2.987 ηp2 = 0.054	p = 0.9073 F(1,52) = 0.01369 ηp2 < 0.001	p = 0.6614 CI = -0.1815 to 0.3808 g = 0.32	p = 0.6770 CI = -0.3165 to 0.1544 g = 0.29	p = 0.0910 CI = -0.02952 to 0.4854 g = 0.8
Supplemental Figure 2a Pup weights P10	p = 0.3257 F(1,46) = 0.9868 ηp2 = 0.021	p = 0.1699 F(1,46) = 1.945 ηp2 = 0.041	**p = 0.0334*** F(1,46) = 4.811 ηp2 = 0.095	p = 0.6623 CI = -0.382 to 0.7986 g = 0.44	**p = 0.0454*** CI = 0.009543 to 1.097 g = 0.76	p = 0.9497 CI = -0.4922 to 0.6314 g = 0.14
Supplemental Figure 2a Pup weights P15	p = 0.4281 F(1,40) = 0.6408 ηp2 = 0.016	p = 0.3409 F(1,40) = 0.9289 ηp2 = 0.023	p = 0.1563 F(1,40) = 2.087 ηp2 = 0.050	p = 0.8861 CI = -0.6149 to 0.902 g = 0.23	p = 0.2023 CI = -0.2044 to 1.205 g = 0.58	p = 0.9907 CI = -0.6551 to 0.7278 g = 0.07
Supplemental Figure 2b Female weights P50	p = 0.2453 F(1,95) = 1.367 ηp2 = 0.014	p = 0.0807 F(1,95) = 3.117 ηp2 = 0.032	p = 0.0548 F(1,95) = 3.782 ηp2 = 0.038	p = 0.8494 CI = -0.6313 to 0.9957 g = 0.13	**p = 0.0361*** CI = 0.03982 to 1.424 g = 0.80	p = 0.9087 CI = -0.6775 to 0.9578 g = 0.11
Supplemental Figure 2b Female weights P90	p = 0.5337 F(1,87) = 0.3904 ηp2 = 0.004	p = 0.1004 F(1,87) = 2.757 ηp2 = 0.031	p = 0.5917 F(1,87) = 0.2899 ηp2 = 0.003	p = 0.6697 CI = -0.7895 to 1.647 g = 0.2	p = 0.9975 CI = -1.186 to 1.122 g = 0.02	p = 0.2173 CI = -0.3628 to 2.048 g = 0.65
Supplemental Figure 2b Male weights P50	p = 0.4720 F(1,80) = 0.5223 ηp2 < 0.001	p = 0.8631 F(1,80) = 0.02991 ηp2 < 0.001	**p = 0.0332*** F(1,80) = 4.695 ηp2 = 0.055	**p = 0.0446*** CI = 0.02142 to 2.11 g = 0.81	p = 0.59 CI = -0.7849 to 1.85 g = 0.24	p = 0.9012 CI = -0.9347 to 1.34 g = 0.14
Supplemental Figure 2b Male P90	p = 0.7589 F(1,75) = 0.09493 ηp2 = 0.001	p = 0.1455 F(1,75) = 2.163 ηp2 = 0.028	**p = 0.0478*** F(1,75) = 4.048 ηp2 = 0.051	p = 0.3461 CI = -0.8163 to 3.05 g = 0.41	p = 0.2478 CI = -0.7624 to 3.804 g = 0.52	p = 0.4338 CI = -3.449 to 1.117 g = 0.52
Supplemental Figure 2c Righting Reflex	**p = 0.0378*** F(1,32) = 4.697 ηp2 = 0.128	p = 0.5194 F(1,32) = 0.4245 ηp2 = 0.013	p = 0.8747 F(1,32) = 0.02526 ηp2 = 0.001	p = 0.2778 CI = -0.689 to 3.019 g = 0.62	p = 0.2291 CI = -3.342 to 0.6436 g = 0.80	p = 0.4731 CI = -0.9747 to 2.733 g = 0.49
Supplemental Figure 2c Eye Opening	p = 0.8988 F(1,32) = 0.01642 ηp2 = 0.001	p = 0.9524 F(1,32) = 0.003617 ηp2 < 0.001	p = 0.5064 F(1,32) = 0.4516 ηp2 = 0.014	p = 0.8073 CI = -0.933 to 0.5594 g = 0.34	p = 0.9175 CI = -0.9291 to 0.6752 g = 0.14	p = 0.9881 CI = -0.7902 to 0.7023 g = 0.06
Supplemental Figure 2c Auditory Startle	p = 0.0682 F(1,32) = 3.563 ηp2 = 0.100	p = 0.2471 F(1,32) = 1.39 ηp2 = 0.042	p = 0.6804 F(1,32) = 0.1728 ηp2 = 0.005	p = 0.4930 CI = -0.4634 to 1.255 g = 0.52	p = 0.2354 CI = -1.542 to 0.3044 g = 0.83	p = 0.0618 CI = -0.03483 to 1.683 g = 1.03
Supplemental Figure 2c Ear Twitch	p = 0.5195 F(1,32) = 0.4241 ηp2 = 0.013	p = 0.2425 F(1,32) = 1.418 ηp2 = 0.042	p = 0.9332 F(1,32) = 0.07135 ηp2 < 0.001	p = 0.8343 CI = -0.8809 to 0.5513 g = 0.22	p = 0.9108 CI = -0.6428 to 0.8968 g = 0.23	p = 0.9068, CI = -0.5952 to 0.837 g = 0.18
Supplemental Figure 3a CA1 volume (P50) Female	p = 0.6827 F(1,28) = 0.1706 ηp2 = 0.006	**p = 0.0447*** F(1,28) = 4.419 ηp2 = 0.136	**p = 0.0291*** F(1,28) = 5.291 ηp2 = 0.159	p = 0.1263 CI = -63051668 to 6540168 g = 1.18	p = 0.3484 CI = -54448168 to 15143668 g = 0.53	p = 0.4260 CI = -17206168 to 52385668 g = 0.68
Supplemental Figure 3b CA3 volume (P50) Female	p= 0.4666 F(1,28) = 0.5447 ηp2 = 0.019	p = 0.0505 F(1,28) = 4.175 ηp2 = 0.130	p = 0.5797 F(1,28) = 0.314 ηp2 = 0.011	p = 0.5986 CI = -47433838 to 20886963 g = 0.41	p = 0.9902 CI = -32344151 to 35976651 g = 0.06	p = 0.5954 CI = -20816651 to 47504151 g = 0.50
Supplemental Figure 3c DG volume (P50) Female	p = 0.1791 F(1,28) = 0.06071 ηp2 = 0.002	**p = 0.0247*** F(1,28) = 5.636 ηp2 = 0.168	p = 0.6542 F(1,28) = 0.205 ηp2 = 0.007	p = 0.8593 CI = -51726365 to 79097990 g = 0.24	p = 0.9868 CI = -61372928 to 69451428 g = 0.07	p = 0.1434 CI = -14115178 to 116709178 g = 1.03
Supplemental Figure 3d CA1 volume (P50) Male	p = 0.4013 F(1,28) = 0.7263 ηp2 = 0.025	**p = 0.0370*** F(1,28) = 4.797 ηp2 = 0.146	p = 0.8740 F(1,28) = 0.02562 ηp2 = 0.001	p = 0.7296 CI = -68965942 to 36894942 g = 0.30	p = 0.8619 CI = -41965692 to 63895192 g = 0.27	p = 0.5803 CI = -31735317 to 74125567 g = 0.41
Supplemental Figure 3e CA3 volume (P50) Male	p = 0.2328 F(1,28) = 1.488 ηp2 = 0.050	p = 0.9919 F(1,28) = 0.0001 ηp2 < 0.001	p = 0.4587 F(1,28) = 0.5645 ηp2 = 0.020	p = 0.3183 CI = -67930682 to 17524432 g = 0.78	p = 0.9339 CI = -36739057 to 48716057 g = 0.14	p = 0.6396 CI = -58192557 to 27262557 g = 0.36
Supplemental Figure 3f DG volume (P50) Male	**p = 0.0366*** F(1,28) = 4.818 ηp2 = 0.147	**p = 0.0076**** F(1,28) = 8.283 ηp2 = 0.228	p = 0.9247 F(1,28) = 0.0091 ηp2 < 0.001	p = 0.2755 CI = -86227659 to 19680909 g = 0.66	p = 0.2195 CI = -16657409 to 89251159 g = 0.83	p = 0.8652 CI = -42130034 to 63778534 g = 0.22
Supplemental Figure 4a Female Regular Trace Jump reaction	p = 0.938 F(1,36) = 0.006 ηp2 < 0.001	**p = 0.0003**** F(1,36) = 16.2 ηp2 = 0.31	p = 0.312 F(1,36) = 1.053 ηp2 = 0.028	p = 0.686 CI = -1.391 to 2.791 g = 0.31	p = 0.757 CI = -1.491 to 2.691 g = 0.31	**p = 0.017*** CI = -4.591 to -0.4092 g = 1.04
Supplemental Figure 4b Male Regular Trace Jump reaction	p = 0.131 F(1,36) = 2.393 ηp2 = 0.062	**p = 0.002**** F(1,36) = 11.335 ηp2 = 0.239	p = 0.181 F(1,36) = 1.863 ηp2 = 0.049	p = 0.990 CI = -1.713 to 1.913 g = 0.06	p = 0.091 CI = -3.413 to 0.2134 g = 0.86	p = 0.370 CI = -2.813 to 0.8134 g = 0.52
Supplemental Figure 4c Female Regular Trace Run reaction	p > 0.999 F(1,36) < 0.001 ηp2 < 0.001	**p = 0.004**** F(1,36) = 9.684 ηp2 = 0.212	p = 0.517 F(1,36) = 0.429 ηp2 = 0.012	p = 0.875 CI = -2.813 to 0.8134 g = 0.15	p = 0.875 CI = -2.415 to 1.615 g = 0.47	p = 0.067 CI = -3.915 to 0.1149 g = 0.84
Supplemental Figure 4d Male Regular Trace Run Reaction	p = 0.267 F(1,36) = 1.273 ηp2 = 0.034	**p = 0.0003**** F(1,36) = 16.234 ηp2 = 0.311	p = 0.523 F(1,36) = 0.416 ηp2 = 0.011	p = 0.389 CI = -3.148 to 0.9477 g = 0.39	p = 0.930 CI = -1.748 to 2.348 g = 0.49	**p = 0.002**** CI = -5.248 to -1.152 g = 1.42
Supplemental Figure 4e Female Modified Trace Jump Reaction	p = 0.808 F(1,48) = 0.06 ηp2 = 0.001	p = 0.262 F(1,48) = 1.29 ηp2 = 0.026	p = 0.859 F(1,48) = 0.032 ηp2 = 0.001	p = 0.999 CI = -1.175 to 1.223 g = 0.02	p = 0.945 CI = -1.343 to 1.034 g = 0.11	p = 0.801 CI = -1.587 to 0.9352 g = 0.26
Supplemental Figure 4f Male Modified Trace Jump Reaction	p = 0.102 F(1,46) = 2.78 ηp2 = 0.057	p = 0.200 F(1,46) = 1.688 ηp2 = 0.035	p = 0.190 F(1,46) = 1.766 ηp2 = 0.037	p = 0.961 CI = -1.091 to 1.358 g = 0.09	p = 0.096 CI = -2.538 to 0.1714 g = 0.84	p = 0.964 CI = -1.237 to 1.528 g = 0.09
Supplemental Figure 4g Female Modified Trace Run Reaction	p = 0.515 F(1,48) = 0.431 ηp2 = 0.009	p = 0.148 F(1,48) = 2.16 ηp2 = 0.043	p = 0.537 F(1,48) = 0.387 ηp2 = 0.008	p > 0.999 CI = -0.5863 to 0.5742 g = 0.01	p = 0.601 CI = -0.3489 to 0.8013 g = 0.29	p = 0.831 CI = -0.4663 to 0.7541 g = 0.28
Supplemental Figure 4h Male Modified Trace Run Reaction	p = 0.088 F(1,46) = 3.03 ηp2 = 0.062	p = 0.179 F(1,46) = 1.858 ηp2 = 0.039	p = 0.129 F(1,46) = 2.391 ηp2 = 0.049	p = 0.987 CI = -0.6347 to 0.5598 g = 0.08	p = 0.063 CI = -0.02758 to 1.294 g = 0.72	p = 0.962 CI = -0.7472 to 0.6017 g = 0.16

Supplemental Table 6. Detailed statistics from BDNF genotype X exposure condition two-way ANOVAs from Supplemental Figures 2-4. The BDNF genotype X exposure interaction, genotype, and exposure p values, F ratios, and effect sizes as partial eta squred (η_p^2) are shown. Planned comparison analyses of exposure condition within BDNF genotype, as well as of genotype effect within air exposed animals are also presented, with Sidak multiplicity adjusted p values, 95% confidence intervals, and Hedges' *g* effect sizes.