

Pollution Impact of Oil, Gas and petrochemical Industries on Neurologic System

System	Diseases	Methods	Results	References
Nervous system	<ul style="list-style-type: none"> chronic rhinosinusitis (CRS), migraine headache fatigue symptoms 	self-administered questionnaire to 23,700 adult patients	<ul style="list-style-type: none"> The response rate was 33%. Of 7,785 study participants, 1,850 (24%) had current CRS symptoms, 1,765 (23%) had migraine headache, and 1,930 (25%) had higher levels of fatigue 	(1)
Nervous system	<ul style="list-style-type: none"> neurological symptoms 	A questionnaire survey was conducted to gather the information on illness symptoms in children exposed to benzene. Serum β -2-microglobulin and urinary phenol were assessed	Upper respiratory symptoms were the most (67%) frequently reported, followed by neurological symptoms (57%), diarrhea (25%), and cough (24%).	(2)
Nervous system	<ul style="list-style-type: none"> headaches, nausea, vomiting, depression, personality changes, nosebleeds, and breathing difficulties. 	Occupational and Medical History Questionnaires. Six domains of brain function were tested: neurophysiological, recall, overlearned memory, cognitive, perceptual motor speed, and affective	The exposed subjects' mean values were statistically significantly abnormal compared to controls for two-choice reaction time, balance (as speed of sway), color discrimination, digit symbol, trail-making A and B, and immediate recall of a story.	(3)
Nervous system	<ul style="list-style-type: none"> Neurobehavioral functions 	Questionnaires neuropsychological tests Measurements included balance, reaction time, color discrimination, blink reflex, visual fields, grip strength, hearing, vibration, problem solving, verbal recall, long-term memory, peg placement, trail making and fingertip number writing errors (FTNWE).	The Lovington adults who averaged 11.8 abnormalities were ssd from, Tatum–Artesia adults who had 3.6 and from unexposed subjects with 2.0. Multiple source community hydrogen sulfide exposures impaired neurobehavioral functions	(4)

References:

1. Tustin AW, Hirsch AG, Rasmussen SG, Casey JA, Bandeen-Roche K, Schwartz BS. Associations between unconventional natural gas development and nasal and sinus, migraine headache, and fatigue symptoms in Pennsylvania. *Environmental health perspectives*. 2017;125(2):189.
2. D'Andrea MA, Reddy GK. Illness symptoms experienced by children exposed to benzene after a flaring incident at the BP refinery facility in Texas City. *Clinical pediatrics*. 2016;55(12):1143-51.
3. Kilburn KH, Warshaw RH. Hydrogen sulfide and reduced-sulfur gases adversely affect neurophysiological functions. *Toxicology and Industrial Health*. 1995;11(2):185-97.
4. Kilburn KH, Thrasher JD, Gray MR. Low-level hydrogen sulfide and central nervous system dysfunction. *Toxicology and industrial health*. 2010;26(7):387-405.