**Motor Vehicle Emissions and its Effect on Health**

The threat posed by the increased usage of fossil fuels to run car engines is immense. As more and more vehicles using fuels are produced in this century, it is evident that the adverse effects of the use of fossil fuels will continually cause havoc across the globe (Chow, 2001). Research has identified that transportation is one of the leading factors promoting air pollution in America and the world (Grosjean, & Grosjean, 2002). Both lightweight and heavyweight vehicles emit elements that affect the human body negatively (Grosjean, Grosjean, & Gertler, 2001). The components released from cars include sulfur dioxide, particulate matter such as soot, hydrocarbons, nitrogen oxides, carbon monoxide (CO), greenhouse gases, etc. (Canagaratna, Onasch, Wood, Herndon, Jayne, Cross, & Worsnop, 2010; Robinson, Grieshop, Donahue, Hunt, 2010). However, Lighty, Veranth, & Sarofim (2000), identify that the particulate matter in the fuel emissions is the leading causes of the health effects on humans.  The engine emissions promote adverse health among humans. There has been a sharp increase in respiratory as well as cardiovascular diseases. This essay focuses on assessing the effect of car exhaust gases on human health.

The gaseous emissions from motor vehicles are among the leading factors promoting adverse health in the community. Wong, Vichit-Vadakan, Vajanapoom, Ostro, Thach, Chau, & Peiris (2010) identify that the air pollution has promoted the deaths of individuals in a rate that is higher than that of the deaths caused by natural phenomena. Further, the pollution has been identified to cause respiratory and cardiovascular health problems that have accelerated poor health conditions among individuals living in areas with high gaseous emissions from cars (Brunekreef, Beelen, Hoek, Schouten, Bausch-Goldbohm, Fischer, Jerrett, 2009; Franchini, & Mannucci, 2007). The adverse health effects caused by the gaseous release becomes more dangerous, especially among children.  Children have lower immunity than adults, and hence they are hard hit the least exposure. Schwela (2000) recognizes that children exposed to poor air conditions are likely to experience bronchitis, chronic coughs, conjunctivitis, a decreased lung function, etc. The components released from cars include sulfur dioxide, particulate matter such as soot, hydrocarbons, nitrogen oxides, carbon monoxide (CO), greenhouse gases, etc.The CO released from cars negatively affects the human body as the element mixes with hemoglobin in the blood and hence adversely affecting the transport of oxygen (Chow, 2001). The other elements have similar effects on the body, which impair normal body functioning. Other health issues associated with the exposure to the various elements include hypoxia, neurobehavioral changes, neurological deficits, cardiovascular diseases and an increase in daily mortalities (Nafstad, 2004; Samet, 2007). Denis, & Lindner (2005) further identify that the health conditions have increased the government’s expenditure on treatment and prevention of respiratory and cardiovascular diseases. Individuals have also spent a lot of their funds on the payment of medical bills. The adverse effects of health as a result of the gaseous releases from vehicles is great.

One of the major factors promoting the increased adverse apects of air pollution as a result of motor vehicles is the fact that the air polluters are highly concentrated in cities where the human population is also high. As a result, more individuals inhale dangerous gases that increase the public health burden. The effects of the exposure to gases from vehicles that cause pollution to the air increase the mortality rates depending on the location, age, sex, etc. (Adar, & Kaufman, 2007; Goldberg, 2008; Neuberger, & Moshammer, 2004). Besides, manufacturing companies are additionally promoting the emission of harmful gases as a majority of the companies lack the proper technologies that lead to the development of engines that emit safe gases to the environment. The companies need to recognize that their products are among the leading agents of air pollution and hence adopt technologies that embrace the creation of a safe environment. The heavy-duty diesel vehicles have also been identified as being among the primary factors promoting the ‘dirty’ air environments (Khan, Clark, Thompson, Wayne, Gautam, Lyon, & Hawelti, 2006; Lipfert, & Wyzga, 2008). The machines release more gases as compared to the lightweight vehicles as a result of their high engine energy requirements. Further, the type of engine technologies such as EFI determines the destruction that the cars cause to the environment. Research has identified that vehicles not fitted with exhaust gases treatment systems release more harmful gases to the atmosphere (Hesterberg, Lapin, & Bunn, 2008; Lighty, Veranth, & Sarofim, 2000). Further research identifies that environmental temperatures affect the emissions from vehicles which consequently affects human health. Nam, Kishan, Baldauf, Fulper, Sabisch, & Warila (2010) identify that in cold temperatures, the emissions of particulate matter from engines is higher as compared to during warm temperatures. The factors promote the release of motor vehicle waste gases which in turn negatively affect human health.

In conclusion, the effects of pollution on the humans are saddening. There is the need for the immediate development of strategies that will promote the creation of a safe human environment. The air pollution and combustion control methods and knowledge on atmospheric chemistry need to be integrated into the modern studies explaining how vehicle emissions effect human health. Individuals, nations, and institutions need to emphasize on the need for the implementation of international environmental standards that embrace clean environments. If the right strategies are implemented, there will be a decline in the mortality rates in the society.

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