4.3 Nitrogen Dioxide Exercise

Your first job as copyeditor is to mark the following typescript for typesetting in a newsletter. Use the marks as illustrated and explained in Chapter 4. Mark the typescript so that it will match the edited and typeset version following this double-spaced version when it is typeset. In addition to clarifying the text, inform the typesetter that the title should be centered, boldface, and set in 14-point Times Roman. The text is to be set in 12-point Times Roman a 27-pica line, flush left and ragged right. Paragraphs are to be indented one em.

Nitrogen Dioxide

Nitrogen is an elemant essential to all life but nitrogen comppounds are “extras largely produced thorugh energy consumption. Nitrogen oxides effect the nitrogen cycle, and when high temperature oxidation and chemical conversions form nitrodgen dioxide, physical effects are possible. NO_2 forms the depressing brown in smog it irritates our eyes and blurs our envirnoment. In animal studies, NO2 has been also shone to be hte most dangerous among the eight nigrogen oxides. Inhaled, NO_2 reacts quickly with lung issue and causes cell injury and cell death. Biochemical experi ments indicate that the region of the lung most reponsible for respiration, the region bounded by the terminal respiratory bronchioles and the alviole, is most affected by inhaled NO_2.

Lung injury seems related more to the concentration of NO_2 than to the lenhgt of exposure, but even small concentations for less then a hour have caused breatheing difficulties for some people. Ashmatics may be particularly sensative to very low levels of NO_2. Between 1940 and 1970, emissions of NO_2 in the United States increased nearly 3 times. Even tho we might expect that Los Angeles would regularly experience high concentrations of NO_2, the open spaces of the West and Southwest are not exempt form NO_2 loaded air. Especially at busy hours of the day. Because concentration is more damaging than length of exposure, the measures of NO_2 in terms of yearly arithmetic

averages disguise the dangerously high concentrations of NO_2 at peak traffic hours. Energy demands, coupled with understandable attempts to use natural resources like coal, mean that NO_2 emissions from huamn activities will certainly increase. We need verified emission standards, careful monitoring and continued research on the health affects of NO_2.

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In animal studies, NO_2 has also been shown to be the most dangerous among the eight nitrogen oxides. Inhaled, NO_2 reacts quickly with lung tissue and causes cell injury and cell death. Biochemical experiments indicate that the region of the lung most responsible for respiration, the region bound by the terminal respiratory bronchioles and the alveoli, is most affected by inhaled NO_2. Lung injury seems related more to the concentration of NO_2 than to the length of exposure, but even small concentrations for less than an hour have caused breathing difficulties for some people. Asthmatics may be particularly sensitive to very low levels of NO_2.

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