

Passage 3

The underground railway stations' air, like that found in welding factories, has a higher proportion of airborne metals, and is more damaging than normal air for two reasons. First, because its particles are very small, when you add them all up, for the same amount of metal contained, they present a much larger surface area for contact compared to their volume than the larger particles. Second, the small particles penetrate deeper. The dust in the air comprises coarse particles (between 2.5 and 10 micrometers) called PM10 (Particulate Matter up to 10 micrometers in size), fine particles smaller than 2.5 micrometers, and ultrafine particles which are smaller than 0.1 micrometers. Compared to coarse and fine stations' particles, little is known about the chemistry of particles smaller than 0.1 micrometers. We know that coarse particles don't get further into the body than the nasal passages and the bronchi, while fine dust reaches the smaller airways (the bronchioles), and ultrafine dust reaches the deepest lung areas into the alveoli. There is also a suggestion that ultrafine dust may penetrate the underlying tissue and the bloodstream and damage not only the airways but also the cardiovascular system, liver, brain and kidneys.

151 . Based on the information presented in the passage, the stations' air

- a. contains more coarse metal particles than normal air
- b. contains more metal than welding factories and normal air
- c. and welding factories' air have high amounts of metal dust
- d. and normal air have almost equal amounts of metal dust

152 . According to the author, the air in underground railway stations is more damaging than the normal air, because it contains

- a. more airborne metal than that found in factories
- b. as much ultrafine particulate matter as do welding factories
- c. more airborne metal ultrafine particulate matter
- d. much more coarse and fine particulate matter

153 . Based on the classification of the passage, a particle of around 1 micrometer would be considered as

- a. small
- b. coarse
- c. fine
- d. ultrafine

154 . The author is perhaps still uncertain about the underground railway station's causing damage to the

- a. heart
- b. alveoli
- c. nasal passages
- d. smaller airways

155 . Among the different types of particulate matter,particles are still the most unknown.

- a. coarse
- b. fine
- c. ultrafine
- d. small

Passage 4

Smallpox has a number of unique characteristics which made its eradication possible. Its symptoms develop quickly, making those infected aware of the disease at an early stage and reducing the possibility of them unknowingly transmitting the disease to others. Because it is almost completely specific to humans, there is a very low possibility of smallpox being kept alive in animals to reinfect humans. The availability of effective vaccines was also a necessary factor. Finally, the high level of mortality from the disease made it easier to achieve global agreement on its eradication.

Although smallpox has ceased to kill, it remains a potential danger to humanity. Though the possibility of the virus surviving in animals is very low, it is still a possibility. So, too, is the accidental release of material traditionally used for variolation in remote communities. However, the most pressing fear is that stocks of the variola virus set aside for research purposes could some day be used as a biological warfare agent. The proposal, in 2003, to inoculate health care staff in some countries against such a possibility shows that the potential of smallpox to kill remains as strong as ever.

156 . The possibility of the eradication of smallpox was due to its.....

- a. low morbidity rate
- b. distinct and specific features
- c. high rate of reinfection of people and animals
- d. lack of noticeable symptoms

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