

Text B Lead

Lead was widely used even in antiquity because it was so easy to shape or mould into vessels and pipes. The Romans used a lot of lead in their water supply systems, and women used pulverized lead as makeup. Throughout the Middle Ages, lead was also widely used, mostly as an additive to make sour wine drinkable - often with painful, sometimes even fatal after-effects. In modern times, lead has proven an extremely useful metal in crystal glass, ceramic glazing, white paints, ammunition and printer's type. When the motor car came on to the scene, lead batteries provided electrical power, and lead was added to petrol to increase its octane rating.

Unfortunately, lead is also extremely toxic. Several scientists believe that the Roman upper class suffered from permanent lead poisoning because they drank water from lead pipes and used lead-based mugs, vessels and beauty creams. This have led to birth defects and widespread physical impairment and consequently have contributed to the fall of the Roman Empire.

It has been known for a long time that high concentrations of lead in the bloodstream can cause cramps, coma and death.

Globally about 90 percent of lead emissions comes from lead added to petrol. The leaded petrol now represents 2.2 percent of total lead consumption. The US started phasing out lead in gasoline in 1973 and they essentially completed the task in 1986. In the UK, a reduction was started in 1981 and in 1985 the allowed lead contents in gasoline had been reduced by two-thirds. Today, all US gasoline is unleaded, and 75 percent of the gasoline sold in the UK is unleaded too. The consequence for lead concentrations has been enormous.

The US Environmental Protection Authority estimates considerable benefits from this dramatic decline in lead pollution. It is estimated that about 22,000 deaths are avoided every year, which is about 1 percent of all deaths.

These figures are surprisingly large and demonstrate the amazing air pollution improvement. For the second worst air pollutant, the last 15-20 years have seen lead concentration levels falling dramatically by 80-97 percent.

VOCABULARY:

Lead	Свинец	Ammunition	Боеприпасы
To mould	Формовать	Battery	Аккумулятор
Vessel	Сосуд	Mug	Кружка
Pipe	Труба	Permanent	Постоянный
Pulverized	Порошкообразный	Impairment	Ухудшение
Additive	Добавка	Bloodstream	Кровообращение

Sour	Кислое	Cramp	Судорога
Crystal glass	Хрусталь	To phase out	Постепенно свертывать
Ceramic glazing	Гончарный обжиг	Complete	Полный
leaded	Освинцованный	Likewise	Подобно
To avoid	Избегать	Improvement	Улучшение
After-effect	Последствия	Octane rating	Октановое число

EXERCISE 1

Найдите эквиваленты: система водоснабжения, широко используемый, в настоящее время, с появлением автомашин, проявить себя как чрезвычайно необходимый, легко принимающий форму, это привело, допустимое содержание, значительная польза, что составляет около одного процента, удивительное улучшение состояния воздуха.

EXERCISE 2

Перечислите положительные свойства свинца.

EXERCISE 3

Перечислите области применения свинца в античности, в средние века, в Римской империи, а также в настоящее время.

EXERCISE 4

Найдите предложения в тексте, указывающие на токсичность свинца и степень его влияния на здоровье человека.

EXERCISE 5

Насколько вредно использование свинца в составе бензина?

EXERCISE 6

Найдите в тексте предложения, подтверждающие эффективность мер по снижению загрязнения воздуха частицами свинца.

EXERCISE 7

Ответьте на вопросы: 1. What are advantages of lead as a metal? 2. Where and how is lead used today? 3. Why is it dangerous for our health? 4. Where does 90 % of lead emissions come from? 5. How effective were the efforts made against the second worst air pollutant?

EXECISE 8

Составьте фразы, соответствующие содержанию текста:

	in water supply system.
1. Pulverized lead is used	as make-up.
	to form vessels.

	to increase its octane rating.
2. Lead is added to petrol	to decrease its octane rating.
	to make it ecologically cleaner.

	coma and death.
3. The high concentration of lead in the bloodstream can cause	respiratory disease.
	heart disease.

	easy	
4. Lead is	difficult	to shape or mould.
	impossible	