Amyl Nitrate and Alkyl Nitrite Information

Also known as: Locker Room; Poppers

Description

Amyl Nitrate is a type of Nitrate formerly used as a Pharmaceutical Drug and now more commonly used as a Recreational Drug (especially amongst gay the community).

Orthodox Medical Usage of Amyl Nitrate

Cardiovascular System

Amyl Nitrate was originally manufactured and prescribed for the treatment of Angina (nowadays more effective treatments exist for the treatment of Angina and it is rarely prescribed for this condition).

Toxic Effects of Amyl Nitrate

Cardiovascular System

- Amyl Nitrate (inhaled) can cause (temporary but acute) Tachycardia (accelerated Heartbeat rate):
  - When Amyl Nitrate is inhaled it relaxes the walls of the Blood Vessels, causing the dilation (expansion) of Blood Vessels resulting in lowered Blood Pressure. The Heart then beats at a faster rate as it attempts to restore Blood Pressure back to normal levels.

Immune System

- Amyl Nitrate increases the risk of Cancer:
  - The Nitrate ions generated by Amyl Nitrate (inhalation) increase the body's production of Nitrosamines (known carcinogens).
- Inhalation of Amyl Nitrate suppresses the Immune System.
- Amyl Nitrate (inhalation) increases the risk of developing Kaposi's Sarcoma - in persons who are HIV positive:
  - Although not clinically proven, statistics show that positive gay men with a history of Amyl Nitrate use are more likely to develop KS than non-Amyl Nitrate using HIV positive persons.

Metabolism

- Amyl Nitrate (inhaled) can cause (short term) Hypoxia - Amyl Nitrate competes with Oxygen for transport via Hemoglobin.

Nervous System

- Amyl Nitrate (inhaled) can cause (short term) Nausea.
- Vertigo can occur as a result of Amyl Nitrate (inhalation).

Respiratory System

- When Amyl Nitrate ions are inhaled they can burn sensitive Mucous Membranes in the Throat, Nose and Lungs.
- Amyl Nitrate (inhaled) can cause Coughing.
- Amyl Nitrate (inhaled) can cause Bronchitis.

Skin

- If Amyl Nitrate is allowed to contact the Skin, it can burn it.

Caution

Amyl Nitrate is not recommended as a means of enhancing Sexual Performance as it has numerous toxic side effects.

Bioavailability

Amyl Nitrate is extremely volatile - when it reacts with air it breaks down into Nitrate ions and other substances. These airborne ions are then introduced into the body by inhalation. The Lungs pass inhaled Amyl Nitrate into the bloodstream.

Nitrite

Nitrite inhalants (including amyl, butyl, and isobutyl nitrite) have been used since 1867, when amyl nitrite was found to have clinical utility in the management of coronary insufficiency.

Esters of nitrous acid, the nitrites are highly volatile liquids that have been nicknamed 'poppers' because of the sound made when an amyl nitrite pearl is crushed. Whereas amyl nitrite is now a prescription drug in the United States.

The inhalation of volatile nitrite vapours produces diffuse relaxation of smooth muscle, thereby causing an intense vasodilation with flushing, a fall in blood pressure, and a reflex tachycardia. The vasodilation of cerebral vessels appears to trigger an increase in intracranial pressure which may give rise to the euphoria and 'rush' reportedly experienced by users. Adverse reactions include skin and tracheobronchial irritation; nausea, headache, and syncope; true allergic reactions with wheezing and itching; and the potential for serious burn injuries.

Nitrite inhalation induces change in the immune system, by initially suppressing immune function, and this is followed by a period of non-specific immune stimulation. This raises the possibility that HIV replication may be activated as a consequence of this non-specific and non-directed stimulation; and that in addition to their other deleterious effects, poppers may facilitate viral replication.

These studies have helped clarify the association between nitrite inhalant use, immune dysfunction, and evolving patterns of AIDS expression. For example, KS is the only manifestation of AIDS to have shown a decrease since 1981, and this has coincided with the decrease in the use of nitrite inhalants by homosexual men.

In the case of the volatile alkyl nitrites, the most reasonable hypothesis at this time is that the

cellular basis for their abuse resides in their actions on smooth muscles to produce vasodilation and relaxation, however, direct effects on the brain cannot be ruled out.
Inhalants can be categorized:
Nitrates, including cyclohexyl nitrate, amyl nitrite, and butyl nitrite.
The most serious hazard for inhalant abusers is a syndrome called "sudden sniffing death." A
single, prolonged session of inhalant use can produce rapid and irregular heart rhythms, heart
failure, and death. "Sudden sniffing death" can happen within minutes and can strike an otherwise healthy young person. But inhalant abuse can cause death in other ways, too, through asphyxiation, suffocation, or choking.
Chronic exposure to inhalants causes widespread and long-lasting damage to the nervous system and other vital organs. The toxic chemicals damage parts of the brain that control learning, movement, vision, and hearing. Damage to the heart, lungs, liver, and kidneys may
be permanent.

Summary

Alkyl nitrite has the ability to cause asphyxia, arrhythmias, cardiovascular depression, neurologic dysfunction, and mucosal, pulmonary, and skin irritation following acute exposure
and permanent neurologic damage with chronic exposure.

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