LIVOPAN®
A fresh breath in pain relief.

Linde: Living healthcare
Rapid and controlled.

LIVOPAN® is a ready-to-use gas mixture consisting of 50% nitrous oxide and 50% oxygen, with well-documented analgesic and sedative effects. It is fast-acting, self-administered and rapidly eliminated from the body once inhalation stops. The effects are predictable and reliable, with minimal side effects. A potent analgesic in its own right, LIVOPAN can also be used as an adjunct to other analgesics.

NITROUS OXIDE EXHIBITS CLASSICAL DOSE DEPENDENT ANALGESIC EFFECTS, RAISING THE PAIN THRESHOLD AND REDUCING THE LEVEL OF PAIN EXPERIENCED. ONCE THE NITROUS OXIDE/OXYGEN MIXTURE HAS BEEN ADMINISTERED IT STARTS WORKING WITHIN MINUTES. RESIDUAL COGNITIVE AND/OR PSYCHOMETRIC EFFECTS DISAPPEAR RAPIDLY FOLLOWING CESSATION OF ADMINISTRATION. THE ANALGESIC EFFECT BEGINS WITHIN A FEW MINUTES AND WEARS OFF WITHIN 5-10 MINUTES.

Administered with care.
LIVOPAN is administered through an inhalation facemask or mouthpiece with patients’ intake of the gas mixture controlled by an on-demand valve or, if needed, a continuous flow valve. An integrated valve ensures patient and user safety, with no change of regulators necessary, no more handling of high filling pressure, and no risk of leakage. Low constant outlet pressure and flow is gauged to the treatment required.

Administered by specially trained paramedics, nurses or midwives, LIVOPAN can help to enable a more effective use of resources. Fast patient recovery is a clear advantage in most diagnostic and therapeutic procedures. The rapid offset minimises post-procedural monitoring and patient stay.

Emergency.
The advantages of LIVOPAN make it suitable for the pre-hospital setting as well as in accident and emergency departments.

Paediatric.
Without adequate relief during a painful procedure, children may experience a pain memory which could worsen the situation for subsequent procedures. This is especially valid for children with chronic diseases. LIVOPAN is beneficial in small children who may or may not be able to rationalise their pain or communicate what they are experiencing.

Obstetrics.
LIVOPAN can be used during early labour to help mothers cope with the pain during contractions and, if required, for uncomfortable examinations. The gas mixture allows, as near as possible, the mother to experience the sensation of a natural birth. Mothers can adjust their intake to suit their own individual pain thresholds.

Painful procedures.
LIVOPAN has been used widely in the treatment of pain and reduction of anxiety during minor interventions, investigations or surgical procedures.

Comfort when it’s most needed.

Rapid onset and offset of action, predictable effects, non-invasiveness and ease of administration have established LIVOPAN’s analgesic usefulness from emergency medicine to painful diagnostic as well as therapeutic procedures.

LIVOPAN nitrous oxide/oxygen mixture
Fast onset and offset make nitrous oxide/oxygen mixture ideal for acute pain of relatively short duration. The analgesic effect begins within a few minutes and wears off within 5-10 minutes.

Simple
• Non-invasive
• On demand
• Effective use of care resources

Safe
• Minimal cardiovascular or respiratory effects
• Minimal side effects

Rapid onset and offset of action in combination with a high degree of safety make LIVOPAN an attractive alternative in emergencies and other situations where rapid and controlled pain relief is required. Its analgesic and anxiolytic properties play an important role in helping patients overcome the apprehension associated with pain.

Nitrous oxide/oxygen mixture is non-cumulative. Apart from minor side effects such as drowsiness and nausea, no serious adverse effects have been reported in studies examining the use of nitrous oxide/oxygen mixtures in adults as well as children. It is associated with only minor effects of clinical relevance on the heart, circulation and breathing, even if the patient is suffering from cardiac disease or has respiratory problems. Studies in connection with acute heart attack have noted the analgesic effect of nitrous oxide without hemodynamic effects or significant side effects.
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Linde Healthcare is committed to working with healthcare providers and regulatory authorities to continuously promote safe use of medical products and improve patient care. We provide medical gas products, therapies, technical solutions and services to hospitals, clinics, nursing facilities, emergency management services and home healthcare providers around the world. With our long experience and understanding of healthcare realities, you can depend on solutions that are delivered and serviced to the highest possible standards of quality, safety and efficacy.

References.


