What is morphine?
Extracts from the poppy plant have been known to relieve pain since the ancient civilisations. One of such extracts is morphine. When administered properly, it is a safe, proven and commonly used drug.

Why do I need morphine?
Morphine is a painkilling drug that has been used for decades to treat moderate to severe pain caused by, for example, burns, heart attacks or open fractures. Tramadol, which is commonly prescribed, cannot replace and is no alternative to morphine. Its painkilling effect is only 1/10th of that of morphine. Though in many countries it is a lot easier to get Tramadol, this does not outweigh the benefits of morphine. Moreover, according to the International Maritime Dangerous Goods Code (IMDG Code) / Medical First Aid Guide (MFAG) ships that carry dangerous goods are obligated to hold sufficient quantities of morphine on board.

Frequently asked questions

How does morphine work?
Morphine lowers the sensitivity to pain. Morphine also has a calming (sedating) effect, which supports its painkilling effects. Morphine reduces the need for oxygen and can help to relieve severe shortness of breath.

Can I become addicted to morphine?
You won’t become addicted to morphine if you use it as instructed to relieve pain in an emergency.

What if I take too much? Can it cause life-threatening problems?
You must use morphine only after you have consulted with a doctor (e.g. telemedical service) and always follow medical instructions. If you are in severe pain, you will hardly feel any of the side effects morphine can cause.

How do I take morphine?
After consulting a doctor from the telemedical service, a morphine solution can be injected easily into a vein or a muscle.

How fast does morphine work?
You will feel the effects of morphine 15 to 30 minutes after an intramuscular injection and within a few minutes after an intravenous injection.

Is morphine expensive?
If you compare the prices of Tramadol and morphine, you will see that they differ only slightly.

How and where can I get morphine?
In German ports, a ship agent or the local pharmacy that supplies ships can quickly and easily get it for you. The port physician will issue a prescription based on which you can order the morphine.

When should morphine be taken?

Heart attack:
Take, for instance, a crew member who complains about chest pain that radiates into the arms and back. He may also have an anxiety attack because he has difficulty breathing as a result of the heart attack.
Morphine is one of the most important drugs used for emergency treatment of a heart attack. Apart from relieving pain, it also reduces anxiety and makes breathing feel easier.

Severe burns:
A chief cook suffered severe burns on his upper torso following an accident with hot frying oil. The pain was unbearable.
Morphine can help reduce severe pain. Often, painkillers like Tramadol drops or Paracetamol tablets are not strong enough to relieve the pain.

Open fracture:
A crew member sustained an open fracture after he misstepped and fell down a staircase.
Morphine will significantly relieve the pain. The wound can then be treated and a leg splint can be applied.
Quite often, several days pass before the patient can receive emergency medical treatment and/or be operated on. If used properly, morphine can help to make the long, and at times agonising, hours more bearable.
Legal background
The flag states determine what a ship’s medicine chest must contain. Ships sailing under German flag must carry morphine if they ply international shipping routes. Many major flag states also require ships to hold morphine on board (e.g. Cyprus or Malta).
If a flag state does not have its own medical supply regulations in place, their ships must carry the range of medicines set forth in the WHO International Medical Guide for Ships (IMGS); among others, the WHO Medical Guide requires the ship to at least carry morphine. Ships that transport dangerous goods in accordance with the International Maritime Dangerous Goods Code (IMDG Code) are also obligated to carry morphine as provided for in the Medical First Aid Guide (MFAG).

Rules applicable to ships under German flag

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Minimum quantity based on shipping area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphin hydrochloride, injectable, 10mg/ml in ampoules of 1ml</td>
<td>A 10 0 0</td>
</tr>
</tbody>
</table>

In accordance with the German Maritime Labour Act [SeeArG]; applies to German merchant ships

WHO requirements (IMGS)

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Minimum quantity based on shipping area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphin hydrochloride, injectable, 10mg/ml in ampoules of 1ml</td>
<td>A 10 0 0</td>
</tr>
</tbody>
</table>

10 ampoules per 10 crew members

IMDG Code, MFAG Annex 14 requirements

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Minimum quantity based on shipping area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphin hydrochloride, injectable, 10mg/ml in ampoules of 1ml</td>
<td>A 40 10 5</td>
</tr>
</tbody>
</table>

The next port will be reached in A >24h, B = 2-24h, C <2h

Things you should do ...

Medical-related actions
- Take the time to make yourself familiar with how to handle and dose the morphine available on board; you won’t have time to do that in an emergency situation.
- In an emergency always contact the Telemedical Maritime Assistance Service (TMAS) and follow their instructions.

Managing the medicine chest
- Keep all narcotic drugs locked at all times.
- Keep track of the on-board narcotic drugs and document everything in detail in a narcotic drugs book.
- Destroy the narcotic drugs that have expired in the presence of 2 witnesses or return them to a government agency or a pharmacy that supplies ships.
- Record in the narcotic drugs book which drugs you have destroyed or returned.
- Don’t hesitate to contact us if a government agency requires you to provide information on German regulations and rules. You can also call, email or write to us.

Published by
Free and Hanseatic City of Hamburg
Ministry for Environment, Climate, Energy and Agriculture
Institute for Hygiene and Environment
Hamburg Port Health Center (HPHC)
Beltgens Garten 2
20537 Hamburg

https://www.hamburg.de/hphc

Telephone: +49 (0)40 428 45 2209
Email: hphc@hu.hamburg.de

March 2021