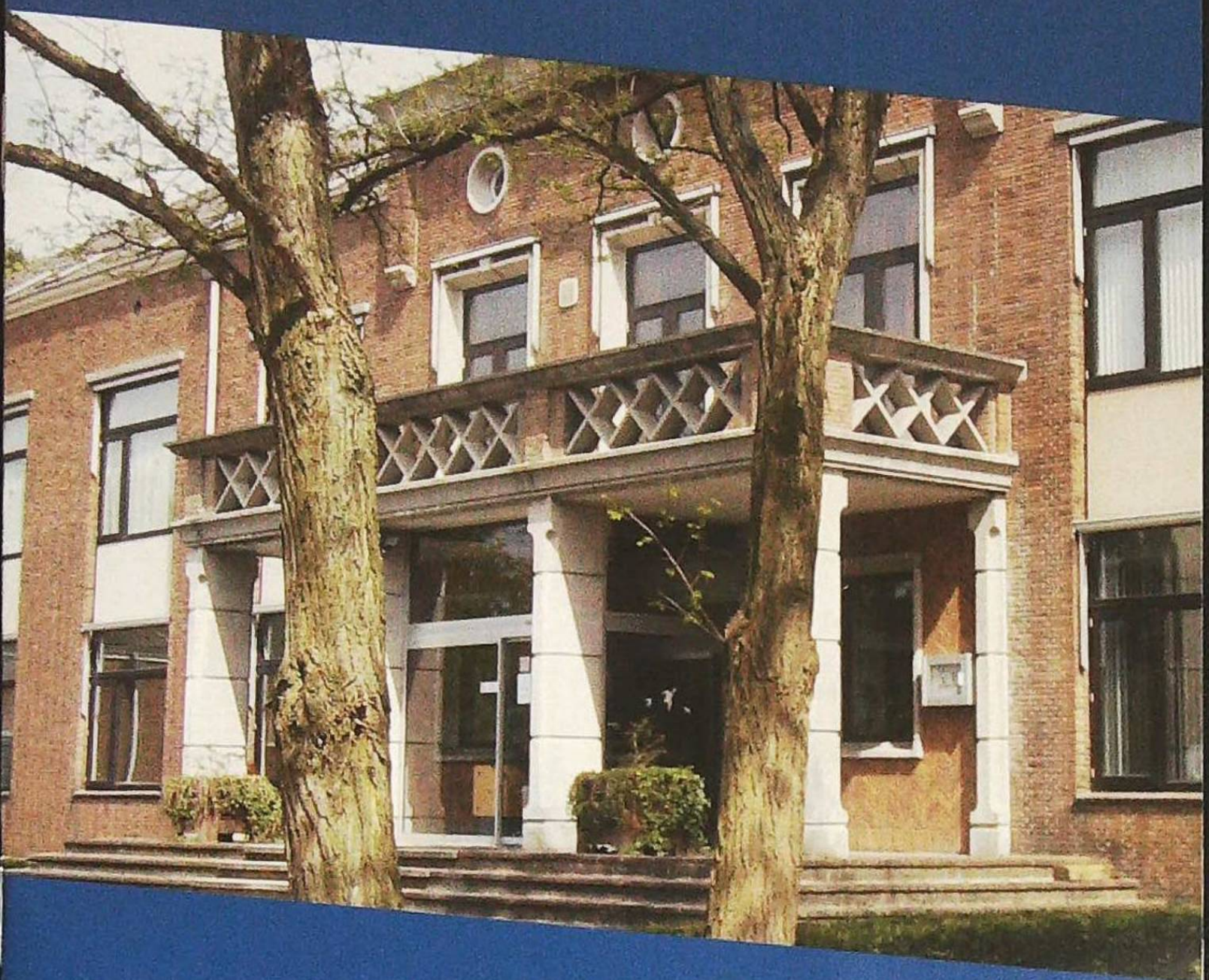


Royal Netherlands Air Force



Center for Man in Aviation

Aerospace Physiology Department

'Prevent mishaps and improve mission effectiveness'

What can the RNLAF Aerospace Physiology Department do for you?

We provide (flight-) physiological and human factor training,
education and/ or evaluation on:

Human Centrifuge Training

Build in 1983 and certified according to leading USAF standards our human centrifuge is unconditionally used by Nato, EPAF and Non-Nato countries as well as space affiliated organizations, universities and other civilian companies to teach their (new) aviators how to cope with the high demands of (military) aviation. In a controlled and safe environment we can create g-forces and teach how to counter g-forces with correct anti-g straining manoeuvres. We teach the physiological aspects of g-forces and provide a g-awareness as well as a high-g training to prepare (new) aviators for their difficult task at hand.



Hypobaric Chamber Training

Atmospheric conditions at high altitude differ enormously from those at sea level. In order to work safely at those high altitudes (anything from aviation to mountain climbing) it is important to know what effect these conditions can have on your body and what to do if your support system fails. Loss of pressure (thus oxygen) can lead to loss of consciousness, therefore it is of utmost importance to know how to recognize the symptoms of hypoxia (lack of oxygen) and to be able to take timely and adequate measures

to counter them and recover safely. Not only do we teach about the physiological effects of altitude and hypoxia, we also let people experience them first-hand in the controlled and safe environment of our hypobaric chambers. In our two hypobaric chambers we can provide "flights" up to 63000 feet with slow ascent rates or simulate a rapid decompression with very high ascent rates. We also use the hypobaric chambers for (altitude) research purposes in (inter) national studies.





Aided and non-aided night vision in Night Vision Goggle (NVG) Training Lab

NVG imagery differs from the naked-eye view in several respects, which makes it difficult to interpret. NVG reduces the visual performance and can cause visual illusions. These effects, in combination with the increasing number of night-flying NVG-ops taking place, make in-depth training an essential element to ensure safe and successful operations.

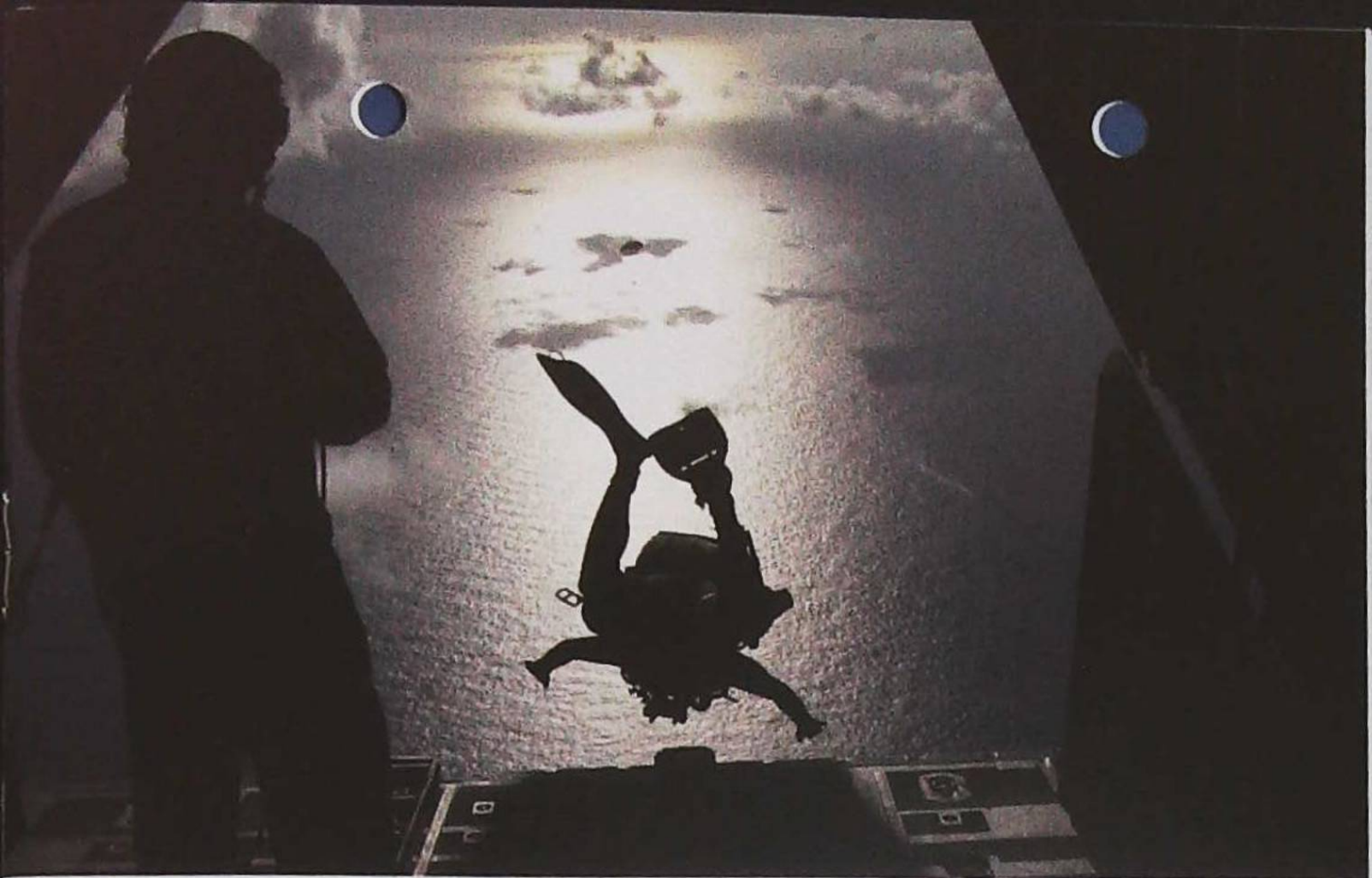
NVG-training capabilities are still being constantly enhanced and streamlined. We have one of the latest developments in NVG training. A series of hands-on demonstrators to cover the more deceptive NVG visual illusions (geometrical, atmospheric, distance, color and shading.) For our NVG simulations we use a NVG Training lab and a high-end NVG capable simulator and training board.



Disorientation in the Disorientation Demonstrator

Our organ-senses enable us to collect information from our environment. In general the information we receive from our senses is reliable but in aviation the reliability of our senses (especially eyes and vestibular-organ) decreases enormously and can cause total disorientation. In our Flight Simulated Disorientation Demonstrator (FSDD) we can show first hand how mind and senses can play tricks on aircrew. The disorientation training provides information about our senses, how they can get fooled, how to recognize these effects and the importance to always trust your instruments.



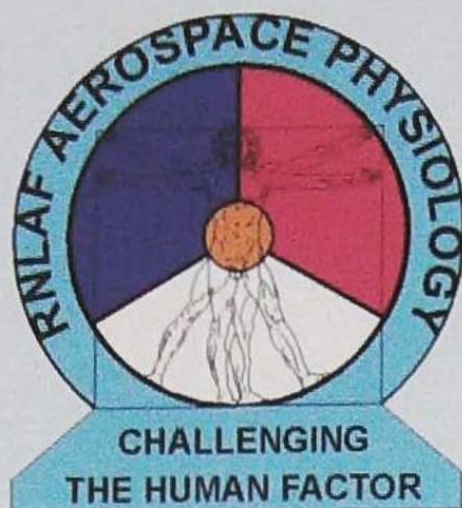


High Altitude Airdrop Missions (HAAMS)

Our aerospace physiologists can also provide support for your HAAMS. In accordance with STANAG 7056 and AFI 11-2c 130v3 oxygen supervisors at high altitude airdrop missions such as High Altitude High Opening (HAHO) and High Altitude Low Opening

(HALO) missions our physiologists are in charge of the oxygen equipment and check en keep control over the jumpers and flight crew. There is also a possibility to train your crew in advance in the hypobaric chambers.





*Should you, your company or your country wish to receive more information
or take part in a training you can contact the Aerospace Physiology
Department at the Center for Man in Aviation.
Contact details are on the back.*





**Center for Man in Aviation
Aerospace Physiology Department**

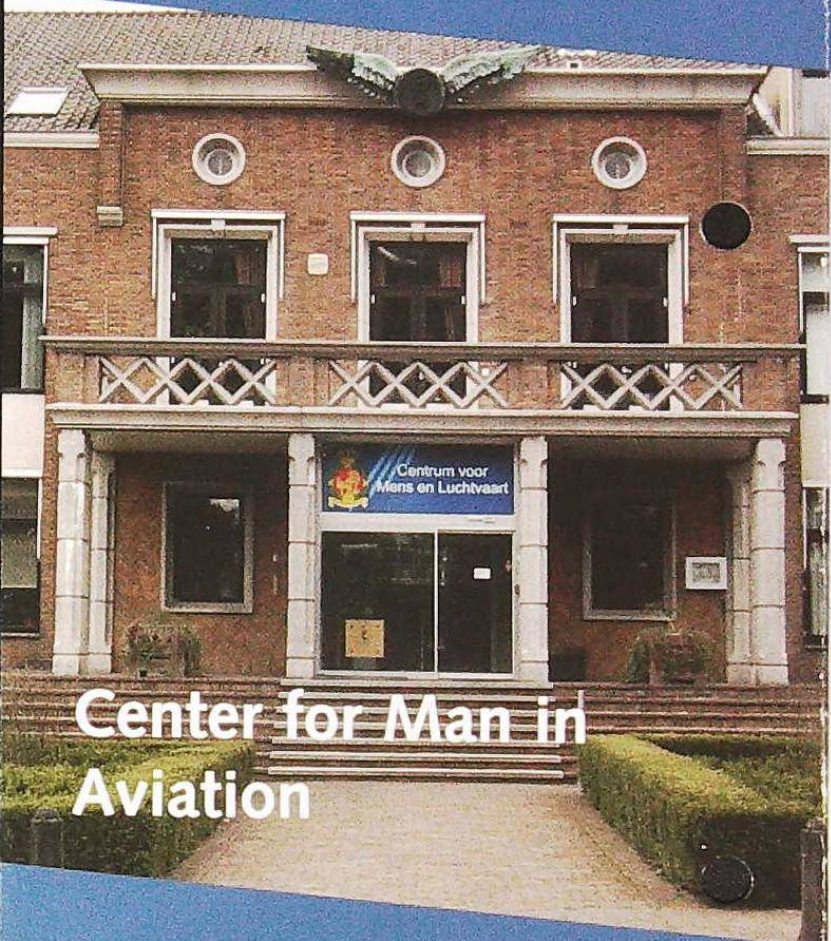
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Koninklijke Luchtmacht



Center for Man in Aviation

All expertise, facilities and experience under one roof





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Center for Man in Aviation

Aviation is highly demanding, pushing man to the limits of human ability. This is particularly true for military aviation where peak performance is demanded under the most extreme circumstances. Healthy, highly motivated and well trained professionals form the basis for success in the execution of operational tasks.

Furthermore, the creation of an enabling environment by providing the safest working conditions possible is essential.

It is within this context that the Center for man in Aviation (CML) provides a meaningful contribution, through a broad range of disciplines such as medicine, psychology, physiology and ergonomics. The combination of expertise, experience and facilities has established CML as an internationally acknowledged centre of excellence on the line between man and aviation.

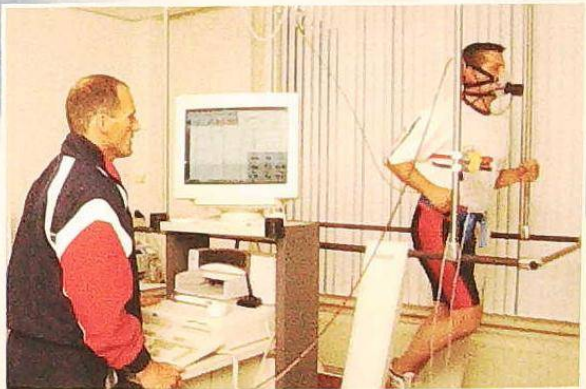
What can the CML do for you?

- select the right candidates;
- dental care;
- provide and ensure effective training;
- conduct periodic testing and assessment to ensure aviators are meeting critical demands;
- provide advice on improvements to the working environment enhance pilot performance;
- support flight operations in the field also during deployments;
- initiate and execute research in cooperation with other knowledge and research institutes.

The Center for Man in Aviation is part of the Royal Netherlands Air Force. A variety of other organisations also use CML knowledge, facilities and experience. Examples include other branches of the Dutch defence forces, foreign allied air forces, the National Police Service Corps as well as various civilian pilot schools and airlines.

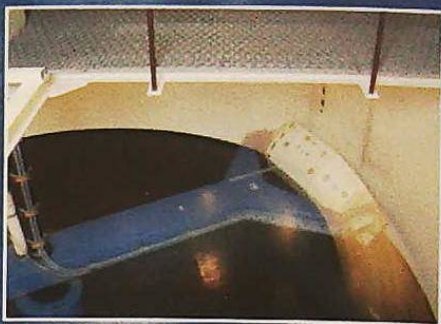
Testing and Selection

The applicant is run through a wide variety of psychological, medical and physical testing to determine whether he/she has the right profile to become a pilot.



Education and training

Aviators are introduced to the demands of aviation within safe test surroundings. This teaches them to handle G forces and oxygen debt. They are also taught how to function and work in teams.



Operational deployment

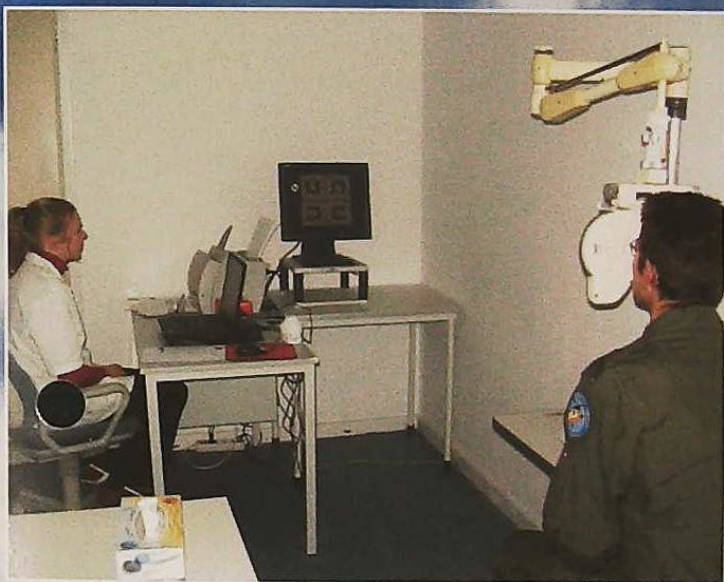
CML experts also help control flight safety and health risks during operational deployment. Examples include: assessment of surroundings dangers, aeromedical evacuation, support for high altitude parachute dropping, water and gas sampling and can act as members of accident investigation boards.





Ergonomics

CML contributes to cockpit ergonomic improvements to enhance the performance of air crew. Some examples are display design, active noise reduction and 3D audio.



Research

CML co-operates with universities and laboratories to improve knowledge concerning man in aviation. This research is aimed at improving flight safety and contributes to the health of our pilots.