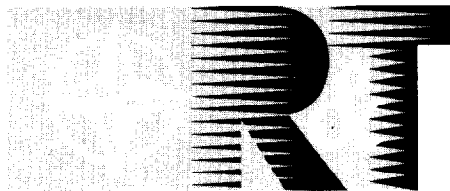


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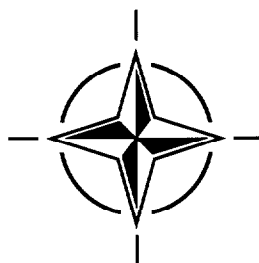
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(les Aspects aéromédicaux de la formation des équipages)

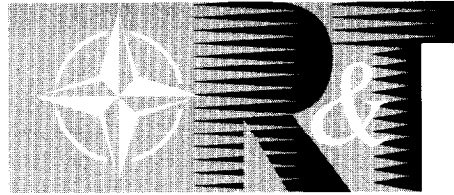
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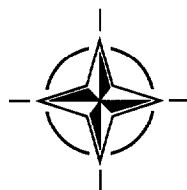
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RTO reports both to the Military Committee of NATO and to the Conference of National Armament Directors. It comprises a Research and Technology Board (RTB) as the highest level of national representation and the Research and Technology Agency (RTA), a dedicated staff with its headquarters in Neuilly, near Paris, France. In order to facilitate contacts with the military users and other NATO activities, a small part of the RTA staff is located in NATO Headquarters in Brussels. The Brussels staff also coordinates RTO's cooperation with nations in Middle and Eastern Europe, to which RTO attaches particular importance especially as working together in the field of research is one of the more promising areas of initial cooperation.

The total spectrum of R&T activities is covered by 7 Panels, dealing with:

- SAS Studies, Analysis and Simulation
- SCI Systems Concepts and Integration
- SET Sensors and Electronics Technology
- IST Information Systems Technology
- AVT Applied Vehicle Technology
- HFM Human Factors and Medicine
- NSPG NATO Simulation Policy Group (Modelling and Simulation)

These Panels are made up of national representatives as well as generally recognised 'world class' scientists. The Panels also provide a communication link to military users and other NATO bodies. RTO's scientific and technological work is carried out by Technical Teams, created for specific activities and with a specific duration. Such Technical Teams can organise workshops, symposia, field trials, lecture series and training courses. An important function of these Technical Teams is to ensure the continuity of the expert networks.

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Aeromedical Aspects of Aircrew Training

(RTO MP-21)

Executive Summary

The Human Factors and Medical Panel of NATO's Research and Technology Organization (RTO) sponsored a Workshop to bring together Aeromedical Trainers to discuss current Aeromedical Training Programmes and to present some new approaches to providing training. In addition, time was provided for attendees to discuss various approaches to Aeromedical Training and to review STANAG 3114 "Aeromedical Training of Flight Personnel". Presentations included: categories of training, subject taught, frequency of training, duration of courses, period of validity and altitude chamber profiles utilized.

The objectives of the Workshop were met. Most NATO countries were present and provided overviews of their programmes, as did representatives from Poland and the Czech Republic. Presentations were also made on new approaches to Aeromedical training including: Simulator Based Physiology Training (SYMPHYS). Simulator Based Disorientation Training and In-Flight Disorientation Training.

Attendees were also able to agree on a number of recommended changes to STANAG 3114 including, but not limited to: removal of the split between Rotary and Fixed-wing aircraft training requirements, addition of the requirement for instruction on aeromedical aspects of new Life Support Equipment and addition of the requirement for a practical Spatial Disorientation experience during refresher training.

Attendees also recommended the establishment of a Task Group to study the variation between countries in rates of Decompression Illness resulting from altitude chamber exposure. In addition, they recommended that NATO validate the need for a new STANAG on Night Vision Training. All attendees also agreed on the need for a follow-up Workshop in 3-5 years to review the progress made on issues identified during this Workshop and to discuss methodologies for providing Aeromedical Training.

Les aspects aéromédicaux de la formation des équipages

(RTO MP-21)

Synthèse

La commission facteurs humains et médecine de l'Organisation pour la recherche et la défense de l'OTAN (RTO) a organisé un atelier avec des responsables de formation dans le domaine aéromédical pour discuter des programmes aéromédicaux de formation et présenter un certain nombre d'approches nouvelles. En outre, l'une des séances a porté sur une discussion des différentes approches de la formation aéromédicale, avec examen du STANAG 3114 «La formation aéromédicale du personnel navigant». Les sujets suivants ont été abordés : les catégories de formation, les sujets enseignés, la périodicité de la formation, la durée des cours, la période de validité et les profils utilisés pour la caisson à dépression.

Les objectifs de l'atelier ont été atteints. La majorité des pays membres de l'OTAN, plus la Pologne et la République Tchèque étaient représentés et ont donné des résumés de leurs programmes. Des communications ont été présentées sur les nouvelles approches de la formation aéromédicale y compris : La formation en physiologie par simulateur (SYMPHYS), l'entraînement au simulateur et en vol sur la désorientation.

Les participants ont proposé un certain nombre de modifications à apporter au STANAG 3114, comprenant, de façon non-limitative : suppression de la distinction entre aéronefs à voilure fixe et à voilure tournante, adoption du principe d'une formation sur les aspects aéromédicaux des nouveaux équipements de survie et adoption du principe d'une séance pratique de désorientation spatiale lors des cours de recyclage.

Les participants ont également recommandé la création d'un groupe de travail pour étudier les différences entre pays concernant les incidences du mal de décompression résultant du passage en caissons à dépression. Par ailleurs, il ont souhaité que l'OTAN confirme la nécessité d'un nouveau STANAG sur l'entraînement à la vision nocturne. Un consensus s'est fait jour sur la tenue d'un atelier sur le même sujet dans 3 à 5 ans, afin de faire le point des progrès réalisés sur les questions identifiées lors de l'atelier et de discuter des méthodologies à adopter pour la formation des équipages.

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Preface

Are NATO countries complying with STANAG 3114 “Aeromedical Training of Flight Personnel”? Does STANAG 3114 require updating to ensure validity into the next century? These questions are frequently asked by Air Staffs and Aeromedical Training Personnel.

Following discussions at recent Aerospace Medical Association Meetings and the former AGARD Panel Meeting on “Selection and Training Advances in Aviation” held in Prague, Czech Republic in 1996 answers to the preceding questions were not readily apparent.

As a result this RTO Workshop invited Aeromedical Trainers from all NATO countries as well as PfP nations to discuss their countries’ current Aeromedical Training Programmes and to discuss possible changes to STANAG 3114.

Workshop participants presented the current programmes in place in their countries for conducting Aeromedical Training. Presentations include aspects such as:

- Categories of Training
- Duration of Courses
- Frequency of Training
- Altitude Chamber profiles
- Subjects Taught

Additionally, there were presentations on new approaches to Aeromedical Training including Simulator Based Physiology Training, Simulator Based Disorientation Training and In-Flight Disorientation Training. The outcomes of the Workshop include:

- Recommendations for changes in STANAG 3114
- Recommendations for the RTO to form a Working Group to investigate the causes for the wide variation in DCI rates during training that has been reported in the various countries
- Recommendations that the NATO HFM validate the need for a new STANAG on Night Vision Device Training
- Recommendations that a similar workshop be convened in 3-4 years to review the Progress of this Workshop and to discuss methodologies for providing Aeromedical Training

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14. Abstract	A RTO Human Factors and Medicine Panel Workshop held in San Diego, California, in October 1998 brought together Aeromedical Trainers to discuss current Aeromedical Training Programmes and to present new approaches to this training. Various approaches to Aeromedical Training were also discussed and STANAG 3114 "Aeromedical Training of Flight Personnel" was reviewed. Presentations included: categories of training, subjects taught, frequency of training, duration of courses, period of validity and altitude chamber profiles utilized. Most NATO countries were present and provided overviews of their programmes, as did representatives from Poland and the Czech Republic. Presentations also included new approaches to Aeromedical Training including: Simulator Based Physiology Training (SYMPHYS), Simulator Based Disorientation Training and In-Flight Disorientation Training. The Workshop recommended changes to STANAG 3114 including, but not limited to: removal of the split between Rotary and Fixed-wing aircraft training requirements, addition of the requirement for instruction on aeromedical aspects of new Life Support Equipment and addition of the requirement for a practical Spatial Disorientation experience during refresher training. Also recommended was the establishment of a Working Group to study the variation between countries in rates of Decompression Illness from altitude chamber exposure. It was also recommended that NATO validate the need for a new STANAG on Night Vision Training.		



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