



NATO STO HFM RTG-344

HFM-344 HUMAN IMPACT ONBOARD HIGH SPEED BOATS Prof Steve Myers – Chair

High Speed Boat Operations

- High Speed Boat (HSB) operations are physically and cognitively demanding
- Characterised by high levels of impact exposure, cold, wet, prolonged, and their parameters are often driven by operational requirements
- The arduous nature of HSB operations leads to fatigue (physical and cognitive), reduced operational effectiveness (during & post), can cause acute injury and anecdotally pain and chronic musculoskeletal disorders

High Speed Boat Operations

- To protect the HSB operator (crew and passengers) population data are needed to help establish the link between musculoskeletal disorders and impact exposure
- HSB operator population is relatively small *cf.* land, highly trained and self-selecting
- Therefore, an international collaborative effort is needed to collect these required data – NATO HFM-344 (RTG)

Human Impact Exposure onboard High Speed boats HFM-344 (RTG)



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Team leader(s): Prof Stephen MYERS (GBR) & CDR JOHN FRASER (USA)

Participating: BEL FRA DEU NOR GBR USA SWE

Authorized: SSTOEP PfP MD GP ICI Other

Duration: 01 OCT 2021 – 01 OCT 2024

Classification: Public Release

Objectives:

1. Establish the incidence and prevalence of musculoskeletal disorders among HSB operators.
2. Establish the necessary knowledge about which levels and which characteristics of impact exposure correlate to higher rates of injuries.
3. Establish preventive operator safety SOP and instructions.
4. Specify for smart signal solutions the real-time exposure.

Topics covered:

1. Closing the knowledge-gap on epidemiology of acute and chronic discomfort caused by impact exposure during boat operations.
2. Threshold levels for singular and cumulative impact for high-speed boat operators.
3. Safe ride operational standards for high-speed boats.
4. Naval vessel engineering and ergonomics onboard high-speed boats

Exploitation and impact:

The knowledge from this study will lead to safe-ride standards for HSB operations. The aim is a healthier workforce, maintained combat readiness, avoiding irrelevant operational restrictions, preventing occupational medical disorders, reduced sick leave & healthcare costs. The study results can lay the base for a common NATO standard, which will improve interoperability.

Status:

Unofficial meeting 02-Sep-21 – Gothenburg/online
Official first meeting Nov/Dec 2021 Paris.
Previous Activity ET-138

NATO HFM-344 (RTG) – What's it aiming to do

Instigate a study to:

- Routinely collect raw acceleration & pain/soreness data in operators on multiple routine HSB transits, across multiple nations – every transit is different
- Ingest minimal (non-operational) data into a centralised NATO database
- Database provides a NATO resource to assist in:
 - Establishing the link between pain/soreness and impact exposure – i.e. what causes pain/injury – big impacts, multiple lower-level repeated accelerations ...?
 - Identifying operational/educational and & technical solutions to improve the lot of the HSB operator community
 - Other...

NATO HFM-344 (RTG) – What's Next?

- Encourage nations to appoint members to HFM-344 through their National Representatives
- Commence activities which will include:
 - Identifying suitable opportunities for data collection
 - Agreeing minimum data collection requirements
 - Registering data the activity as a clinical trial – increases the ability to disseminate findings
 - Designing and commissioning the database
 - Identifying other exploitation route.