Mast and Tower Safety Group

promoting safety and best practice

Guidance Note

GN-005

Medical Requirements for Climbing Masts & Towers

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MATS Group Guidance Note

Medical Requirements for Climbing Masts & Towers

1 Purpose

The purpose of this guidance is to set out the required elements of mast climber medical assessments. The guidance applies to those working on masts and towers in the broadcast and communications industry.

The aim of the medical assessment is to:

- Highlight medical problems early
- Minimise the risk of sudden incapacity and need of rescue
- Encourage employees to seek medical advice should new conditions be identified. Ensure that any underlying / chronic health conditions are well controlled
- Provide consistency across the industry

2 Scope

This guidance will cover the content and frequency of the medical assessments and the medical standards to apply.

It also explains what type of medical is required for different classifications of climbers and the health conditions that may indicate a high-risk climber.

3 New climbers

New employees should be identified as climbers at the stage of recruitment. A medical assessment should be undertaken prior to any climber training or activities to ensure fitness to climb.

4 Medical Content

The contents of medicals must include the measures below as a minimum.

See Appendix B for recommended medical standards to apply.

- Completion & review of health questionnaire (see Appendix C)
- Weight, height & BMI
- Blood pressure & pulse
- Vision test - near/far/peripheral
- Hearing assessment: the whisper test
- Pin prick test for diabetes
- Musculoskeletal assessment
- Physical examination including cardiac, respiratory, neurological & mental state
    - Physical fitness to climb / Cardio-respiratory fitness tests to consider Chester Step Test or alternative fitness to climb practical assessment

The medical assessment should be undertaken by a registered medical practitioner with an understanding of the activities being undertaken physical demands of climbing masts and towers. A fitness certificate should be issued following the medical, detailing any adjustments and / or review dates. See Appendix A for example fitness certificate.

5 Chester Step Test

Research conducted within the industry *(Arqiva) demonstrated that reaching level 4 (VO2 max of 27 mLkgO2) is an acceptable standard of fitness to climb. This is based on the oxygen demand required to climb a 100m vertical ladder with no additional equipment within a timescale of 30 minutes.

6 Lifestyle Advice

The medical assessment may also present an opportunity to discuss with the climber lifestyle choices that are not impacting their health at the time of the medical but could have the potential to do so in the future, e.g. exercise, diet, alcohol use and smoking.

7 Frequency of Medicals

- The assessments should be repeated at regular intervals as mentioned below: Under 50 – Every 3 years*
- 50 or over – annually

It should also be noted that there is a requirement for requesting medicals outside of the standard periodicity if there are any concerns from the line manager or individual regarding fitness to climb following sickness absence, diagnosis of a new medical condition, following injury/accidents or as specified by the examining physician following previous restricted or failed medical.

* Some employers may adopt more regular intervals if deemed necessary due to remote locations or risk assessment.

8 High Risk Conditions

Certain medical conditions would be considered as high risk for those climbing masts and towers.

Climbers, who have conditions such as diabetes and asthma, when controlled, should still be eligible to climb. An assessment of the condition should be undertaken by a medical professional via the medical to determine the type of condition and whether the condition is suitably controlled, so that its existence does not increase risk when climbing. It is advisable to ensure those who climb with you, know the condition and are advised where appropriate medication is, such as an inhaler.

Epilepsy would be considered as a high-risk condition where climbing activities should not be undertaken. All other conditions should be assessed via the medical.

9 High Risk Activities

Risk assessments should be conducted for all activities which may present a risk to the climber. The risk assessment will determine whether a climber medical is needed. Activities to consider which may need a medical are:

- Climbing masts and towers
- Access to restricted spaces on the structure (e.g. antenna work in broadcast industry)
- Restricted space access on rooftops
- Rigging activities e.g. use of winch where hearing and visual fitness may be crucial

10 Climber Responsibilities

It is important that the climber undertakes a self-assessment prior to every climb. Any climber who feels unwell or is under the influence of alcohol or drugs should not climb. Anyone taking medication with the warning "may cause drowsiness avoid operating machinery" should not be climbing.

Climbers are responsible for informing their employer of any changes to their health that may affect their fitness to climb.

It is recommended that climbers complete the self-declaration of fitness for working as a climber shown at appendix D as part of the MATS Basic Tower climbing and rescue scheme administered by EUSR

11 Failure of medicals

If and individual has been found unfit to climb at the time of the medical assessment, they should be advised to seek further treatment / referral / investigations via their own GP with support from their employer. The examining physician ought to suggest a suitable timeframe for review of their fitness to climb.

A restricted medical certificate should be considered if an individual is found to be "unfit to climb" / grounded. Consideration may be that they can still undertake other work for example access a flat roof, climb a ladder. This will help an individual still feel valued and be able to work toward full fitness again.

12 Medical Questionnaire

A medical questionnaire should be completed before the medical for review by the medical practitioner. A sample medical questionnaire is included at Appendix C.

13 Related Documents

- MATS Group Guidance Note GN-001 – Work at Height Training
- MATS Group Guidance Note GN-006 – Principles for Access to Radio Sites
- MATS Group Guidance Note GN-007 – Lifting Equipment onto Roof Tops
- MATS Group Guidance Note GN-008 – Mast and Tower Rescue – Guidance for Radio and Rigging Teams working on Radio Structures
- MATS Group Guidance Note GN-009 – First Aid Guidance

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Appendix A – Example Climber Medical Certificate

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Appendix B – Medical Standards for climbing Masts and Towers

- **Vision**
  Visual acuity must be adequate for safe work.
  A visual acuity of at least decimal 6/12 (with glasses or contact lenses, if necessary) using both eyes together.
  Peripheral vision should be tested and if abnormal optician referral to be arranged.
  Visual fields should be full in both eyes. For monocular vision, fitness to work may be permissible, subject to local risk assessment and climber activities. Vision may be tested using Snellen's chart or Keystone apparatus. Spectacles (including prescription safety glasses) or contact lenses may be worn for correction.
  Assessment of near vision and colour vision may be included if requested by the employer depending on the nature of the work being carried out on the structure.

- **Blood Pressure**
  Blood pressure should be well controlled.
  The DVLA group 2 criteria should applied:
    - Systolic of < 180 mm Hg and/or
    - Diastolic of < 100 mm Hg.

- **Weight / Height / BMI**
  Due to the harness weight restriction any climber that weighs in excess of 120 kg must be referred back to the employer for risk assessment and review to ensure a suitable harness is available.
  A high BMI is not a contraindication to climb but mobility and agility should be considered
  A local risk assessment should be considered for any climber with a BMI >35.
  High BMI scores should have a neck measurement completed. Males with neck measurements greater than 43 cm and females with neck measurements greater than 38 cm are to be escalated for further review.
  For climbers with a high BMI the examining physician may need to consider screening for Obstructive Sleep Apnoea using for example the STOP-Bang questionnaire.

- **Musculoskeletal Assessment**
  Full movement of the back, neck and all four limbs are required for safe climbing. There must be no significant muscular weakness in the finger flexors (grip strength), elbow flexors, shoulder girdle muscles and knee extensors.

- **Hearing**
  Hearing should be assessed using a practical test such as a whisper test. Audiometry is normally not required but may be appropriate to determine baseline hearing levels if exposure to noise will be above the Action Level under the Control of Noise at Work Regulations 2005. There must be no significant hearing impairment because the employee must be able to hear voice communication and auditory warnings over a distance of 10 metres in an outdoor environment.
  A local risk assessment is required for any climber with hearing impairment.

When considering fitness to climb such as assessing sudden risk of incapacity and other health conditions; it is recommended that the examining physician refers to the DVLA group 2 driving standard as a benchmark for fitness to be a high climber.

Appendix C – Example Climber Medical Questionnaire

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Appendix D – Self Declaration Of Fitness

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declaration%20-%20