

'Covid-19 Revised' Emergency Response Teams Assessment

OGUK medical guidelines have been adapted to meet the challenge posed by the worldwide pandemic of Covid-19 virus, beginning in late 2019 and continuing to date. The 'socially distanced' OGUK medical has minimised the need for respiratory function testing for example, and there is a need to revise the Section 3, paragraph 2 guidance on assessing the fitness of ERT members for the same reason. The following should be substituted for the existing 2008 Guidance Section 3, Paragraph 2:

2. Emergency Response Teams

2.1 Introduction

Duty holders are required to have arrangements in place to provide for an effective response in the event of an offshore emergency. This is achieved by a series of measures summarised in the Safety Case and includes preventive and reactive measures.

One element of the response is a trained Emergency Response Team (ERT), some of whom will have a range of duties including firefighting, assisting with a controlled platform evacuation and casualty search and rescue.

Participation in emergency response could require working in a variety of potentially stressful environmental conditions, sometimes with long hours and extended physical demands in situations significantly beyond the individual's routine job duties.

While some designated team members will have sedentary functions such as Radio Operator and Control Room Operator, the roles of some of the ERT members will involve wearing protective clothing/breathing apparatus and engaging in physical activity recognised to be of 'vigorous' intensity (1). Because these duties and activities are likely to put additional physiological burdens on the worker, employers need to establish the capacity of team members for such duties, and to risk-assess their participation in them.

OGUK therefore recommends that ERT members tasked with physically strenuous activities undergo regular:

- Medical Assessment
- Fitness Grading

2.2 Medical Assessment

A medical assessment should be conducted to ensure that the person does not have a medical or physical condition that would preclude them from safely performing the essential job functions, and is able to safely complete the essential physical requirements of their emergency response role. The examining physician should, in particular, consider the following when making the assessment:

Respiratory Function

Respiratory function testing was previously listed as a requirement for ERT members regardless of history of lung disease, but for the 'Covid-19 amended' ERT assessment this requirement is removed: for ERT members with a history of respiratory disease, the exercise test provision of the 'socially distanced' OGUK medical applies – this will establish a basic standard of physical capacity, but additional assessment as described at 'capability assessment' and 'risk assessment' below will also be necessary.

Cardiovascular System

Any form of cardiac pathology including dysfunction or myocardial insufficiency will normally render an individual unacceptable for ERT duty. Mild hypertension, controlled if necessary by medication, may be acceptable providing the medication does not limit exercise tolerance.

Nervous System

A history of epilepsy, recurrent impaired consciousness, vertigo or impaired co-ordination is unacceptable for ERT members.

Psychological Disorders

Phobic anxiety relating to heights or confined spaces is unacceptable. Evidence of current alcohol and or substance abuse is unacceptable. A history of significant/recurrent anxiety and/or depression would normally be unacceptable.

Vision

A minimum standard of 6/9 binocular is required, if necessary using appropriate corrective lenses compatible with BA use. If visual correction is required, an uncorrected binocular visual acuity of 6/60 is appropriate to allow the safe escape of the individual following an event. Visual fields must be normal. Monocular vision is unacceptable.

Hearing Impairment

Examinees should be able to hear conversational speech without difficulty. A hearing impairment in excess of 35dB in the better ear (averaged over 0.5, 1, 2kHz) may raise doubts about ability to hear in a hazardous environment. Such cases should be individually assessed by the examining physician but are normally unlikely to be fit for ERT membership.

Endocrine Disease

Significant endocrine disease requiring ongoing treatment will normally render a person unfit to participate in an ERT.

Medication

Workers requiring medication to treat an identified medical condition that would deteriorate significantly should a dose be missed will normally be unfit for ERT membership, as will those taking medication that causes side effects that would interfere with any of the ERT functions.

Musculoskeletal System

The examining physician should assess the musculoskeletal system to exclude any impairment of function that would interfere with the execution of the individual's essential job tasks in the ERT. Particular attention should be paid to any history of back disorders, especially (but not limited to) in those in the role of stretcher-bearer.

2.3 Fitness Grading

The requirement for a VO2max test is removed (for additional remarks on VO2max assessment see later).

The requirement for VO2 max testing was introduced in response to two specific concerns – conversations with industry representatives year on year consistently identifies the two themes of concern (expressed in varying fashion) to be:

‘They’re not up to it’ (i.e. concern about the worker’s *capability* to undertake ERT duties), and
‘They’re going to collapse’ (i.e. concern about the worker’s *safety* in undertaking ERT duties).

These two aspects of ERT readiness can be alternatively assessed as follows:

2.3.1 Capability Assessment

There is general agreement that ERT activities (predominantly search and rescue) are ‘vigorous intensity activity’.

The examining doctor should ask the question ‘Can the worker demonstrate ability to undertake sustained vigorous activity?’ and rate the examinee according to the evidence he/she is able to provide:

Evidence provided = Capability Rating **Green**

Evidence not provided = Capability Rating **Amber**

The examining doctor may use the ‘Compendium of Physical Activities’ (2) as a guide to the examinee’s physical capability. As a simple guide, those examinees able to provide evidence of completion of a ‘fun run’ of 5k or more at a suitable pace may be judged to have provided sufficient evidence; evidence of membership of and regular training at a running club, cycling club, football team or similar activity are also likely to be sufficient.

Those unable to provide evidence of capability should be provided with information on the ‘Couch to 5k’ training programme (3) (<https://www.nhs.uk/live-well/exercise/couch-to-5k-week-by-week/>) and encouraged to train until able to run at a *minimum* pace of 4 mph (6.4 km/h) continuously for 30 minutes*: this means covering a *minimum* distance of 2 miles (3.2 km) in 30 minutes.

Note that it is not necessary for the examinee to undertake an exercise test for the purposes of the ERT assessment; the capability element of the assessment is not a pass/fail one, but is intended to grade ERT members on assessed capability and risk; decisions on deployment will follow accordingly (see below).

However, once an examinee reports themselves (after self-directed training) capable of running for a minimum of 30 minutes at a pace equal to or greater than 4 mph (6.4 kph), in order to be ‘upgraded’ from **Amber** to **Green** they may voluntarily demonstrate their ability to do so, for example to an installation medic by suitable timed run in the installation gym, where permitted by installation Covid-19 policy. Alternatively, examinees may undertake an on-installation practical demonstration of ability to undertake relevant ERT tasks while wearing the usual ERT-specific clothing and equipment for that task, sufficient capacity being judged by the ERT leader, OIM, installation medic or similarly suitable person.

*technical note: the Compendium of Physical Activities

(<https://sites.google.com/site/compendiumofphysicalactivities>) indicates that the intensity of running at 4 mph/6.4 kmph is 6.0 METs, equivalent to ‘vigorous’ intensity exercise (the 2008 Physical Activity Guidelines for Americans defines physical activity intensities as: light <3.0 METs, moderate 3.0-5.9 METs, and vigorous ≥6.0 METs). A person running a minimum distance of 2 miles/3.2 km in 30 minutes is therefore undertaking vigorous intensity exercise for that duration.

Safe vigorous activity

The most obvious risk of vigorous physical activity is collapse (typically cardiovascular) during or immediately afterwards. Newspaper and internet stories of collapse and fatality during activities such as running (4) or novel party dancing (5) are typically about middle-aged men (often obese, if pictured), around the average age of offshore workers.

However, the overall risk of fatal collapse during activity is low - 1 death per million exercise hours in middle-aged men (6, 7). It is twice as likely in those with 'low habitual activity' than in the habitually active (6, 7, 8). Habitual activity pattern is the strongest predictor of death during vigorous exercise, this being 5 times more likely during vigorous exercise in the habitually active, compared to 56 times more likely during vigorous exercise in the habitually inactive (9).

2.3.2 Safety risk assessment

Risk of collapse and/or more severe related events during ERT duty may be assessed by considering the examinee's habitual physical activity habits, and refined empirically by the consideration of smoking habit and known clinical markers of cardiovascular risk.

The amount of physical exercise typically undertaken weekly by the examinee should be assessed, along with their use of nicotine products, and the presence or absence of hypertension, indicators of hyperlipidaemia (e.g. prescription of statin medication) and obesity (BMI >30). These factors can be scored and summed to produce a safety rating:

Risk factor		Score		
Amount of leisure time physical activity	Less than 150 minutes per week	1	0	150 minutes per week or more
Smoker*	Yes	1	0	No
Any one or more of**: hypertension, high cholesterol, obesity	Yes	1	0	No
Total score				Safety Rating: 0 = Green 1 = Amber 2 = Red 3 = Black

Explanatory notes: Minimum requirement for physical activity per week is 150 minutes (in at least 10 minute periods) per week of moderate intensity (3.0 to 5.9 METs) exercise. Use the Compendium of Physical Activities (<https://sites.google.com/site/compendiumofphysicalactivities/>) to take an exercise history, and assess the MET value of leisure-time exercise, or exercise specifically for the purpose of keeping fit, reported by the examinee.

*Smoking: means smoking tobacco in any form or use of nicotine vaping in any form, in the past year - 90% of e-cigarette users also continue to use combustible tobacco products (10).

**Hypertension = medical diagnosis and/or on treatment; high cholesterol = clinically established from known blood test results, or inferred from medication history; obesity = BMI >30.

2.3.3 Final Assessment of fitness grading

The examinee’s capability and safety ratings are combined to give an overall fitness grading, as follows:

Capability rating	Safety rating	Grading Category
Green	Green	A1
Amber	Green	B
Green	Amber	B
Amber	Amber	C
Amber/Green	Red	D
Amber/Green	Black	DD

2.4 Frequency of Assessment

Medical assessments should follow the normal OGUK periodicity, whilst fitness grading should be undertaken at least annually.

2.5 Roles and Responsibilities

Medical assessment should be undertaken by an OGUK approved physician with a valid Oil & Gas UK PIN.

The fitness grading may be carried out by an OGUK approved physician or by an offshore Medic, a nurse or other suitably trained person working under the supervision of a OGUK approved physician.

2.6 Certification of Fitness for ERT Duties

Following successful completion of the medical examination, for candidates whose duties contain a physical component, the examining physician should complete Part 1 of the Certificate of Fitness to Participate in ERT Duties (refer to Addendum 6A/6B).

Following fitness grading, the responsible person should complete Part 2 of the Certificate of Fitness to Participate in ERT Duties.

Subsequent fitness grading assessments between periodic medical examinations should be entered in the remaining sections of Part 2 of the certificate.

In addition to confirming fitness to participate in ERT duties, operating companies may wish to use this certificate as confirmation of fitness for firefighting training. In such circumstances, the operating company’s medical adviser should ensure the acceptability of the certificate to the relevant training body.

2.7 Application of Assessment system:

The fitness grading element of the assessment is not intended to be a pass/fail one, but to produce a grading of practical use to operators, employers, and ERT leaders and teams alike. The fitness grading can readily be understood as reflecting a worker’s physical capability and their liability to adverse medical events during ERT activities.

Operators and employers (if different) will wish to agree policy on selection for and deployment of workers in ERTs on the basis of fitness grading – it would be logical for example to select only workers of A1 grade into ERTs where possible, but if limited numbers of such workers are available, B graded workers would be

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preferred next, and C workers as a third preference. It is likely that operators would wish to avoid selecting D and DD graded workers for ERT duty unless no other alternative higher-graded worker was available.

Similarly, deployment decisions on installations can be simply and readily informed by fitness grading: it would be logical to deploy only A1 graded team members to the most physically demanding activities (such as search and rescue in breathing apparatus), and lower-graded personnel to the least demanding activities. Where lack of A1 graded personnel obliged the deployment of B or C graded persons into physically demanding activities, team leaders could take account of this by briefing the team to work at a slower pace (for example, at one judged appropriate for the lowest-graded team member).

Operators and/or employers may at their discretion set policies such as selection and deployment only of workers at or above a certain fitness grade: the extent to which this is feasible will depend on the overall pattern of fitness grading in the offshore workforce: while this is yet to be established, it is likely that only a minority of workers will be of A1 grade, with many at C grade, and a not insignificant minority at D or DD grade.

2.8 Use of VO2 max testing.

Operators/employers wishing to retain assessment of fitness for ERT duty by VO2max may do so where local Covid-19 circumstances permit relevant tests to be carried out: however, they should specify whether a direct measurement (by maximal exercise test) or estimated value (from step test or similar) is required, and should define their own preferred acceptable minimum value. Examining doctors should report only a VO2max value (Addendum 6B, Part 3), and employers/operators will determine whether that is a 'pass' or 'fail' value.

2.9 References:

1. Bugajska, J et al. Cardiovascular Stress, Energy Expenditure and Subjective Perceived Ratings of Fire Fighters During Typical Fire Suppression and Rescue Tasks. *International Journal of Occupational Safety and Ergonomics*, 13:3, 323-331. DOI: 10.1080/10803548.2007.11076730
2. Compendium of Physical Activities 2011: <https://sites.google.com/site/compendiumofphysicalactivities/Activity-Categories/walking>
3. NHS. Couch to 5k: week by week (undated, last accessed 31 May 2020): <https://www.nhs.uk/live-well/exercise/couch-to-5k-week-by-week/>
4. <https://metro.co.uk/2017/03/20/man-collapsed-and-died-during-5k-park-run-6520857/amp/>
5. <https://www.telegraph.co.uk/news/health/news/9739262/Middle-aged-men-warned-to-avoid-violent-exertion-after-man-dies-following-Gangnam-Style-dance.html>
6. Albert et al. Triggering of Sudden Death from Cardiac Causes by Vigorous Exertion. *NEJM* 2000; 343 (19): 1355-61
7. Vuori, I. Reducing the Number of Sudden Deaths in Exercise. *Scand J Med Sci Sports* 1995; 5: 267-8
8. Lemaitre et al. Leisure-time Physical Activity and the Risk of Primary Cardiac Arrest. *Arch Intern Med* 1999; 159: 686-90
9. Siscovik et al. Incidence of Primary Cardiac Arrest during Vigorous Exercise. *NEJM* 1984; 311(14): 874-7
10. Wise, J. E-cigarettes are independent risk factor for respiratory disease, study finds. *BMJ* 2019;367:l7019. doi: <https://doi.org/10.1136/bmj.l7019> (17 December 2019)

Addendum 6A – Certificate of Fitness to Participate in ERT Duties

First Name:
 Last Name:
 Date of Birth:

Employing Company Name:
 Occupation:

Part 1 – Medical Fitness for ERT Duties

I certify that the above-named has been assessed in accordance with the ‘Covid-19 Revision of Medical Aspects of Fitness for Offshore Work’ and that he/she is assessed as fit for work offshore and medically fit to undertake ERT duties

Examining Physician Name:
 OGUK PIN:
 Date:
 Expiry Date:

Part 2 – Fitness Rating

I certify that the above-named has been assessed in accordance with the ‘Covid-19 Revision of Medical Aspects of Fitness for Offshore Work’ and that he/she is assessed as ERT Fitness Grading:

Date of grading			
Grading (circle one)	A1	A1	A1
	B	B	B
	C	C	C
	D	D	D
	DD	DD	DD
Name of person assessing grading			
Date of expiry			
Signed			

Addendum 6B – Certificate of Fitness to Participate in ERT Duties (VO2max)

First Name:
 Last Name:
 Date of Birth:
 Employing Company Name:
 Occupation:

Part 1 – Medical Fitness for ERT Duties

I certify that the above-named has been assessed in accordance with the ‘Covid-19 Revision of Medical Aspects of Fitness for Offshore Work’ and that he/she is assessed as fit for work offshore and medically fit to undertake ERT duties

Examining Physician Name:
 OGUK PIN:
 Date:
 Expiry Date:

Part 2 – Fitness Rating

I certify that the above-named has been assessed in accordance with the ‘Covid-19 Revision of Medical Aspects of Fitness for Offshore Work’ and that he/she is assessed as ERT Fitness Grading:

Date of grading			
Grading (circle one)	A1	A1	A1
	B	B	B
	C	C	C
	D	D	D
	DD	DD	DD
Name of person assessing grading			
Date of expiry			
Signed			

Part 3 – VO2 max

I certify that the above-named has undergone measured/estimated* VO2 max measured by [state method of assessment] and that their measured/estimated* VO2 max is [insert value] ml/kg/min.

Examining Physician Name:
 OGUK PIN:
 Date:
 Expiry Date:

*delete as appropriate