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4.4.3 30 January 2020

Dear Senior Coroner,

**RESPONSE TO HM SENIOR CORONER'S REGULATION 28 REPORT TO PREVENT FUTURE DEATHS**

Reference:

A. HM Senior Coroner's Letter 132897 – KAMIL IDDRISU (LH/RP) dated 6 Dec 19.
B. British Army/Capita Statement to the Coroner Following the Collapse of Mr Iddrisu at Assessment Centre Lichfield dated 13 Dec 19.
C. British Army/Capita Statement to the Coroner Following the Collapse of Mr Nkhoma at Assessment Centre Lichfield dated 13 Dec 19.

**BACKGROUND**

1. In Nov 19 two candidates[1] collapsed and subsequently died whilst taking part in the 2000 metre (m) run at the Assessment Centre Lichfield (AC(L)) as part of the Role Fitness Test Entry (RFT(E)) for joining the Regular Army.[2] A copy of the Army Recruitment and Assessment Centre Selection process is at Annex A.

2. Following the death of Mr Iddrisu ('the first death'), appropriate action was taken to manage the risk, which was assumed at the time to most likely be a cardiac event. After the death of Mr Nkhoma ('the second death'), the 2000m run was suspended for all Commonwealth Candidates. Once the cause of death was presumed to be Exertional Collapse Associated with Sickle Cell Trait (ECAST)[3] several multidisciplinary meetings, with many medical experts, have taken place. These have been informed by an Evidence-Based Medicine approach drawing on available research and current NHS best practice, tempered by best available experience of UK Subject Matter Experts (SMEs) and US Armed Forces. It was also recognised that ECAST is a condition potentially applying to both UK and non UK candidates, therefore all subsequent actions have been applied to <u>all</u> candidates applying to join the Army.

[1] Mr Kamil Iddrisu from Ghana and Mr Youngson John Jumbe Nkhoma from Malawi.
[2] The ACs are contracted to be run by Capita as part of the Army Recruiting Partnering Programme.
[3] SCT is a hereditary condition that is normally benign but is known to be associated with sudden death on exertion following a breakdown of skeletal muscle. ECAST can rapidly lead to death when the large muscles break down, causing kidney and other organ failure, and is regarded as a 'metabolic crisis'.

**Mrs Louise Hunt**
**Senior Coroner for Birmingham & Solihull**
**50 Newton Street**
**Birmingham**
**B4 6NE**

3. An Army SME group[4] has been formally established as the Sickle Cell Trait Steering Group which reports to Director Personnel and the Army Health Committee. This Group will continue to review and revise current Army recruiting and in-service policies and procedures to mitigate the risk of further Sickle Cell Trait (SCT) related incidents to As Low As Reasonably Practicable (ALARP). It has been agreed for now that those with SCT still meet the entry medical standard for the Army, but this will be formally reviewed by the Army Heath Committee.

**HM SENIOR CORONER MATTERS OF CONCERN**

4. HM Senior Coroner raised two Matters of Concern in the PFDR dated 6 Dec 19, which are answered in the detail below.

5. **Matter of Concern 1**. *Consideration should be given to all non-UK selection candidates being screened for sickle cell trait before embarking on any selection process. A blood test can be undertaken to assess whether candidates have sickle cell trait.*

a. **Action taken after the two deaths and *before* HM Senior Coroner issued the PFDR.** A number of actions were taken, the most pertinent being:

(1) As the first death was believed to be cardiac related, it was decided that any candidate, regardless of origin who presents with an abnormal Electrocardiogram (ECG) (as directed within current Army Cardiology protocol) would undergo a full Echocardiogram (ECHO).

(2) The 2000m RFT(E) best effort run was suspended on 28 Nov 19 for all CW candidates. CW candidates completed the rest of the selection activities as normal. As a result, approx. 150 candidates were placed 'on hold' pending a way forward.[5]

b. **Action taken *since* the issue of HM Senior Coroner's PFDR.** The PFDR was issued on 6 Dec 19; earlier that day the Deputy Chief of the General Staff (DCGS) – the Army's Principal Personnel Officer – directed that the Army (on medical advice) implement a screening process to identify those candidates who are SCT positive prior to participating in the 2000m best effort run. This is being conducted in two phases:

(1) **Stage 1 – Screening Questionnaire to identify those at risk of being SCT positive.** The NHS has already developed a Family Origins Questionnaire (FOQ) which helps to identify individuals whose family background indicates high risk of SCT. The Army has adopted, developed and implemented the FOQ which was issued on 13 Dec 19 (Annex B); it will be used to determine which individuals are at high risk and will be filled out in <u>all</u> Army ACs by <u>all</u> candidates regardless of origin and application

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[4] Chaired by Senior Health Advisor (Army) and attended by, amongst others: Director Operations of the Army Recruiting and Initial Training Command, Head Advisory Army Legal Services, Defence Consultant Advisor for Occupational Medicine, Consultant Advisor General Practice (Army), Defence Consultant Advisor in Pathology, Recruiting Group Chief Medical Officer, Assistant Head of Professional Development (Army), and Occupational Medicine Representatives from the Royal Navy and Royal Air Force.

[5] The 2000m run assesses a candidate's cardiovascular fitness. The minimum standard is determined by intended job role requirements, considering the benefits offered by progressive development in Basic Training and aims to minimise risk of injury during training and throughout their career.

stream (officer, soldier, Regular and Reserve). This recognises that SCT is present in all family origins.[6]

(2) **Stage 2 – Blood Test.** The FOQ will identify those candidates who will need to undergo a blood test to determine if they are SCT positive or negative.[7]

c. Since the FOQ was implemented, the first cohort of 24 high risk candidates were blood tested at the Army Training Centre Pirbright (ATC(P)), through an interim process set up between the Defence Primary Healthcare (DPHC) and Frimley Park Hospital, on 19-20 Dec 19. Seven were SCT positive, the remaining high risk candidates on hold will follow the same process.

d. An Evidence-Based Medicine approach was adopted to swiftly manage the risk, using the available research albeit limited; "*In military populations who had completed basic training there was a much lower risk of unexplained Exertional Death in SCT*". Gardner et al attributed this to "*elimination of a vulnerable set of recruits, the removal of the unique and novel stresses to succeed during basic training, and/or protection conferred by sustained enhanced fitness and environmental acclimation*".[8] In the same paper O'Connor et al recommend that "*appropriate progression in exercise intensity are critical factors in mitigating risk*". The Senior Health Advisor (Army) was also able to draw on contemporary US Armed Forces experience of managing SCT risk, provided through the British Medical Liaison Officer in Washington, to advise that a progressive 4-week pre-conditioning course for SCT positive candidates will reduce the risk to ALARP.

e. The Army already runs a well-established Soldier Development Course (SDC), (Annex C) [9] which has been designed to progressively assist potential Army recruits who have marginally failed at AC to develop in a range of areas to meet the Army's entry standards. The seven SCT positive candidates commenced a bespoke 4-week period of pre-conditioning, on 8 Jan 20, which is being run within the parameters of the SDC. This pre-conditioning activity has been endorsed by the Army's Senior Health Advisor. For the SCT personnel their conditioning programme is to mitigate the risk of ECAST to enable them to undertake RFT(E) at the end of the course, which includes the 2000m run. There will be a specific focus on avoiding over exertion by using individual heart rate monitors to assist their progression. How these individuals perform and the effectiveness of the course in supporting them to meet the Army entry standards will be the subject of ongoing assessment and assurance. Lessons learned and improvements will be incorporated into the next course due to start in Feb 20.

f. **Further action that *will* be taken.** Following the decision to screen all candidates for SCT when applying to join the Army, the Army in partnership with Capita are working to put in place an enduring solution to test the blood of every candidate whom the FOQ identifies as high risk of being SCT positive. This

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[6] Medical advice highlights that SCT is present in 1 in 4 West Africans, 1 in 10 Caribbeans, 1 in 640 Caucasian and 1 in 76 of all babies born in the UK (of all ethnicities). Currently JSP 950 entry policy excludes candidates with a history that indicates exertional rhabdomyolysis, whether caused by SCT or not, but not those with known asymptomatic SCT. There is no current intent to make asymptomatic SCT (without exertional rhabdomyolysis) a disbarring condition.
[7] Candidates will not be allowed to undertake to 2000m run until their SCT status has been determined.
[8] O'Connor et al. "ACSM and CHAMP Summit on Sickle Cell Trait: Mitigating Risks for Warfighters and Athletes in Medicine and Science in Sports and Exercise", June 2012 pp 2045-2056. *Gardner JW et al. Non-traumatic Exercise related deaths in the US military 1996-1999. Mil Med 2002:167(12):964-70.*
[9] This was originally launched in Jan 17 as a pre-conditioning course and was retitled the Soldier Development Course in Apr 19.

process enables a medical assessment to be made identifying those at risk of SCT with a follow on blood test to confirm their status, where required. Unless proven to be SCT negative, no candidate at risk of SCT participates in the 2000m run, without attending a pre-conditioning course first. The blood test screening process will be delivered through a future contracted arrangement, which will be United Kingdom Assurance Service (UKAS) accredited. Details on the assurance mechanism will be known once the enduring solution has been implemented (not expected before 1 Apr 20).

g. **Assurance measures in place to ensure adherence to new measures/policy.** The following measures have been implemented, to date:

(1) **Assurance of the pre-conditioning course.** Those SCT positive personnel (and non-SCT candidates) attending the SDC come under the same strict assurance and Duty of Care regime of all Defence training schools in terms of the Joint Service Publication (JSP) 822 and Army Command Standing Order 3216. This includes the requirement for Risk Assessments and the implementation of practices that reduce any Risk to Life to ALARP. The course has its own specific Risk Assessment and SCT positive personnel have an individual Appendix 9[10] which communicates the restrictions and limitations of that individual to the staff running the SDC. The course will also receive additional and specialist assurance visits to ensure complete compliance with both the Duty of Care and SCT physical development direction.

(2) **Control of SCT positive personnel on the pre-conditioning course.** The day-to-day management of the SCT positive personnel is tightly controlled. Specifically, their progressive physical conditioning programme is individually tailored and includes specialist medical input. They will be overseen by qualified Army Physical Training Instructors and training staff dedicated to the course. These SCT positive individuals will also wear personally issued watches with in-built heart rate monitors[11] at all times to educate and minimise risk of over-exertion. All candidates on the SDC (whether SCT positive or not) will be assessed using a sub maximal aerobic test. This will provide the information to create individual heart rate training zones. It is worth noting that all those attending the pre-conditioning course still must meet the Army's physical entry standards in order to proceed to Basic Training; if they fail to achieve the set standards by the end of the course they will be discharged.

6. **Matter of Concern 2**. *Consideration should be given to all non-UK selection candidates who have been through the process already having an urgent blood test to check whether they have sickle cell trait. If a person has sickle cell trait, they are a significant increased risk or death/collapse during military exercise.*

a. **Action taken since the issue of HM Senior Coroner's PFDR.** The Interim Training Direction (Annex E) was issued to the Army Recruiting and Initial Training Command (ARITC) training establishments[12] by Director Operations on 13 Dec 19, with specific direction for the information to be briefed to or seen by all training staff, including Physical Training Instructors and medical staff. The SCT

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[10] Appendix 9 is taken from AGAI Volume 2 Chapter 78 (Annex D)
[11] The current issued model is Polar Ignite.
[12] The Royal Military Academy Sandhurst Group, The Initial Training Group and the School of Infantry.

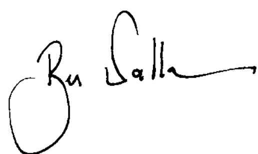
awareness and information document has been adopted across all initial training establishments from 5 Jan 20 and is at Annex C. The Interim Direction is based on current US military practice and is designed to mitigate the risk for those who might be at risk of ECAST, how to recognise the symptoms and what immediate treatment is needed if ECAST is suspected. Also contained in the document are the universal precautions designed to reduce the risk of those factors believed to contribute to the onset of ECAST, such as dehydration and dietary supplements containing stimulants. Further, every individual identified as SCT positive is being issued with information on SCT in the form of a Public Health England information leaflet[13] to understand the implications of their condition and how they can personally help to mitigate risk.

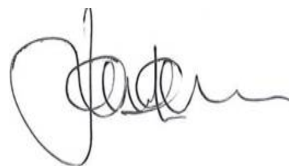
b. **Further actions that *will* be taken.** In order to ensure that the Army has identified all SCT positive individuals, all personnel not captured during the application process will be screened on entry, by the end of the first week of Basic Training (BT).[14] It is intended to have this process, which will be developed with and delivered by the Defence Primary Healthcare Service, in place by as soon as possible and not later than 1 Apr 20. In addition, the Army is considering an Army-wide screening programme for serving personnel.

c. The Army's Personnel Directorate has revised and circulated Army-wide the relevant policy to ensure that the prevention, recognition and effective handling of anybody suffering from Exertional Collapse, from any cause, is fit for purpose. AGAI Vol 1 Ch 7 (Annex F) has been updated with a new paragraph called *Risk of Exertional Collapse*. The revised document includes information on SCT positive personnel, including risk factors, recognition and treatment. The policy changes have been directed to the Army's Chain of command through an Army Briefing Note, at Annex G.

d. The Army is also assessing further options for what pre-conditioning activity can be applied to SCT positive Regular officer and Junior Entry candidates. Likewise, for candidates wishing to serve in the Reserves or those who apply to the Officer Training Corps whilst at university. As lessons are learnt from the current conditioning course then more bespoke courses may be put in place elsewhere, notably for the Reserves and Junior Entry candidates.

e. Work is also underway to develop the advice that will be given to all serving soldiers. In addition, those who have been identified as SCT positive will be given bespoke advice.





Secretary of State for Defence — Chief Executive Capita plc

[13] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/701031/SCT28_HbAS_carrier_leaflet_180418_web.pdf

[14] Screening will take place before recruits conduct the RFT(E) or any maximal heart rate activity.

Annexes

A. Army Recruitment and Assessment Centre Selection Process.
B. British Army Family Origins Questionnaire.
C. Army Guide to ARITC re Soldier Development Course.
D. AGAI Vol 2 Ch 78 Appendix 9.
E. British Army Interim Training Directive.
F. AGAI Vol 1 Ch7 Physical Training AEL 120 dated Jan 20.
G. AGAI Vol 1 Ch7 Physical Training (ABN New Release).

Enclosures:

1. JSP 950 Leaflet 6-7-7 Annex N Pre-Entry Other Conditions.
2 JSP 539 Heat Illness and Cold Injury: Prevention and Management

**ARMY RECRUITMENT AND ASSESSMENT CENTRE SELECTION PROCESS**

3. **Army Recruitment Process.** For context and to help describe the recruiting process for an applicant wishing to join the Regular Army the following, noting there are nuances between Soldier/Officer and Regular/Reserve (primarily at selection[15] and medical screening[16]), outlines the common soldier recruiting pipeline activity:

4. **Key Stages.** The Army recruitment process delivers soldier candidates in to the British Army (via Training) in a series of stages. Army entry standards are role specific and common for both UK Nationals and Commonwealth (CW) citizens. CW candidates conduct the initial stages of recruitment at reach, due to the vast majority not being physically in the UK at point of application[17]. The result is a subtly different journey from Application to Selection, managed by Candidate Support Managers (CSM) in the National Recruitment Centre (NRC) rather than Regional Recruiters. The stages are as follows:

a. **Application.** All candidates apply to join the British Army online via the Defence Recruiting System (DRS). This system then manages and tracks a candidates journey all the way to starting Basic Training. This stage also includes an Initial Eligibility Check. Due to these checks CW candidates require a manual intervention by the team based in the NRC to bypass the minimum UK residency requirement.

b. **Online Medical Questionnaire (OMQ).** The OMQ is conducted online using the DRS interface and seeks to filter out candidates early in the process, who are extremely unlikely to pass medical screening and therefore fail to achieve the Army medical entry standards.

c. **Army Brief (AB) and Initial Career Discussion (ICD).** Candidates who successfully pass the OMQ are invited to attend an AB/ICD. This is most commonly held at an Army Careers Centre (ACC) and consists of two key parts. The AB is an opportunity for Recruiting Group (RG) to explain to the candidate what the Army is and what it offers whilst the ICD is an opportunity for the candidate to discuss any personal preferences and ask any questions they may have with a recruiter. CW candidates conduct the majority of the AB/ICD remotely with the CW Team in the NRC.

d. **Medical Screening.** Candidates are medically screened against the Army Medical Entry Standards[18]. For Regular Soldier this is facilitated using a candidates PHCR that is reviewed by a doctor. For Regular Officer, all Reserve candidates and CW candidates the Recruiting Group Medical Declaration (RGMD) is used. The RGMD is completed by the candidate's doctor. At both OMQ and Medical Screening Further Medical Evidence (FME) may be requested from a candidate and a medical fail can be appealed.

e. **Assessment Centre (AC).** Soldier Selection, conducted at an AC, consists of a Pre-Service Medical Assessment (PSMA), cognitive testing and physical assessment. The run element of the physical assessment is not conducted by candidates until they have been cleared 'medically fit' by the AC doctors, post full PSMA.

f. **PSMA.** PSMA includes several tests and a thorough one-to-one examination conducted by a Doctor. Prior to the one-to-one, medical technicians and nurses conduct a series of 'run-ups' including urine tests, basic measurements and vision/hearing testing. All

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[15] Officer candidates (Regular and Reserve) attend Westbury (Army Officer Selection Board), rather than one of the 4 (Pirbright, Lichfield, Glencorse and Belfast) soldier Assessment Centres.
[16] Regular Soldier candidates have their PHCR (Primary Healthcare Records).
[17] CW Candidates are formally invited to attend AC in writing to help support their Visa Application (when required). The CW recruitment process is influenced by immigration requirements and security vetting.
[18] Joint Service Publication 950 Medical Policy Leaflet 6-7-7 (20 Aug 19 Revise).

candidates have an ECG and all ACs can conduct both an exercise Spirometry and ECHO when a requirement is highlighted in a candidate's ECG.

g. The cognitive assessment consists of 4 elements detailed below. (1) and (2) are common to all and therefore tested for all soldier candidates. (1), (2) and (3) are scored refining which soldier roles a candidate is eligible for. They are as follows:

(1) **General Trainability Index (GTI).** As the name would suggest the GTI score gives an indication as to the trainability of a candidate. Each soldier role has subtly different training requirements, which is reflected in the GTI score required.

(2) **Functional Skills Assessment (FSA).** The FSA assesses a candidate's numeracy and literacy level. Functional Skills Entry Level (EL) 2 is the minimum level to enter Basic Training in the British Army.

(3) **Technical Selection Test (TST).** More technical soldier roles require candidates to conduct the TST. This test is primarily maths focused.

(4) **Further Educational Evidence.** Some roles require Mandatory Academic Qualifications (MAQ) that are provided at AC, if not before, in the form of educational certificates.

h. The physical assessment[19] consists of 3 elements:[20]

(1) **Mid-Thigh Pull.** Very similar to a dead lift, this assessment assesses/indicates strength and capacity. This has multiple correlations with military tasks. Score required is dictated by role (but minimum 46 kgs).

(2) **Medicine Ball Throw.** This measures upper-limb strength and involves throwing a 4 kg medicine (weighted) ball from the sitting position with legs extended and back against a wall. The score required is dependent on role (minimum 2.9 metre throw).

(3) **2000m Run.** This activity is best effort and determines a candidate's cardiovascular fitness. A 500-metre run/walk is conducted as a squad as a warm-up. This is to be completed in 6:30 – 7:00 minutes (as a warm-up) immediately prior to the 2000 metre best effort run. The score required is dependent on role (minimum Standard Entry requirement is 11:15 minutes). **The run element of RFT(E) is only completed when a candidate has been deemed medically fit at PSMA.**

**4. Assessment Centre Pass/Fail.** All Regular Soldier Candidates can only be loaded to Basic Training having passed the Army Entry Standards for a specific soldier role. Therefore a candidate's result is dependent upon their preferred/chosen role (this is often a two way discussion). Each soldier role has different cognitive, educational and physical entry standards specific to their future employment. Providing a candidate passes for this role and there is training space available candidates are loaded to the event by the Load to Train Team in the NRC.

[19] Role Fitness Test (Entry) (RFT(E)), effective as of 1 Apr 19.

[20] The current RFT(E) tests and standards have been developed using an internationally-recognised scientific method which combines scientific technical analysis and military judgement. This approach considers the benefits of progressive physical development afforded during Basic Training and is intended to minimise risk of injury both during training and throughout career.

Annex B to
PFDR RESPONSE
Dated 30 Jan 20

**FAMILY ORIGIN QUESTIONNAIRE**

| Candidate URN | Candidate Date of Birth |
|---|---|
| | |
| **Candidate Surname (Last name/family name)** | **Candidate Forename (First name)** |
| | |

**INFORMED CONSENT**

This questionnaire is to assist in establishing a candidate's genetic heritage. This will enable the assessment of the candidate's sickle cell status.

The results of this questionnaire will be used to inform whether a blood test will be needed to ascertain the candidate's sickle cell status. This information will then be used to assess the risk of exertional collapse when taking part in the Army physical tests.

The candidate is required to sign and date this form to confirm that they have had the questionnaire explained to them and understand its purpose and that they consent to being asked these questions to ascertain if there is a requirement to progress to a blood test[21]. A copy of this form will be held in the candidate's case file. The health professional who has explained the purpose of this form must also sign below.

**Candidate signature**…………

**Date**…………

**Health Professional's Name**…………

**Signature**…………

If the candidate does NOT consent to the completion of this form and has been informed that their application to join the Army cannot continue at this time, the Health Professional needs to confirm this and sign.
**Health Professional's Name**…………

**Signature**…………

**Date**…………

Once the form below is completed the outcome is to be circled or ticked on this front page:

| FOQ Outcome | Proceed | Held pending blood test |
|---|---|---|

[21]Candidates who do not consent to completing the FOQ are unable to progress with their recruitment at this time.

**FAMILY ORIGINS:**

The following questions relate to the candidate's BIOLOGICAL parents. Please tick all boxes in ALL sections that apply to the biological mother and biological father.

| | Biological Mother | Biological father |
|---|---|---|
| **A. AFRICAN OR AFRICAN-CARIBBEAN (BLACK)** | | |
| Caribbean Islands | | |
| Africa (excluding North Africa) | | |
| Any other African family origins | | |

| | Biological Mother | Biological father |
|---|---|---|
| **B. SOUTH ASIAN** (ASIAN) | | |
| India or African-Indian | | |
| Pakistan, Bangladesh, Sri Lanka | | |
| Nepal | | |

| | Biological Mother | Biological father |
|---|---|---|
| **C. SOUTHEAST ASIAN (ASIAN)** | | |
| China including Hong Kong, Taiwan | | |
| Singapore, Thailand, Indonesia | | |
| Malaysia, Vietnam, Philippines | | |
| Cambodia, Laos, Myanmar | | |
| Any other Asian family origins | | |
| Any Melanesian/Polynesian country (includes Fiji, Tonga) | | |

| | Biological Mother | Biological father |
|---|---|---|
| **D. OTHER NON-EUROPEAN (OTHER)** | | |
| North Africa, South / Central America | | |
| Middle East, Saudi Arabia, Iran | | |
| Any other non-European family origins | | |

| | Biological Mother | Biological father |
|---|---|---|
| **E. SOUTHERN AND OTHER EUROPEAN (WHITE)** | | |
| Sardinia | | |
| Greece, Turkey, Cyprus | | |
| Italy, Portugal, Spain | | |
| Albania, Czech Republic | | |
| Poland, Romania, Russia | | |
| Any other Mediterranean country | | |

| | Biological Mother | Biological father |
|---|---|---|
| **F. UNITED KINGDOM (WHITE)** | | |
| England, Scotland, Northern Ireland, Wales | | |

| | Biological Mother | Biological father |
|---|---|---|
| **G. NORTHERN EUROPEAN (WHITE)** | | |
| Austria, Belgium, Switzerland, Scandinavia | | |
| Ireland (Eire), France, Germany, Netherlands | | |
| Australia, North America, Canada, South Africa, New Zealand | | |
| Any other European family origins | | |

| **H. DON'T KNOW** | |
|---|---|
| Adoption | |
| Unknown for other reasons | |

| **I. BONE MARROW TRANSPLANT (FOR SICKLE CELL DISEASE)** | | |
|---|---|---|
| Have you had a bone marrow transplant? | Yes | No |
| | Biological Mother | Biological father |
| Has either parent had a bone marrow transplant – if yes to either parent - test | Yes/No | Yes/No |

| | Biological Mother - Grandmother | Biological Mother - Grandfather |
|---|---|---|
| **J. ORIGIN** | | |
| A. AFRICAN OR AFRICAN-CARIBBEAN (BLACK) | | |
| B. SOUTH ASIAN (ASIAN) | | |
| C. SOUTHEAST ASIAN (ASIAN) | | |
| D. OTHER NON-EUROPEAN (OTHER) | | |
| E. SOUTHERN AND OTHER EUROPEAN (WHITE) | | |
| F. UNITED KINGDOM (WHITE) | | |
| G. NORTHERN EUROPEAN (WHITE) | | |
| H. DON’T KNOW | | |

| | Biological Father - Grandmother | Biological Father - Grandfather |
|---|---|---|
| **K. ORIGIN** | | |
| A. AFRICAN OR AFRICAN-CARIBBEAN (BLACK) | | |
| B. SOUTH ASIAN (ASIAN) | | |
| C. SOUTHEAST ASIAN (ASIAN) | | |
| D. OTHER NON-EUROPEAN (OTHER) | | |
| E. SOUTHERN AND OTHER EUROPEAN (WHITE) | | |
| F. UNITED KINGDOM (WHITE) | | |
| G. NORTHERN EUROPEAN (WHITE) | | |
| H. DON'T KNOW | | |

***Guidance for health care professionals.***

1. Please ask for the family origins going back at least 2 generations (or more if possible) – sections J and K. Assessing risk as per below, i.e. origin groups A, B, D, E H and I require testing.

2. Boxes A, B, D, E, H and I represent a high prevalence area/risk for sickle cell disease, and boxes C, F and G are associated with a low prevalence area/risk.

3. If a Candidate has ticked any of the high prevalence boxes, it is recommended that a screening test for sickle cell is required to proceed in the process.

4. If the candidate ticks a low prevalence box for both parents, then they can proceed to the RFT(E) in particular the 2 km run.

5. If the candidate does not consent to the completion of the FOQ, the clinician is to sign and date this form.

6. The form is to be signed by the clinician to confirm that they have informed the candidate the purpose of the questionnaire.

10 Jan 20

**ARMY HQ PHYSICAL DEVELOPMENT GUIDANCE TO ARITC**
**REDUCING THE LIKELIHOOD OF EXERTIONAL COLLAPSE ASSOCIATED WITH SICKLE CELL TRAIT (ECAST)**

1. Following a series of meetings on 07 Jan 20 at ATR(W), the following physical development guidance is provided by Professional Development Branch, Personnel Directorate, Army HQ. This document provides interim guidance for the delivery of the Soldier Development Course (SDC) to reduce the likelihood of ECAST during selection and training. Future consultation will be necessary with stakeholders to further refine the SDC content and to enhance the guidance and mitigations provided at this stage.

**ECAST Education**

2. Educate both SCT+ candidates and Directing Staff on how to promote, prevent, detect and treat ECAST:

a. **Promote:**

(1) Health education, including a positive approach to PD activities and general lifestyle.

(2) Management of SCT+ through effective policy and guidance to staff and SCT+ personnel.

b. **Prevent:**

(1) Using universal mitigations and generic risk factors associated to exertional collapse. Direction and Guidance is available in AGAI Vol 1 Ch 7.

(2) Through education and candidates and Staff in the management of progressive training and the basic use of the heartrate monitors and training zones.

c. **Detect:**

(1) During training. Participants and Staff should be aware of the signs, these being:

(a) The SCT+ candidate may have been a front runner, or off to a strong start, but will be noted somewhere before the collapse as slowing down, falling behind and struggling.

(b) They begin to lose smooth coordination, they evolve into an awkward running posture and gait, with legs that may look wooden or wobbly.

(c) The SCT+ candidate may complain of progressive weakness, pain, cramping or shortness of breath.

(d) Distinct from the cramping of exercise associated muscle cramping, in ECAST, there is generally no visible muscle twitching and the muscles do not "lock up." The pain of muscle cramping is generally excruciating, whereas the predominate symptom of ECAST is weakness over pain.

(e) The ECAST casualty will initially be mentally clear, before the onset of confusion and loss of consciousness.

(2) View the US SCT awareness videos at https://www.hprc-online.org/articles/sickle-cell-trait-awareness.

d. **Treat:**

(1) In the event of exertional collapse, the following immediate action drills are to be followed:

(a) STOP the activity.

(b) EVALUATE, ADMINISTER FIRST-AID as appropriate (ie. Check Airway, Breathing, Circulation and TREAT as required) and CALL emergency services if needed.

(c) ADMINISTER oxygen if available and appropriate.

(d) HYDRATE if tolerating liquids.

(e) INITIATE COOLING techniques as required.

(f) ENSURE appropriate medical follow-up of the individual.

(g) REVIEW others. Only restart activity when assessed as safe to do so.

(h) INFORM the Chain of Command as necessary.

**Controlled and Progressive Physical Training**

3. Long-term prevention measures judged to reduce the likelihood of ECAST are to employ the use of training zones to support the positive effects of progressive and controlled physical conditioning. ARITC should review SDC MEL and allocate lessons to achieve the following:

a. At the beginning of the course conduct a sub-maximal aerobic test on the wattbike for all candidates. A sub maximal aerobic test is a recognised method of establishing individual training zones **whilst not** taking the individual to maximum exertion.

b. Review training duration, intensity and frequency for all training activities including physical training, swimming, drill, fieldcraft and adventurous training.

c. Review medical plans and access to medical facilities including the access to oxygen.

d. Introduce pacing to assist SCT+ candidates to achieve their RFT (E) CEG run time whilst **not at best effort** (zone 5, 90-100% of maximum heart rate). This is a pragmatic mitigation noting excessive motivation, highly likely on RFT (E), is an ECAST risk factor.

e. Ensure all exertional collapse risk factors (AGAI Vol 1 Ch 7) are reduced to ALARP.

4. Directing Staff to manage and monitor exertional levels of SCT+ candidates for all training activities:

a. As an additional mitigation tool (to the visible symptoms), monitor SCT+ candidate's heartrate using issued heart rate monitor (HRM) watches. During training, use the alarm function on the issued heart rate monitor (HRM) watches to prevent SCT+ candidates from training in zone 5[22]. It must be noted the use of the HRM **only forms one part** of the overall assessment process and monitoring of participants.

[22] There is some fluctuation in heart rate zones depending on the activity. For example, take cycling and running at the same level of intensity: the cyclist's heart rate is 5-10 beats slower than the runner's heart rate. This is because cyclists don't need to support their own bodyweight and their muscles can use most of the available oxygen for moving forward. Also, the number of working muscle groups used for cycling is smaller than for running.

b. ARITC Directing Staff to manage and monitor training/performance of participants and reduce the likelihood of ECAST to ALARP.

c. Participants to develop their fitness progressively and gradually in a controlled environment. Analysis of the participants performance and HRM data should be used to review the SDC and to ensure the content remains optimised and intensity is progressive.

d. A key summative training objective on the SDC for SCT+ candidates is to achieve the RFT (E) minimum run time whilst remaining within the prescribed personal training zone (ie below 90% of maximum heart rate).

e. Wake Up exercises should not be used for SDC SCT+ candidates.

**Future Staffing Requirements**

5. Recommended future tasks include:

a. **Army HQ** will continue to review SCT+ academic literature. **ARITC** to refine training and mitigations as necessary.

b. Establish failure and retest policy. **ARITC with Army HQ in support.**

c. Develop protocols to conduct the sub-maximal aerobic test on a treadmill. **ARITC with Army HQ in support.**

d. Refine and optimise future SDC content by:

(1) Evaluating course feedback through internal validations from both staff and candidates. **ARITC**

(2) Evaluating candidates' performance and development. **ARITC**

(3) Analysing HRM training zone data from candidates. Ensuring a progressive training pathway is achieved during the 4-week SDC course. **ARITC**

## APPENDIX 9

## FORM FOR NOTIFYING MEDICAL/ FUNCTIONAL RESTRICTIONS TO UNIT

**Guidance for MO**. The form should provide sufficient information for the Unit to manage the individual's career for the period until the review date. The individual should be given a copy and asked to read the paragraph below and sign at section 8. A second signed copy should be sent to the unit. It is the unit's responsibility to hold the signed copy. There is no requirement to retain a signed copy on DMICP. If the individual refused to consent to the distribution of the App 9, you are still required to complete the DMICP JMES template and inform the CO of safety critical duties (weapon handling, driving etc). This is a public safety duty that surpasses that of confidentiality.

**Guidance for Unit**. The unit are responsible for ensuring promulgation to OC, line manager, RCMO and the appropriate APC Career Manager as required. This form allows the Unit to conduct a risk assessment on the individual's role. The form remains valid until the review date only. It is signed by the individual to ensure they are aware of the restrictions advised. If overdue review the unit should assume the individual is restricted all activities previously indicated and arrange a review. **THIS APP MUST BE UPLOADED ONTO PAPMIS.**

**Guidance for Individual**. You must read this form and **comply with its direction -** it explains to your Unit any medical/ functional restrictions you have been given. The form will be used at Unit Health Committee meetings, will be held by your unit and a copy will be passed to your APC Career Manager. The APC Occupational Health Branch may access your medical record to provide further functional advice if requested. You have been given the opportunity to ask questions regarding the form and the Medical / Assessment Board proceedings, on-going treatment and likely outcome. You will need to sign section 8 to say you have been given a copy consent to its use and will abide by its direction.

<table>
<tr><td>No:</td><td></td><td>Rank:</td><td></td><td>Name:</td><td></td></tr>
<tr><td>Unit:</td><td></td><td>JMES:</td><td>Date of board:<br>MDS:<br>MES temp/perm:<br>MES: A L M E</td><td>Board Type:<br><br>Review date:</td><td></td></tr>
<tr><td colspan="6">*Anticipated Outcome: (e.g. return to MFD)<br>*Anticipated Timeline / Stability:</td></tr>
<tr><td colspan="6">* Where appropriate these fields can be populated with relevant information in order to support employment decisions/discussions at UHC in addition to the PAPMIS record (which is key). The information is for guidance only and is subject to change.</td></tr>
</table>

### 1. DEPLOYABILITY/EMPLOYABILITY ON OPERATIONS

<table>
<tr><td>MND (L5-L6)</td><td>Not</td><td>Not deployable on operations</td></tr>
<tr><td rowspan="2">MLD (L2-L4)</td><td rowspan="2">Limited</td><td>PJHQ CAT 1: personnel whose duties remain within the confines of designated main operating bases</td></tr>
<tr><td>PJHQ CAT 2: personnel whose duties may require periodic deployment outside defensive locations</td></tr>
<tr><td>MFD (L1)</td><td>Full</td><td>PJHQ CAT2+: personnel whose duties may require routine deployment outside defensive locations</td></tr>
</table>

| | | PJHQ CAT 3: personnel whose duties encompass the full spectrum of operations in theatre. CAT2+ by exception |
|---|---|---|

| **Deployability Category**<br>[SP]'s Deployability Category is: | |
|---|---|
| **Functional Capacity on Operations**<br><br>Take cover/prone position - Yes<br>Run a short distance (100m) - Yes<br>Carry own bergan to transport - Yes<br>Wear Operational Body Armour - Yes<br>Stand 2 hours in PPE with weapon - Yes<br>-<br>- | **Deployment Risk**<br><br>Incapacitation (Low Risk)<br>Worsening condition (Low Risk)<br>Primary care requirement (Low Risk)<br>Rehabilitation requirement (Low Risk)<br>Secondary care requirement (Low Risk)<br>Emergency aeromed (Low Risk)<br>Interference with treatment (Low Risk) |
| Overall risk assessment for deployment: | Overall risk assessment for deployment (Low Risk) |
| Comments: Deployability/Employability on Operations – User comments | |

**2. DEPLOYABILITY/ EMPLOYABILITY ON EXERCISES/TRAINING SUPPORT DEPLOYMENTS**

| | |
|---|---|
| Weight-personal kit & equipment<br>Weight - personal kit & equipment - No specified limit<br>- | Full trade exercise activities<br>Full trade exercise activities - No specified restriction<br>- |
| Infantry activities (Including digging)<br>3100: Infantry activities - No specified restriction<br>- | Living in field conditions<br>3200: Living in field conditions - No specified restriction<br>- |
| Travel on foot across rough terrain<br>3101: Travel on foot across rough terrain - No specified restriction | Move tactically and adopting fire positions<br>3102: Move tactically and adopting fire positions - No specified restriction |
| Comments: - exercise cat 5 | |

**3. SPECIFIC LIMITATIONS** *- complete if appropriate*

| | |
|---|---|
| Trade restrictions | - trade cat 5 |
| Noise Restrictions | Noise Restrictions - No specified restriction - as per HCP - |
| Climatic Restrictions | 5100: Climatic - No specified restriction - |
| Other restrictions | Other Restrictions - No specified restriction - |
| Requires ongoing primary health care | Does not require ongoing primary health care |
| Comments: - limitations cat 5 | |

**4. FUNCTIONAL CAPACITY**

| | |
|---|---|
| Level 3 PT | Unit mainstream or operational specific PT Programme (conditioning PT).<br>Will have passed RFT(S)/AFT. |
| Level 2 PT | Personnel with reduced physical ability, not quite ready to conduct mainstream PT (reconditioning PT).<br>Will have completed the SCR to a satisfactory standard but not RFT(S)/AFT. |
| Level 1 PT | Personnel who are medically exempt, un-acclimatised, on weight management programme, or who have not reached a satisfactory SCR, RFT(S)/AFT level. Requires rehabilitation and/or reconditioning before advancement. |

| **Recommended Physical Training Level**<br>*NB: PT prescriptions and PT Levels 1-3 detail can be found in AGAI 7. This relates to medical fitness to participate in physical training and medical fitness to attempt the fitness assessments/tests (i.e. physical fitness is not a factor that can prevent medical upgrading).*<br><br>Recommended PT Level: Level 3 PT | **Rehabilitation:**<br><br>Individual has been given a PT prescription<br><br>Rehabilitation programme - risk of prolonged recovery if rehab interrupted - No |
|---|---|

| **Functional Activities** | | |
|---|---|---|
| Walking<br>6007: Walking - No specified restriction<br>- | Working Hours<br>1210: Working Hours - No specified restriction<br>- | Boots<br>9301: Boots - No specified restriction<br>- |
| Standing<br>6004: Standing - No specified restriction<br>- | Workplace<br>1213: Workplace - No specified restriction<br>- | Clothing<br>9300: Clothing - No specified restriction<br>- |
| Sitting<br>6003: Sitting - No specified restriction<br>- | Marching / drill<br>6006: Marching/drill - No specified restriction<br>- | Combat Body Armour<br>Combat Body Armour - No specified restriction<br>- |
| Lifting<br>6200: Lifting - No specified restriction<br>- | Guard duties<br>9200: Guard duties - No specified restriction<br>- | Helmet<br>Helmet - No specified restriction<br>- |
| Comments: - functional active cat 5 | | |

**5. SAFETY CRITICAL TASKS**

| Driving<br>1403: Driving - No specified restriction<br>- | Weapons<br>9004: Weapons - No specified restriction<br>- | Working at Heights<br>1203: Working at Heights - No specified restriction<br>- |
|---|---|---|
| Passenger<br>1212: Passenger - No specified restriction<br>- | Ranges<br>9003: Ranges - No specified restriction<br>- | Workplace Assessment<br>Workplace Assessment - No specified restriction<br>- |
| Comments: - safety cat 5 | | |

**6. MEDICAL REVIEW**

| Medical review required before commencing MST/ Deployment | 5500: Medical review before MST/Deployment - No |
|---|---|
| Approval by an ROHT required before commencing MST/ Deployment | ROHT approval required before commencing MST/Deployment - No |
| Comments: - med rev 5 | |

**7. COMPLETED BY**

| **Name:** | | **Date:** | |
|---|---|---|---|
| **Rank and Appointment:** | | **Signature:** | |

**8. INDIVIDUAL'S ACKNOWLEDGEMENT OF RECEIPT (Sign before giving to line manager)**

| **Name:** | | **Rank** | | **Signature:** | |
|---|---|---|---|---|---|

**ARMY RECRUITING AND INITIAL TRAINING COMMAND HANDBOOK – TRAINING QUALITY MANUAL**
This document forms part of the ARITC Handbook and is intended for use in HQ ARITC and its Operating Groups only

| | | |
|---|---|---|
| **Title:** | **ARITC Sickle Cell Trait (SCT) Information and Awareness** | |
| **Subject Area:** | Deliver | |
| **Applies:** | 13 Dec 19 | |
| **Issued:** | 13 Dec 19 | |
| **Last Reviewed:** | 10 Jan 20 (v1.1 with amendment) | |
| **Contact:** | Maj (MAA) C M Roberts RAPTC | |
| **Email:** | ARITC-PD-SO2 | |
| **Telephone:** | Military | 94344 5758 |
| | Civilian | 01980 615758 |

## SICKLE CELL TRAIT (SCT) INFORMATION AND AWARENESS – FOREWORD

Noting recent events, particularly those related to recruiting, assessment and testing, there is a requirement within the organisation to recognise how SCT may affect soldiers within our duty of care.

The notes below are designed to present a wider understanding of SCT and inform our training staff on how to recognise those who within our care may be subject to a strain of sickle cell inheritance.

SCT is a genetic condition that is generally benign; however, under physical exertion, complications can occur. Unfortunately, many people do not know that they are affected, and symptoms can easily be confused with more common conditions, making it difficult to recognise immediately. Exertional Collapse Associated with Sickle Cell Trait (ECAST) in our recruits can be minimised through screening[23], education and appropriate acclimatisation to activity. The detail below offers information and awareness for the prevention and management of our candidates and recruits.

**DOps**
**ARITC**

**S**

[23]. This process is currently under review by Occ Med, with further direction to follow.

## SICKLE CELL TRAIT (SCT) INFORMATION AND AWARENESS

References:

A. Strength and Conditioning Journal – Sickle Cell Trait: a review and recommendation for training. *(Vol 34 – Issue 3 – p 28-32).*
B. JSP 950 Lft 6-7-7 (V1.6 Aug 19).
C. Regulation 28 report dated 6 Dec 19.
D. Prevention of exercise-related collapse; Ser M34/19UM32246 dated 4 Oct 19.

### SICKLE CELL TRAIT (SCT) PHYSIOLOGY

1. **What is it?** SCT is a condition acquired through inheritance and is related to family origin rather than geographic origin. It is the inheritance of one gene for normal haemoglobin and one gene from sickle haemoglobin.

2. **Those Affected.** The sickle cell gene has survived in evolution as a natural way for the body to fight malaria. It is present in 1:4 West Africans and 1:10 Caribbeans. The trait can also appear in those with Mediterranean, Middle Eastern and Indian family origins.

3. **US Armed Forces Study.** (Ref A refers). The US Armed Forces have linked SCT to exertional collapse during basic training. Their conclusion is that Exertional Collapse Associated with Sickle Cell Trait (ECAST) is associated with intense conditioning at a level to which the individual is not accustomed.

5. **Physical Observations.** During intense maximal activity, a decrease in oxygen levels can cause some blood cells to deform (from the normal round shape to a sickle shape). These sickle cells can block small blood vessels in the muscles leading to muscle breakdown (known as 'rhabdomyolysis'). The breakdown products of damaged muscle can block the kidneys (causing kidney failure), with other toxic substances creating a 'metabolic crisis' that can include heart failure and death. The harder and faster the individual works, the greater the chance that sickling will occur. The Army recognises that a best effort run is a focus of risk. US Army experience is that risk is greatest in early training, but does not completely disappear later on in Service. However, that risk can be significantly reduced by conditioning, education and by taking sensible precautions to mitigate the external risk factors of ECAST as much as practicably possible. Heat, cold, dehydration, high altitude and carrying a heavy load are some of the factors that can increase risk.

### DIFFERENTIAL JUDGEMENT

6. **ECAST vs Heat Illness.** ECAST and heat illness can have similar symptoms and heat can amplify the risk of ECAST. Heat management within the organisation is well measured and understood by our instructors. An individual with ECAST will complain of muscle pain and weakness; they may have been a front runner before dropping off the pace, slowing, and being seen to wobble or have an odd running gait, before collapsing. Heat illness will be associated with feeling hot and is associated with muscle cramps. These are indicators as there are few absolutes in medicine.

7. **Signs and Symptoms of ECAST.** Additional signs of ECAST are abdominal pain, chest tightness and difficulty breathing. None of these symptoms are exclusive to ECAST, but in a known SCT-positive individual then ECAST should be immediately considered. A casualty will often be conscious when they first collapse with ECAST so they can state the symptoms: however, deterioration is often rapid, and they must be regarded as a life-threatening emergency requiring immediate transport to hospital.

| Table 1 - Common Conditions Leading to Non-Traumatic Collapse | | | | |
|---|---|---|---|---|
| **Sickle Cell Trait (SCT)** | | | | |
| **Onset** | Many SCT carriers are not aware of their condition | Usually no gradual warning or ill feeling | Sickling can occur in as little as 2-3 mins of vigorous activity | Mild sickling can improve after only 10-15 mins of rest, oxygen and fluids. **Do not delay transfer on the assumption the casualty will improve** |
| **Signs and symptoms** | Casualty is usually able to communicate after collapsing | Muscles look and feel normal, but the individual says they are painful and feel weak | Sickling pain (usually in the legs, buttocks, and low back) is often milder than heat cramps **(this is unlikely to be a helpful sign at point of collapse)** | Pain in upper left quadrant of the abdomen, or in the chest due to blood vessels blocked in the spleen. May have severe difficulty breathing |

**EXTERNAL RISK FACTORS**

8. A number of factors are believed to contribute to the onset of ECAST:

a. Dehydration.

b. Those who have previously suffered minor episode of ECAST.

c. Exercising with a cold or when feverish (including within 24 hours of vaccination).

d. Lack of appropriate acclimatisation. High ambient temperature and humidity.

e. Certain medications (such as statins for cholesterol).

f. Dietary supplements containing stimulants, to include various types of energy shots or drinks.

g. Exercise at altitude.

8. **Risk Mitigation.** These risk factors are to be mitigated as much as reasonably practicable, particularly during the first four weeks of Basic Training, with a focus on hydration, the avoidance of supplements and stimulant, underlying health and climatic conditions.

**INTERIM GUIDELINES FOR CMTs/INSTRUCTORS**

9. **ECAST.** An episode of ECAST should be treated as a life-threatening emergency. In all instances where ECAST is suspected a 999 call must be initiated. For the CMT/first responder the following are immediate actions to be taken:

a. Administer high flow oxygen.

b. Check, record and monitor vital signs including heart rate, respiratory rate, $SpO_2$, ECG (where available) and level of consciousness.

c. If there is suspected associated heat illness, the first aid treatment guidelines as detailed in JSP 539, Section 1, Annex B is at the following

**Army General and Administrative Instructions Volume 1 Chapter 7**
**Physical Training**

**Risk of Exertional Collapse**
An individual who is poorly performing or demonstrates distress during, or immediately after physical exercise, may be at risk of exertional collapse, and potentially death. Poor performance and distress must be recognised early to enable timely intervention, including immediate cessation of the physical activity. Priority must be given to treating the individual. A dynamic risk assessment should consider whether others participating in the same activity are also at risk and whether the activity can safely resume.
Risk factors associated with exercise-related collapse can be personal, environmental, or external. In addition, excessive motivation is equally important to recognise as a risk factor, as an individual can push themselves during physical activity and ignore the onset of physical signs and symptoms of distress.
The risk can be mitigated through physical conditioning, good hydration, acclimatisation, avoiding potentially harmful supplements or medications (as directed by the medical chain), and recognising and addressing risk factors. Recognised risk factors are listed below, noting this is not an exhaustive list.

a. Personal risk factors include:

- Dehydration
- Recent or current illness (include raised temperature)
- Recent vaccination (within 24 hours)
- Poor baseline conditioning/fitness level
- Excess body fat
- Prior poor fitness test performance
- Prior exercise related collapse
- Accumulated fatigue
- An underlying cardiac condition
- Asthma
- Sickle Cell Trait (SCT)

b. Environmental and external risk factors include:

- Lack of appropriate environmental acclimatisation
- Exercise at altitude
- High ambient temperature and humidity, and cold weather
- Certain medications
- Dietary supplements containing stimulants, including energy shots or drinks

Additional attention should be given to individuals with Sickle Cell Trait (SCT). Clinical evidence suggests that these individuals may be more prone to injury (or death) with physical exertion.
In the event of exertional collapse, the following immediate action drills are to be followed:

c. STOP the activity.

d. EVALUATE, ADMINISTER FIRST-AID as appropriate (ie. Check Airway, Breathing, Circulation and TREAT as required) and CALL emergency services if needed.

e. ADMINISTER oxygen if available and appropriate.

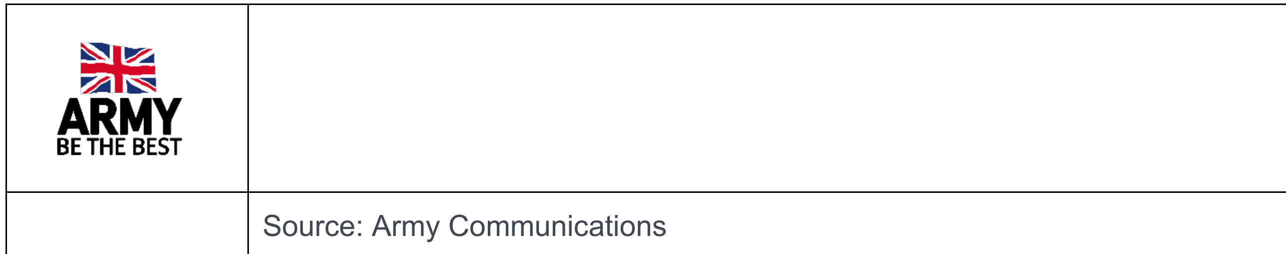
f. HYDRATE if tolerating liquids.

g. INITIATE COOLING techniques as required.

h. ENSURE appropriate medical follow-up of the individual.

i. REVIEW others. Only restart activity when assessed as safe to do so.

j. INFORM the Chain of Command as necessary.



Source: Army Communications

**Date:** **24 Jan 20**
**ABN:** **(Leave blank; serial number inserted by Internal Comms)**

**NEW RELEASE OF AGAI VOL 1 CH 7 PHYSICAL TRAINING – DATED JAN 20**

1. **Issue.** The purpose of this ABN is to notify the Chain of Command of the recent release of AGAI Volume 1 Chapter 7 dated Jan 20. This version supersedes all previous versions of this AGAI.

2. **Target Audience.** Distributed to all regular and reserve units.

3. **Staff Branch for ABN Digest.** G7.

4. **Extract for Routine Orders.** The following is to be repeated on Unit Routine Orders:

**NEW RELEASE OF AGAI VOLUME 1 CHAPTER 7**

A revised AGAI Vol 1 Ch 7 Physical Training (AEL120) was republished in Jan 20. AGAI Vol 1 Ch 7 provides the Army's direction and guidance on the management and delivery of physical training.

Amendments contained within the revised version include:

- Risk of Exertional Collapse
- Training and Testing Risk
- Revised Risk Assessment process (IAW ACSO 3216). To incorporate WBGT readings using QT34 eqpt.
- Officer In Charge criteria
- Use of Generic Risk Assessments (RA)
- Clarification on fitness equipment induction

The revised AGAI Vol 1 Ch 7 is accessible via AKX.

This Army Briefing Note, along with all others, can be viewed on MODNET or on a personal device via Defence Connect or by scanning this QR Code:

ABNs on Defence Connect

5. **Key Points.** The following key points should be noted:

a. AGAI Vol 1 Ch 7 is the Army's overarching publication on Physical Training. All Physical Training must be conducted in accordance with the direction and guidance contained within.

b. The various updates to the revised AGAI Vol 1 Ch 7 include:

(1) **Risk of Exertional Collapse.** Personal and environmental factors associated with exertional collapse are provided, including immediate action drills.

(2) **Testing and Training Risk Management.** All mandated physical testing and assessment are to be conducted in accordance with the direction issued by Army HQ in MATT 2. No deviation can be authorised by the CoC or event OIC without Army HQ endorsement. For Physical Training, commanders have the freedom to create and design innovative physical training activities which either support the APTS or supplement other training objectives.

(3) **Revised Risk Assessment process (IAW ACSO 3216).** WBGT readings must be incorporated in the RA for MATT 2 testing when there may be an elevated risk of heat illness. The QuesTemp 34 is the ratified method of measuring heat stress by the MOD and is an accountable item.

(4) **Officer in Charge (OIC).** Must be nominated prior to any physical training. That individual is to have sufficient military experience and judgement to be responsible for the safety of individuals during the activity. Hence, they are to be at least a Corporal (only in exceptional circumstances where senior rank is unavailable), but typically a Captain/Sergeant or above.

(5) **Generic Risk Assessment.** Generic RAs are to be produced for MATT 2 testing and where similar activities are undertaken or repeated. They are to be used as part of the forward planning of the activity or event. On the day of the activity or event, the RA must be reviewed and amended as appropriate to be site and conditions specific. As and when the situation or conditions change a dynamic review of the RA is to take place.

(6) **Clarification on fitness equipment induction.** Where standard fitness eqpt is in place there is no requirement for SP to receive specific eqpt induction from a qualified in-date PTI before using item which they are familiar with.

c. All previous versions of AGAI Vol 1 Ch 7 are to be removed from use and circulation.

6. **Point of Contact.** Maj Geraint Field (Army Prof Dev PD PT SO2) 94393 6765.