

Title: Fitness for Task and Health Surveillance Management Programme - Scope and Frequency of Fitness for Task and Health Surveillance Assessments.	Doc No: AZSPU-HSSE-REC-00719-2
Dated: September, 2010	Page 1 of 25 Originating Dept: HSE & Engineering

Scope and Frequency of Fitness for Task and Health Surveillance Assessments.

1. Fitness for task assessments

A. Office-based Staff

Office – based employees (e.g. new administrative staff) need only be reviewed for chronic health problems liable to be a cause of poor attendance. Normally, such assessments do not require a rigorous examination.

Periodic health assessments for these staff are not required, unless recommended otherwise following the initial assessment.

DSE users are entitled for a Middle Distance vision test once in two years. It could be performed upon employee's request (through AzSPU Health Team) or if indicated.

N°	Type of Examination	Pre-employment
1.	Fitness for Task Health Questionnaire (parts 1,2,3,4,7,8) filled in / reviewed / signed	√
2.	Task check list filled in / reviewed / signed	√
3.	Clinical Examination (+Mental state examination)	√
4.	Urine test	√
5.	Vision Check	√
6.	Middle Distance Vision Test (DSE Users)	√
7.	Chest X-ray	√
8.	Drug test - 5 panel drug THC, COC, OPI, AMP, PCP urine testing (Buprenorphine for Georgia based staff)	√

Important Note: If office-based employees are expected to perform all or part of their duties at sites, are involved in travel or may be exposed to other occupational hazards that are not normally associated with routine office work, their screening scope needs to reflect these additional requirements (see [Section 1.P](#) and [Section 1.D](#)).

Title: Fitness for Task and Health Surveillance Management Programme - Scope and Frequency of Fitness for Task and Health Surveillance Assessments.	Doc No: AZSPU-HSSE-REC-00719-2
	Page 2 of 25
Dated: September, 2010	Originating Dept: HSE & Engineering

B. Security Guards

N°	Type of Examination	Pre-employment	Periodic (2 yearly)
1.	Fitness for Task Health Questionnaire (parts 1,2,3,4,7,8) filled in / reviewed / signed	√	√
2.	Task check list filled in / reviewed / signed	√	√
3.	Clinical Examination (+Mental state examination)	√	√
4.	Urine test	√	√
5.	Vision Check *	√	√
6.	Middle Distance Vision Test (for DSE users)	As required*	As required*
7.	Audiometry	√	If indicated*
8.	Spirometry **	√	√
9.	ECG (if indicated, if a smoker or if over 40 years old)	√	√
10.	Chest X-ray	√	If clinically indicated
11.	Full Blood Count and ESR	√	√
12.	Glucose	√	√
13.	Physical Fitness Test	√	√
14.	Drug test - 5 panel drug THC, COC, OPI, AMP, PCP urine testing (Buprenorphine for Georgia based staff)	√	√
15.	Diphtheria / Tetanus	Risk based*	As needed*
16.	Rabies	Risk based*	As needed*

* Refer to the filled Task check list

** ERS 1993 Prediction values **.Ref.** Standardised Lung Function Testing. Report working party “Standardization of Lung Function Tests”, Official Statement of the European Respiratory Society & European Community for Coal and Steel (ECCS), Luxembourg. European Respiratory Journal, Volume 6, Supplement 16, 1993 (1-100). ISBN 87-16-15024-4

Title: Fitness for Task and Health Surveillance Management Programme - Scope and Frequency of Fitness for Task and Health Surveillance Assessments.	Doc No: AZSPU-HSSE-REC-00719-2
	Page 3 of 25
Dated: September, 2010	Originating Dept: HSE & Engineering

C. Drivers

The objective is to ensure that drivers are fit to undertake the duties required of them and do not present a risk to themselves, their passengers, other road users or pedestrians.

National employees are the subject to comply with local statutory fitness for task requirements.

Drivers are subject to more rigorous examination.

N°	Type of Examination	Pre-employment	Periodic (2 yearly)
1.	Fitness for Task Health Questionnaire (parts 1,2,3,4,7,8) filled in / reviewed / signed	√	√
2.	Task check list filled in / reviewed / signed	√	√
3.	Clinical Examination (+Mental state examination)	√	√
4.	Urine test	√	√
5.	Vision Check *	√	√
8.	Audiometry	√	If indicated*
9	Chest X-ray	√	If indicated
10.	ECG (if over 40 y.o, if a smoker or if indicated)	√	√
11.	Full Blood Count and ESR	√	If indicated
12	Glucose	√	√
13.	Drug test - 5 panel drug THC, COC, OPI, AMP, PCP urine testing (Buprenorphine for Georgia based staff)	√	√
14.	Rabies	Risk based*	

* Refer to the filled Task check list

Title: Fitness for Task and Health Surveillance Management Programme - Scope and Frequency of Fitness for Task and Health Surveillance Assessments.	Doc No: AZSPU-HSSE-REC-00719-2
	Page 4 of 25
Dated: September, 2010	Originating Dept: HSE & Engineering

D. Offshore Workers, Pipeline and Terminal Operators, Other Operations and Construction Employees

Health assessment of offshore workers and visitors, pipeline, terminal and marine base operators, other operations and construction staff will be performed as per the [OGUK Medical Aspects of Fitness for Offshore Work: Guidance for Examining Physicians - Issue 6](#)

National employees are the subject to comply with local statutory fitness for task requirements.

Under a revised agreement between the UK, Norway and the Netherlands, a Certificate of Fitness granted in any of these countries should be equally acceptable in the others.

Typically, the examinations will include:

N°	Type of Examination	Pre-employment	Periodic (2 yearly)
1.	Fitness for Task Health Questionnaire (parts 1,2,3,4,7,8) filled in / reviewed / signed	√	√
2.	Task check list filled in / reviewed / signed	√	√
3.	Clinical Examination (+Mental state examination)	√	√
4.	Urine test	√	√
5.	Vision Check*	√	√
8.	Spirometry***	√	√
9.	Audiometry	√	√
10.	Chest X-ray	√	If indicated
11.	ECG (if over 40 y.o., if a smoker or if indicated)	√	√
12.	Full Blood Count and ESR	√	√
13.	Glucose	√	√
14.	Drug test - 5 panel drug THC, COC, OPI, AMP, PCP urine testing (Buprenorphine for Georgia based staff)	√	√
15.	Dental Assessment**	√	√
16.	Diphtheria / Tetanus	√	As needed
17.	Rabies	Risk based	
18.	Chester Step test	√	According to task

Title: Fitness for Task and Health Surveillance Management Programme - Scope and Frequency of Fitness for Task and Health Surveillance Assessments.	Doc No: AZSPU-HSSE-REC-00719-2
Dated: September, 2010	Page 5 of 25 Originating Dept: HSE & Engineering

* Refer to filled Task check list

** Dental Assessment process is divided into 2 categories:

- General Dental Assessment
- Dental Clearance Certification

- New hires will go via General Dental Assessment process and if significant problem identified the time restricted fitness certificate will be issuing to give a candidate time to manage dental health problems.
- Pipeline and Terminal Operators, Other Operations and Construction Employees will go via General Dental Assessment; no formal Dental Clearance Certification is required. The [Dental Assessment Form](#) to be used.
- Mandatory Dental Clearance Certification will be applying for all periodic fitness assessment of those who are required to work offshore or travel offshore frequently as per task check list. The certification to be provided by dentist.

*** ERS 1993 Prediction values **.Ref.** Standardized Lung Function Testing. Report working party “Standardization of Lung Function Tests”, Official Statement of the European Respiratory Society & European Community for Coal and Steel (ECCS), Luxembourg. European Respiratory Journal, Volume 6, Supplement 16, 1993 (1-100). ISBN 87-16-15024-4

Title: Fitness for Task and Health Surveillance Management Programme - Scope and Frequency of Fitness for Task and Health Surveillance Assessments.	Doc No: AZSPU-HSSE-REC-00719-2
	Page 6 of 25
Dated: September, 2010	Originating Dept: HSE & Engineering

E. Food Handlers

Please refer to [Health Assessment for Food Handlers](#) for detailed information. General aspects of food safety are outlined in [AzSPU Food Safety Management Programme](#). Those food handlers are working in Offshore Workers, Pipeline and Terminal Operators, Other Operations and Construction sites have to undergo fitness assessments according [Section 1.D](#) in line with scope for Food handlers..

N°	Type of Examination	Pre-employment	Periodic (6 monthly)
1.	Questionnaire and Clinical form filled in / reviewed / signed	√	√
2.	Clinical Examination and Mental State & Skin Examination	√	√
3.	General Dental Assessment	√	√
4.	Vision check basic	√	√
5.	Chest X-ray	√	If indicated
6.	ECG (if over 40 y.o., if a smoker or if indicated)	√	√
7.	Drug test - 5 panel drug THC, COC, OPI, AMP, PCP urine testing (Buprenorphine for Georgia based staff)	√	As needed
8.	Urine analysis	√	√
9.	Stool microscopy and culture	√	√
10.	Medical swabs	As needed to comply with local legal requirements	
11.	Rabies	If at risk	
12.	D/T, Hepatitis A; Typhoid; Polio	√	

Title: Fitness for Task and Health Surveillance Management Programme - Scope and Frequency of Fitness for Task and Health Surveillance Assessments.	Doc No: AZSPU-HSSE-REC-00719-2
Dated: September, 2010	Page 7 of 25 Originating Dept: HSE & Engineering

F. Fire and Emergency Crew

Fire and Emergency Crews are represented by:

- Fire and rescue team (FRT)
- Emergency response team (ERT)

FRT is the processional team of fire and rescue specialists while ERT is the trained team where some of whom will have a range of duties including fire fighting, assisting with a controlled facility evacuation and casualty search and rescue during the installation emergencies as an addition to their normal operations duties.

All Fire and Emergency Crew members will follow [Emergency Response Team Medical Standards](#) requirements and the aerobic capacity VO2 maximum of 35mls/kg/min has been determined as the minimum standard.

National employees are the subject to comply with local statutory fitness for task requirements.

[NFBA 1582 Standard on Medical Requirements for Fire Fighters and Information for Fire Department Physicians](#) will be applying for specific health conditions of professional FRT members which are not covered by above standards.

All Fire and Emergency Crew members who are required to wear the BA sets shall undergo annual respiratory fit testing.

Title: Fitness for Task and Health Surveillance Management Programme - Scope and Frequency of Fitness for Task and Health Surveillance Assessments.	Doc No: AZSPU-HSSE-REC-00719-2
Dated: September, 2010	Page 8 of 25 Originating Dept: HSE & Engineering

G. Respiratory Protective Equipment Users

All individuals who are required to wear respiratory protection equipment (RPE) are subject to complete health assessment to make sure that they are medically and physically capable.

There are two groups of self-contained breathing apparatus (SCBA) users:

- Routine use (eg enclosed space entry)
- Emergency use (eg fire fighting, rescue)

All SCBA users will follow [Emergency Response Team Medical Standards](#) requirements where the aerobic capacity VO₂ maximum of 35mls/kg/min has been determined as the minimum standard.

All other RPE users will follow the scope described in [Section 1.D](#)

In addition to assessment of medical and physical fitness, all RPE users will undergo quantitative RPE fit testing to ensure an effective mask/face seal can be achieved according to [AzSPU Respiratory Protection Programme](#).

Note: Workers may use disposable dust masks for nuisance dust avoidance, in non-hazardous atmospheres, without being fit tested.

Frequency of quantitative RPE fit testing:

- Pre SCBA/respirator use.
- Periodic: annually.
- Following significant illness, injury likely to adversely affect fitness.

Title: Fitness for Task and Health Surveillance Management Programme - Scope and Frequency of Fitness for Task and Health Surveillance Assessments.	Doc No: AZSPU-HSSE-REC-00719-2
Dated: September, 2010	Page 9 of 25 Originating Dept: HSE & Engineering

H. Divers

These are to be performed by a certified medical provider only, according to the international standard of fitness for diving works. See [IMCA Medical Standards for Diving at Work](#) and also [AzSPU Procedure for Diving and Subsea Operations](#).

I. Health Professionals

All those with potential exposure to blood/body fluids must be offered Hepatitis B immunisation Hepatitis B vaccination. TB status assessment (Heaf test) is required.

J. First Aiders

- All those with potential exposure to blood/body fluids must be offered Hepatitis B immunization.
- Country specific requirements may include additional immunizations/tests

K. People assigned for work in high temperature environments

There are several conditions that should be assessed in relation to suitability for performing high temperature work. These are:

- Any pre-existing medical conditions which might affect a person's ability to cope with heat stress e.g. heart and circulation disorders, lung diseases, epilepsy, diabetes, kidney problems.
- Any current medical treatment of relevance.
- Any previous history of heat illness. This may indicate susceptibility and the need for extra care.
- Any history of alcohol or substance misuse - increases dehydration risk and some recreational drugs can cause problems with body temperature regulation.
- Any short term disorders/minor illnesses that would make working in hot conditions inadvisable.
- Baseline measurements of height, weight, pulse rate, blood pressure and temperature should also be taken.
- BMI (Body Mass Index) should be calculated for each individual, those with a body mass index of >35 are at significantly increased risk of development of illness related to high temperature work.
- Age is also a significant risk factor; those who are over 50 years of age are at significantly higher risk of developing heat-induced illnesses.

This is a complex area, it is therefore important that advice should be taken from the Health Team prior to any decision to select a member of staff for high temperature working or prior to any decision to exclude a member of staff from fulfilling duties as a high temperature worker on medical fitness grounds.

See also [OGP Health Aspects of Work in Extreme Climates](#).

Title: Fitness for Task and Health Surveillance Management Programme - Scope and Frequency of Fitness for Task and Health Surveillance Assessments.	Doc No: AZSPU-HSSE-REC-00719-2
Dated: September, 2010	Page 10 of 25 Originating Dept: HSE & Engineering

L. People assigned for work in cold temperature environments

Only appropriate health assessment will make it possible to identify certain contraindications specific to work in extreme cold such as:

- Cardio – vascular diseases see [OGP Health Aspects of Work in Extreme Climates](#).
- Raynauds syndrome (white finger constriction of blood vessels due to the cold)
- Cold induced asthma
- Cold induced urticaria (itching)
- Previous cold injury

Certain conditions may contra-indicate work in extreme cold, e.g. alcohol and drug abuse, heavy smokers who may have respiratory problems, severely obese such as BMI (Body Mass Index) ≥ 35 , and the medically unfit.

All medications should be scrutinized as to their effects on physiological impact when working in extreme cold. i.e.:

- Medications which alter vigilance e.g. tranquillizers, sleeping pills, antidepressant drugs, antihistamines
- Medications which act on blood circulation e.g. medication for high blood pressure and drugs which act on the heart
- Medications and other substances which may increase the risk of hypothermia e.g. alcohol.

M. Lone/Night /Shift Workers

Lone workers are at specific risk if they suffer from a pre-existing condition that could render them unable to summon assistance should they get into difficulties. Depending on the condition the individual may be at increased risk if there is a significant delay in reaching hospital facilities if required.

There are several conditions that should be assessed in relation to suitability for lone work. These are:

- Heart disease
- Dependence on drugs or alcohol
- Chest problems or asthma
- Epilepsy
- Diabetes
- History of stroke, fainting and unexplained loss of consciousness.
- Communication problems.

See also [AzSPU Fatigue Management Programme](#).

Title: Fitness for Task and Health Surveillance Management Programme - Scope and Frequency of Fitness for Task and Health Surveillance Assessments.	Doc No: AZSPU-HSSE-REC-00719-2
Dated: September, 2010	Page 11 of 25 Originating Dept: HSE & Engineering

N. Cleaners /Housekeeping staff/ Manual Handlers/ Sewage Workers/ Pest Control

General examination for cleaners should have emphasis on dermatological and respiratory conditions.

Based on risk assessment Vaccination against Tetanus and other potential diseases can be recommended. Vaccination against D/T, Hepatitis A, polio and typhoid are required for all sewage and pest control workers. For pest control workers rabies vaccination should be provided as well.

Some of these employees may need to be enrolled into appropriate Health Surveillance Programmes.

Additional investigations may be required for employees to meet requirements of particular jobs performed by them (refer to [Section 1.D](#)).

See also [AzSPU Manual Handling Management Programme](#)

Title: Fitness for Task and Health Surveillance Management Programme - Scope and Frequency of Fitness for Task and Health Surveillance Assessments.	Doc No: AZSPU-HSSE-REC-00719-2
Dated: September, 2010	Page 12 of 25 Originating Dept: HSE & Engineering

O. Medical Assessments before International Assignment (pre-posting)

The scope of the assessments depends on the outcome of the risk assessment for the proposed host location and an initial enquiry into the individual's previous health experience. The visa requirements also should be taken into consideration and documentation for visa purposes filled in accordingly.

The process is coordinating by HR International Mobility team and UK Health Team

Refer to the following supportive documents:

- [International Mobility Global Expat Flow Diagrams](#)
- [Global Expatriate Health Clearance Process \(Clinic Guidance Pack\)](#)
- [High and Low risk Countries Map](#)
- [Global Expat Process Health Requirements](#)
- [Employee Briefing Pack for Expatriation Process](#)
- Medical Fitness Requirements for Different Countries - CD ROM 'Medical Criteria – Fitness for Posting' can be obtained from AzSPU OH Team

Periodic Health Assessments during Posting

Expatriate BP Exploration Caspian Sea Ltd. employees will undergo periodical health assessment according the task they are involved and highlighted in different sections of this document.

Expatriate BP Exploration Caspian Sea Ltd. employees and their resident dependants in Azerbaijan are advised to undergo periodic medical assessments part of the Azerbaijan Republic State Migration Service Annual Residence Permit process. See scope of medical assessment [here](#).

Title: Fitness for Task and Health Surveillance Management Programme - Scope and Frequency of Fitness for Task and Health Surveillance Assessments.	Doc No: AZSPU-HSSE-REC-00719-2
Dated: September, 2010	Page 13 of 25 Originating Dept: HSE & Engineering

P. Business Travel Health Assessments

Employees who travel regularly overseas on Company business may be exposed to health risks not normally encountered in their home country.

All business travellers are required to undergo regular health assessments to ensure that:

- Any personal medical conditions can be accommodated during their travel
- Their health has not been adversely effected by either the travel undertaken or the environment at the locations visited

All business travelers should receive advice on preventative health measures and details about the health services and emergency medical arrangements relevant to their likely destinations (See [Global Clinic List \(May 2008\)\)](#)

See also:

- Group Health Travel health [website](#)
- [High and Low risk Countries Map](#)
- [Global Expat Process Health Requirements](#)
- Medical Fitness Requirements for Different Countries - CD ROM 'Medical Criteria – Fitness for Posting' can be obtained form AzSPU OH Team

Typical scope:

N°	Type of Examination	Periodic (2 yearly)
1.	Fitness for Task Health Questionnaire (parts 1-8) filled in / reviewed / signed	√
2.	Clinical Examination	√
3.	Urine analysis	√
4.	Immunisation review and update (depending on the country of destination)	√
5.	Provide travel health advise based on TRAVAX recommendations*	√
6.	Chest X-ray	If clinically indicated
7.	Resting Electrocardiograph (ECG) if age over 40 years or a smoker	If clinically indicated

* For **high-risk** countries consider need for malaria advice and chemoprophylaxis. If required, supply three months of clinically appropriate anti-malaria tablets

Title: Fitness for Task and Health Surveillance Management Programme - Scope and Frequency of Fitness for Task and Health Surveillance Assessments.	Doc No: AZSPU-HSSE-REC-00719-2
	Page 14 of 25
Dated: September, 2010	Originating Dept: HSE & Engineering

Q. Teachers (The International School of Azerbaijan (TISA) staff)

TISA office – based teachers (e.g. administrative staff, teachers, assistants of teachers etc) need be reviewed for chronic health problems liable to be a cause of poor attendance.

TISA based staff on other positions such as securities; kitchen and cleaning staff, etc should pass medical assessment according to their scope of assessment as indicated in this document.

Periodic health assessments for these staff are required according to Order N 13 of Ministry of Health for Special working group.

DSE users are entitled for a Middle Distance vision test once in two years. It could be performed upon employee's request (through AzSPU Health Team) or if indicated.

N°	Type of Examination	Pre-employment	Periodic (Annually)
1.	Fitness for Task Health Questionnaire (parts 1,2,3,4,7,8) filled in / reviewed / signed	√	√
2.	Task check list filled in / reviewed / signed	√	√
3.	Physical Examination	√	√
4.	Urine analysis	√	√
5.	Vision Check	√	√
7.	Chest X-ray	√	If indicated
8.	Drug test - 5 panel drug THC, COC, OPI, AMP, PCP urine testing	√	–
9	Electrocardiography (if over 40 y.o., if a smoker or if indicated)	√	√
10.	Blood test and swab on STD	As required to be comply with local legal requirements	–
11	Blood type	√	If required
12	Full Blood Count	√	If indicated

* Vaccination records for expatriate staff have to be reviewed and vaccination should be updated accordingly

Title: Fitness for Task and Health Surveillance Management Programme - Scope and Frequency of Fitness for Task and Health Surveillance Assessments.	Doc No: AZSPU-HSSE-REC-00719-2
Dated: September, 2010	Page 15 of 25 Originating Dept: HSE & Engineering

2. Health Surveillance Assessments

A. Asbestos

In many countries work with asbestos is subject to specific regulations. BP has a safe operating procedure covering work with asbestos.

Health Effects

Inhalation is the primary route of exposure to asbestos fibers. The most common changes that asbestos exposure may cause, depending on the total dose received, are:

- Plaques
- Pleural thickening
- Asbestosis
- Lung cancer
- Mesothelioma of the pleura and peritoneum

Asbestos related diseases are of insidious onset and generally appear many years after first exposure.

Health Surveillance

If there is any exposure to asbestos health surveillance must be conducted according to country specific regulatory requirement. Where no such requirement exists then Control of Asbestos at Work Regulations 2002 prevails.

B. Benzene

In some countries work with benzene is subject to specific regulations. A BP safe operating procedure is in development.

Benzene can be absorbed into the body by:

- Inhalation
- Skin contact
- Ingestion

Health Effects

The effects on health depend on the length and degree of exposure. Long-term exposure to benzene can result in serious blood disorders.

Health Surveillance

Hygiene monitoring should provide information on potential exposure.

Title: Fitness for Task and Health Surveillance Management Programme - Scope and Frequency of Fitness for Task and Health Surveillance Assessments.	Doc No: AZSPU-HSSE-REC-00719-2
Dated: September, 2010	Page 16 of 25 Originating Dept: HSE & Engineering

If there is any potential for exposure to levels above 1 ppm, health surveillance must be conducted according to country specific regulatory requirements. Where no such requirement exists then OSHA regulations prevail.

C. Cadmium

Cadmium is a well known toxic element. In some countries work with cadmium is subject to specific regulations.

Health Effects

Inhalation is the primary route of exposure to cadmium compounds. Health effects may be acute or chronic. The most common changes that cadmium exposure may cause, depending on the total dose received, are:

- Kidney disease
- Lung disease (acute or chronic)
- Lung and prostate cancer
- Osteomalacia and osteoporosis

Chronic Cadmium related diseases are of insidious onset and develop after years of exposure.

Health Surveillance

The effects on health depend on the length and degree of exposure. Long-term exposure to cadmium can result in serious health disorders.

Hygiene monitoring should provide information on potential exposure.

Health Surveillance will be required for any employee where the risk assessment indicates a significant risk. Health surveillance must be conducted according to country specific regulatory requirements. Where no such requirement exists then OSHA regulations prevail.

D. Carcinogens

Some chemical substances have the potential to damage the DNA of the cells, which may eventually lead to cancer. Such substances are known as carcinogens and may be present in the work environment. Cancer of occupational origin is usually indistinguishable from non-occupational cancer. Nevertheless, there are some characteristics to note.

- It tend to appear earlier than spontaneous cancer of the same site
- Exposure to the putative agent is repeated, but not necessarily continuous
- The latent period is 10-40 years
- The tumors are often multiple in a given organ

Title: Fitness for Task and Health Surveillance Management Programme - Scope and Frequency of Fitness for Task and Health Surveillance Assessments.	Doc No: AZSPU-HSSE-REC-00719-2
Dated: September, 2010	Page 17 of 25 Originating Dept: HSE & Engineering

- Despite widely differing estimates of the proportion of all cancers caused by occupation, the true figure probably lies in the range of 3 to 8%

Different substances have different target organs and conduct to different kind of cancer. International Agency of Research on Cancer (IARC) searches for the evidence for carcinogenicity of compounds and processes, where published data exist suggesting a cancer effect.

The compound or chemical is then graded for evidence of carcinogenicity into one of four categories:

- Sufficient
- Limited
- Inadequate
- Lacking

This information can be found in the MSDS provided along with the chemical.

Health Surveillance

Health Surveillance will be required for any employee where the risk assessment indicates a significant risk of exposure to a carcinogenic substance. Some carcinogens are under control of specific regulations (e.g. asbestos, benzene). In general carcinogenic substances are under the Control of Substances Hazardous to Health (COSHH) Regulations 2002 and OSHA regulations.

E. Hand Arm Vibration (HAV)

Energy can be transferred from a vibrating tool, equipment or work-piece to a worker's hands and arms. In some countries, vibration at work is subject to specific regulations.

Health Effects

Regular, frequent, long-term exposure to HAV can lead to damage to the structure and tissues of the hand and arms. This damage is what causes the condition known as Hand-Arm Vibration Syndrome (HAVS).

The syndrome can be divided into vascular effects and sensory and neurological effects, as a consequence of damage in blood vessels and nerves respectively, leading to the following signs and symptoms:

- Painful finger blanching attacks (Reynaud's phenomena)
- Reduced sense of touch and temperature
- Numbness and tingling
- Stiff and painful joints
- Reduced grip strength

Title: Fitness for Task and Health Surveillance Management Programme - Scope and Frequency of Fitness for Task and Health Surveillance Assessments.	Doc No: AZSPU-HSSE-REC-00719-2
	Page 18 of 25
Dated: September, 2010	Originating Dept: HSE & Engineering

- Reduced manual dexterity

Health effects may become permanent if the exposure is not well controlled. However, it must be noted that similar signs and symptoms may be caused by conditions unrelated to HAV and only a suitably qualified medical practitioner can make accurate diagnosis.

Management of the Affected Worker, including Fitness for Work

Any worker diagnosed as suffering from HAVS will need to receive advice about their medical condition and the likelihood of disease progression with continued exposure from the doctor. The advice will vary according to the severity of the disease. HAVS is classified according to severity in stages using the Stockholm Workshop scales. Continuing exposure may be acceptable in early cases. Diagnosis of new cases of HAVS (Stage 1) shall result in appropriate steps being taken by the employer to review the risk assessment and ensure that exposures are reduced to as low a level as is reasonably practicable. If exposure is adequately controlled, it may be possible to prevent workers with Stage 1 from progressing to HAVS Stage 2 before they reach retirement age. Health surveillance monitoring for the individual may need to take place more frequently, depending on the advice of the doctor, if there is concern about progression of the disease. Even if the employee does not give consent for medical information to be disclosed to the employer it is the responsibility of the doctor to advise the employer on whether the worker is fit for work with exposure to HAV. A recommendation may need to be made on safety grounds. For example, significant loss of grip strength might increase the risk of accidental injury to the employee or their co-employees. In most cases, the main reason for judging a worker to be unfit for work with HAV is to prevent further deterioration that could cause disability.

If an employee is diagnosed as having HAVS Stage 2 (sensorineural or vascular) the aim is to prevent HAVS Stage 3 developing because this is a more severe form of the disease associated with significant loss of function and disability. At the onset of symptoms of HAVS Stage 2, there shall be a reassessment of exposure conditions and close monitoring of the individual for any progression of symptoms, especially functional impairment. An older employee, close to retirement age, with no indication of recent rapid progression of symptoms, and who fully understands the risks involved in ongoing exposures, may be allowed to continue work with limited exposure under regular health surveillance. If carpal tunnel syndrome is diagnosed, the worker may need to be removed from exposure to vibration. Where a non-occupational condition is suspected, the employee shall be referred to their general practitioner. Outcome of surgical decompression in carpal tunnel syndrome can be less favorable in HAVS patients than in people with no history of vibration exposure. Recommendations for return to work with exposure to vibration shall be made on an individual basis and the employee shall be informed of the possible return of symptoms with continued exposure.

When a recommendation is made by the doctor that an employee is no longer fit for exposure to vibration, the employer has to decide on the appropriate action to take. Factors such as the scope for further reductions in exposure and availability of other work with no exposure to vibration may play a part in this decision-making process.

Title: Fitness for Task and Health Surveillance Management Programme - Scope and Frequency of Fitness for Task and Health Surveillance Assessments.	Doc No: AZSPU-HSSE-REC-00719-2
	Page 19 of 25
Dated: September, 2010	Originating Dept: HSE & Engineering

Health Surveillance

Health Surveillance will be required for any employee where the risk assessment indicates a significant risk. Health surveillance must be conducted according to country specific regulatory requirements. In UK this means any employee who is exposed to HAV levels at or above the daily action level of 2.5 m/s² as stated in The Control of Vibration at Work Regulations 2005, which will prevail where no specific regulatory requirements exists.

Tiered Approach to Health Surveillance

To identify employees with symptoms that require further investigation, while avoiding unnecessary use of specialist resources, a tiered approach to health surveillance will be used.

Tier 1 Initial or Baseline Assessment

New and existing personnel identified as having significant exposure to HAV risk (likelihood of regular exposure above the EAV of 2.5m/s A(8) e.g. those who use ‘red’ tools or undertake prolonged use of ‘amber’ tools, must be entered into the health surveillance programme. An initial assessment will be carried out using a self-administered questionnaire (refer to Paragraph 5). These persons must also be given the necessary information and training to make them aware of the health risks and necessary precautions. Employees with no symptoms suggestive of HAVS, or relevant medical history, should be considered fit for work with exposure to HAV.

Tier 2 Annual (Screening) Questionnaire

This shall be carried out annually in the form of routine health surveillance for employees who are at risk but have not exceeded the action value or reported any symptoms suggestive of HAVS. The Tier 1 questionnaire can also be used to conduct this annual screening.

HSE recommends that after 3 years of reporting no symptoms the worker shall be referred for a consultation with a qualified professional to provide an opportunity to more fully explore any possible symptoms that the individual may have experienced without appreciating their full significance.

If symptoms appear for the first time or progress, workers should be encouraged to report any symptoms and not to wait until the next time that screening is carried out.

Any reporting of symptoms triggers the need for further assessment (Tiers 3).

Tier 3 Assessment by a Qualified Person

This will be conducted by a nurse or doctor who has obtained the Faculty of Occupational Medicine qualification in Health Surveillance for HAVS. They will administer the Tier 3 questionnaire. The clinical examination is targeted at vascular and neurological function in the arm and hand. An assessment of grip strength and manual dexterity will be made using

Title: Fitness for Task and Health Surveillance Management Programme - Scope and Frequency of Fitness for Task and Health Surveillance Assessments.	Doc No: AZSPU-HSSE-REC-00719-2
Dated: September, 2010	Page 20 of 25 Originating Dept: HSE & Engineering

a dynamometer and the Purdue pegboard, or other means for manual dexterity.

[Screening Questionnaire for workers using vibrating tools Tier1](#)
[Hand Arm Vibration Clinical Assessment Report Tier 3](#)
[AzSPU Hand-Arm Vibration Programme](#)

F. Ionizing Radiation

Radiation is energy that transmitted, emitted or absorbed on the form of particles or waves. The effect of such radiation on living tissues is variable, but the ability of this energy to ionize the target tissue distinguishes the two main sections of the electromagnetic spectrum: ionizing radiation and non-ionizing.

Ionizing radiation is of two main types electromagnetic and particulate. The electromagnetic group includes X –rays and gamma (γ) rays, and particulate includes electrons (beta (β) particles), protons, neutrons and alpha (α) particles.

Health Effects

Health effects of ionizing radiation can be divided into doses-dependant effects (known as non-stochastic, i.e. effects for which there is a threshold level and thus a progression of severity of effect with dose) and effects for which there is no threshold level of dose and the effect occurs by chance (known as stochastic effects).

Non-stochastic health effects:

- Acute radiation syndrome – gastro-intestinal, blood, central nervous system
- Delayed – cataracts, dermatitis

Stochastic health effects:

- Cancer
- Genetic damage

Health Surveillance

Hygiene monitoring shall provide information on how potential exposure is managed. Employees who are subject to medical surveillance under the HSE Ionizing Radiation Regulations 1999 Regulation 24(1) to (7) must undergo health surveillance conducted by doctors specifically appointed by the HSE Employment Medical Advisory Service. Check with Tracerco if we need to conduct health surveillance

G. Lead

Lead is a highly toxic substance, exposure to which can produce a wide range of adverse health effects. Lead can enter the body from inhaling or ingesting dust and chemicals containing lead. In some countries work with lead is subject to specific regulations.

Title: Fitness for Task and Health Surveillance Management Programme - Scope and Frequency of Fitness for Task and Health Surveillance Assessments.	Doc No: AZSPU-HSSE-REC-00719-2
Dated: September, 2010	Page 21 of 25 Originating Dept: HSE & Engineering

Health effects

Lead exposure can affect almost every system within the body including:

- Brain
- Blood
- Kidneys
- Cardiovascular system
- Central nervous system
- Reproductive system

Health surveillance

Health Surveillance will be required for any employee where the risk assessment indicates a significant risk. Health surveillance must be conducted according to country specific regulatory requirements. In UK work with lead is subject to the Control of Lead at Work (CLAW) Regulations 2002, which will prevail where no specific regulatory requirements exists.

H. Mercury

The absorption and toxicity of mercury are largely a function of the form of mercury involved and the route of exposure. In some countries work with mercury is subject to specific regulations.

Health Effects

Mercury is a heavy metal that causes diverse health effects depending on its presentation in the environment as elemental form, inorganically as salts, or organically as organo-mercury compounds. The three groups vary in effects due to differences in their absorption and metabolism, and in the route of exposure among other factors.

Mercury and mercury compounds may be absorbed into the body by:

- Inhalation
- Skin contact
- Ingestion

With sufficient exposure all mercury- based toxins cause damages in:

- Nervous system
- Lungs
- Liver
- Kidneys

Title: Fitness for Task and Health Surveillance Management Programme - Scope and Frequency of Fitness for Task and Health Surveillance Assessments.	Doc No: AZSPU-HSSE-REC-00719-2
Dated: September, 2010	Page 22 of 25 Originating Dept: HSE & Engineering

- Gastrointestinal tract
- Skin
- Fetus and newborn

Health Surveillance

Hygiene monitoring shall be providing information on how potential exposure is managed. If there is any possibility of people being exposed to mercury, then health surveillance shall be conducted according to country specific regulatory requirements. Where no such requirement exists then OSHA regulations prevail.

I. Noise

Noise is a physical agent health hazard described as an unwanted sound. High noise exposure can lead to hearing loss and other health conditions, and can be a factor to workplace accidents. In some countries noise at work is subject to specific regulations.

Health Effects

Exposure to high levels of noise causes:

- Hearing loss
- Tinnitus
- Cardiovascular impacts
- Stress
- Behavioural changes (irritability)

Health surveillance

Health Surveillance will be required for any employee where the risk assessment indicates a significant risk. Health surveillance must be conducted according to country specific regulatory requirements. In UK it exists The Health and Safety Executive Control of Noise at Work Regulations (CoNAWR) 2005, which states that health surveillance, is required for all employees frequently exposed above the upper exposure action values and for individuals at greater or additional risk if exposed between the lower and upper exposure action values.

[Procedure for Audiometric Testing and Audiogram Interpretation](#)
[HSE Categorisation Scheme](#)
[Audiometry Questionnaire](#)

Title: Fitness for Task and Health Surveillance Management Programme - Scope and Frequency of Fitness for Task and Health Surveillance Assessments.	Doc No: AZSPU-HSSE-REC-00719-2
Dated: September, 2010	Page 23 of 25 Originating Dept: HSE & Engineering

J. Respiratory Irritants/Sensitizers

Inhalation is the primary route of exposure to pollutants (dust, gases and fumes) in the work environment.

Many substances have the potential of causing disturbance directly to the respiratory system or, utilizing it as a route of entry, to sensitize the immunologic system and afterwards to trigger a localized or generalized response on its presence.

These kinds of substances are under the Control of Substances Hazardous to Health (COSHH) Regulations 2002 and OSHA regulations.

Health effects

Main effects of respiratory irritants/sensitizers are:

- Swelling of upper airways
- Allergic rhinitis
- Asthma
- Chronic bronchitis
- Acute lung disease
- Chronic lung disease

Health Surveillance

Hygiene monitoring shall be providing information on how potential exposure is managed. Health Surveillance will be required for any employee where the risk assessment indicates a significant risk.

Health surveillance must be conducted according to country specific regulatory requirements. Where no such requirement exists then OSHA regulations prevail.

[Respiratory Surveillance Questionnaire](#)

K. Skin Irritants/Sensitizers

Skin is the secondary route of occupational exposure to health risks. Many agents (chemical, physical or biological) have the potential of cause skin damages or disease. Must of substances are under the Control of Substances Hazardous to Health (COSHH) Regulations 2002 and OSHA regulations.

Irritants

Title: Fitness for Task and Health Surveillance Management Programme - Scope and Frequency of Fitness for Task and Health Surveillance Assessments.	Doc No: AZSPU-HSSE-REC-00719-2
Dated: September, 2010	Page 24 of 25 Originating Dept: HSE & Engineering

Irritants are agents which produce lesions by direct action at the site of contact. Their speed of action depends on their concentration and the length of time for which they are in contact with the skin. Their effects are caused by chemical reaction with the skin (by degreasing or dehydrating it, or by denaturing proteins in the skin). Frictional irritation of skin points of contact with tools or work-pieces can produce trauma that leads to dermatitis.

Sensitizers

Many substances do not have primary irritant effect. Instead, contact with them may result in sensitizing of the skin that triggers an allergic response after new exposure to the same substance. Allergic contact dermatitis can be acute or chronic.

Health effects

- Chemical burns
- Irritant contact dermatitis
- Allergic contact dermatitis
- Contact urticaria

Health Surveillance

Health Surveillance will be required for any employee where the risk assessment indicates a significant risk.

Health surveillance must be conducted according to country specific regulatory requirements. Most of substances and other skin irritants / sensitizers agents are under The Control of Substances Hazardous to Health (COSHH) Regulations 2002 or OSHA regulations.

Solvents

Organic solvents are a distinct group of substances characterized by their ability to dissolve oils, fats, plastics, rubber and resins. Due to this property of dissolving fats, they are easily taken up through the lungs or through the skin, reaching the bloodstream and being distributed everywhere in the body.

Health effects

The health effects of these agents are dependant to a large extent on the route of exposure, the chronicity of exposure and the severity of the exposure. Some effects are common to all organic solvents but others are substance-specific.

With sufficient exposure, organic solvents cause damages in:

- Nervous system (central and peripheral, including vision and hearing)

Title: Fitness for Task and Health Surveillance Management Programme - Scope and Frequency of Fitness for Task and Health Surveillance Assessments.	Doc No: AZSPU-HSSE-REC-00719-2
Dated: September, 2010	Page 25 of 25 Originating Dept: HSE & Engineering

- Skin
- Lungs
- Liver
- Kidneys
- Blood
- Heart

Health Surveillance

Hygiene monitoring shall be providing information on how potential exposure is managed. Health Surveillance will be required for any employee where the risk assessment indicates a significant risk.

Health surveillance must be conducted according to country specific regulatory requirements. Where no such requirement exists then OSHA regulations prevail.

[Skin Surveillance Questionnaire \(Female\)](#)

[Skin Surveillance Questionnaire \(Male\)](#)

L. Unknown potentially hazardous material

Thousands of substances and compounds are used every day in different work environments and every year new chemicals are introduced as well. Many of them are not well characterized and their effects and potential risks for human health are still unknown.

Wherever a substance or compound lacks of information regarding its potential to affect human health or such information is not known. Such material should be managed as potentially hazardous. All precautionary measures should be adopted when manipulating these materials.

As stated above, health surveillance looks for early signs of work-related ill health in employees exposed to certain health risks. However, health surveillance is appropriate where the risk agent has a known health effect and there is a validated, reproducible and measurable biological impact.

Regardless a health surveillance program is not in place for an specific risk, all sings or symptoms potentially related with a substance or compound most be reported to the appointed person (generally the COSHH coordinator) in order to assess the specific situation.

Potential hazardous material is regulated by The Control of Substances Hazardous to Health (COSHH) Regulations 2002 and OSHA regulations.