



Australian Government
Repatriation Medical Authority

Statement of Principles
concerning
OSTEOARTHRITIS
(Balance of Probabilities)
(No. 62 of 2017)

The Repatriation Medical Authority determines the following Statement of Principles under subsection 196B(3) of the *Veterans' Entitlements Act 1986*.

Dated 3 November 2017

The Common Seal of the
Repatriation Medical Authority
was affixed to this instrument
at the direction of:

A handwritten signature in black ink, appearing to read 'Nicholas Saunders'.

Professor Nicholas Saunders AO
Chairperson

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1 Name

This is the Statement of Principles concerning *osteoarthritis (Balance of Probabilities)* (No. 62 of 2017).

2 Commencement

This instrument commences on 4 December 2017.

3 Authority

This instrument is made under subsection 196B(3) of the *Veterans' Entitlements Act 1986*.

4 Revocation

The Statement of Principles concerning osteoarthritis No. 14 of 2010, as amended, made under subsections 196B(3) and (8) of the VEA is revoked.

5 Application

This instrument applies to a claim to which section 120B of the VEA or section 339 of the *Military Rehabilitation and Compensation Act 2004* applies.

6 Definitions

The terms defined in the Schedule 1 - Dictionary have the meaning given when used in this instrument.

7 Kind of injury, disease or death to which this Statement of Principles relates

- (1) This Statement of Principles is about osteoarthritis and death from osteoarthritis.

Meaning of osteoarthritis

- (2) For the purposes of this Statement of Principles, osteoarthritis means a degenerative joint disorder with:
- (a) clinical manifestations of pain, impaired function and stiffness; and
 - (b) radiological, other imaging or arthroscopic evidence of loss of articular cartilage or osteophytes; and
 - (c) excludes acute articular cartilage tear and osteochondritis dissecans.

Note: Other commonly associated features are sclerosis of the underlying bone, inflammation of the synovium and, for osteoarthritis in the knee, degenerative tears of the menisci and, for osteoarthritis in the hip or shoulder, degenerative tears of the labrum.

- (3) While osteoarthritis attracts ICD-10-AM code M15, M16, M17, M18 or M19, in applying this Statement of Principles the meaning of osteoarthritis is that given in subsection (2).
- (4) For subsection (3), a reference to an ICD-10-AM code is a reference to the code assigned to a particular kind of injury or disease in *The International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM)*, Tenth Edition, effective date of 1 July 2017, copyrighted by the Independent Hospital Pricing Authority, ISBN 978-1-76007-296-4.

Death from osteoarthritis

- (5) For the purposes of this Statement of Principles, osteoarthritis, in relation to a person, includes death from a terminal event or condition that was contributed to by the person's osteoarthritis.

Note: *terminal event* is defined in the Schedule 1 – Dictionary.

8 Basis for determining the factors

On the sound medical-scientific evidence available, the Repatriation Medical Authority is of the view that it is more probable than not that osteoarthritis and death from osteoarthritis can be related to relevant service rendered by veterans or members of the Forces under the VEA, or members under the MRCA.

Note: *relevant service* is defined in the Schedule 1 – Dictionary.

9 Factors that must exist

At least one of the following factors must exist before it can be said that, on the balance of probabilities, osteoarthritis or death from osteoarthritis is connected with the circumstances of a person's relevant service:

- (1) having inflammatory joint disease as specified, of the affected joint before the clinical onset of osteoarthritis in that joint;

Note: *inflammatory joint disease as specified* is defined in the Schedule 1 - Dictionary.

- (2) having an infection of the affected joint as specified before the clinical onset of osteoarthritis in that joint;

Note: *infection of the affected joint as specified* is defined in the Schedule 1 - Dictionary.

- (3) having an intra-articular fracture of the affected joint before the clinical onset of osteoarthritis in that joint;

Note: *intra-articular fracture* is defined in the Schedule 1 - Dictionary.

- (4) having haemarthrosis of the affected joint before the clinical onset of osteoarthritis in that joint;

Note: *haemarthrosis* is defined in the Schedule 1 - Dictionary.

- (5) having a depositional joint disease as specified, in the affected joint before the clinical onset of osteoarthritis in that joint;
Note: *depositional joint disease as specified* is defined in the Schedule 1 - Dictionary.
- (6) having trauma to the affected joint within the 25 years before the clinical onset of osteoarthritis in that joint;
Note: *trauma to the affected joint* is defined in the Schedule 1 - Dictionary.
- (7) having an acute articular cartilage tear of the affected joint within the 25 years before the clinical onset of osteoarthritis in that joint;
- (8) having an acute meniscal tear of the affected knee within the 25 years before the clinical onset of osteoarthritis in that joint;
- (9) having frostbite involving the affected joint before the clinical onset of osteoarthritis in that joint;
- (10) having disordered joint mechanics of the affected joint for at least five years before the clinical onset of osteoarthritis in that joint;
Note: *disordered joint mechanics* is defined in the Schedule 1 - Dictionary.
- (11) having necrosis of the subchondral bone near the affected joint, including that from dysbaric osteonecrosis, before the clinical onset of osteoarthritis in that joint;
- (12) for osteoarthritis of a joint of the upper limb only, performing any combination of repetitive activities or tasks involving repeated or sustained pinch grip or hand/power grip, for an average of at least 30 hours per week, for a cumulative period of at least ten years within a continuous period of 15 years, before the clinical onset of osteoarthritis in that joint;
Note: *hand/power grip*, *pinch grip* and *repetitive activities* are defined in the Schedule 1 - Dictionary.
- (13) for osteoarthritis of a joint of the hand, wrist or elbow joint only, using a hand-held, vibrating percussive tool or object on more days than not, for a cumulative period of at least ten years, within the 25 years before the clinical onset of osteoarthritis in that joint;
- (14) for osteoarthritis of a joint of the lower limb only:
Note: *joint of the lower limb* is defined in the Schedule 1 - Dictionary.
- (a) having:
- (i) an amputation involving either leg; or
 - (ii) an asymmetric gait;
- for at least five years before the clinical onset of osteoarthritis in that joint;

- (b) lifting loads of at least 20 kilograms while bearing weight through the affected joint:
 - (i) to a cumulative total of at least 150 000 kilograms within any ten year period before the clinical onset of osteoarthritis in that joint; and
 - (ii) where the clinical onset of osteoarthritis in that joint occurs within the 25 years following that period;

Note: *lifting loads* is defined in the Schedule 1 - Dictionary.

- (c) carrying loads of at least 20 kilograms while bearing weight through the affected joint:
 - (i) to a cumulative total of at least 3 800 hours within any ten year period before the clinical onset of osteoarthritis in that joint; and
 - (ii) where the clinical onset of osteoarthritis in that joint occurs within the 25 years following that period;
- (d) ascending or descending at least 150 stairs or rungs of a ladder per day, on more days than not, for a continuous period of at least five years, within the 25 years before the clinical onset of osteoarthritis in that joint; or
- (e) having increased bone mineral density before the clinical onset of osteoarthritis in that joint;

Note: *increased bone mineral density* is defined in the Schedule 1 - Dictionary.

(15) for osteoarthritis of a joint of the lower limb or hand joint only:

Note: *joint of the lower limb* and *hand joint* are defined in the Schedule 1 - Dictionary.

- (a) being overweight for at least ten years before the clinical onset of osteoarthritis in that joint;

Note: *being overweight* is defined in the Schedule 1 - Dictionary.

- (b) for males, having a waist circumference exceeding 102 centimetres for at least ten years before the clinical onset of osteoarthritis in that joint; or
- (c) for females, having a waist circumference exceeding 88 centimetres for at least ten years before the clinical onset of osteoarthritis in that joint;

(16) for osteoarthritis of a hip or knee joint only:

- (a) kneeling or squatting for a cumulative period of at least one hour per day, on more days than not, for a continuous period of at least two years before the clinical onset of osteoarthritis in that joint; and
- (b) where the clinical onset of osteoarthritis in that joint occurs within the 25 years following that period;

- (17) for osteoarthritis of a knee joint only, having internal derangement of the affected joint before the clinical onset of osteoarthritis in that joint;
- (18) for osteoarthritis of the patello-femoral joint only, having chondromalacia patella before the clinical onset of osteoarthritis in that joint;
- (19) having a disorder associated with loss of pain sensation or proprioception involving the affected joint before the clinical onset of osteoarthritis in that joint;
- (20) having Paget's disease of bone of the affected joint before the clinical onset of osteoarthritis in that joint;
- (21) having acromegaly before the clinical onset of osteoarthritis in that joint;

Note: *acromegaly* is defined in the Schedule 1 - Dictionary.

- (22) having joint instability or dislocation of the affected joint, at least one year before the clinical onset of osteoarthritis in that joint;
- (23) for osteoarthritis of a hip joint only, having femoroacetabular impingement syndrome of the affected joint, before the clinical onset of osteoarthritis in that joint;
- (24) having inflammatory joint disease as specified, of the affected joint before the clinical worsening of osteoarthritis in that joint;

Note: *inflammatory joint disease as specified* is defined in the Schedule 1 - Dictionary.

- (25) having an infection of the affected joint as specified before the clinical worsening of osteoarthritis in that joint;

Note: *infection of the affected joint as specified* is defined in the Schedule 1 - Dictionary.

- (26) having an intra-articular fracture of the affected joint before the clinical worsening of osteoarthritis in that joint;

Note: *intra-articular fracture* is defined in the Schedule 1 - Dictionary.

- (27) having haemarthrosis of the affected joint before the clinical worsening of osteoarthritis in that joint;

Note: *haemarthrosis* is defined in the Schedule 1 - Dictionary.

- (28) having a depositional joint disease as specified, in the affected joint before the clinical worsening of osteoarthritis in that joint;

Note: *depositional joint disease as specified* is defined in the Schedule 1 - Dictionary.

- (29) having trauma to the affected joint within the 25 years before the clinical worsening of osteoarthritis in that joint;

Note: *trauma to the affected joint* is defined in the Schedule 1 - Dictionary.

- (30) having an acute articular cartilage tear of the affected joint within the 25 years before the clinical worsening of osteoarthritis in that joint;
- (31) having an acute meniscal tear of the affected knee within the 25 years before the clinical worsening of osteoarthritis in that joint;
- (32) having frostbite involving the affected joint before the clinical worsening of osteoarthritis in that joint;
- (33) having disordered joint mechanics of the affected joint for at least five years before the clinical worsening of osteoarthritis in that joint;

Note: *disordered joint mechanics* is defined in the Schedule 1 - Dictionary.

- (34) having necrosis of the subchondral bone near the affected joint, including that from dysbaric osteonecrosis, before the clinical worsening of osteoarthritis in that joint;
- (35) for osteoarthritis of a joint of the upper limb only, performing any combination of repetitive activities or tasks involving repeated or sustained pinch grip or hand/power grip, for an average of at least 30 hours per week, for a cumulative period of at least ten years within a continuous period of 15 years, before the clinical worsening of osteoarthritis in that joint;

Note: *hand/power grip*, *pinch grip* and *repetitive activities* are defined in the Schedule 1 - Dictionary.

- (36) for osteoarthritis of a joint of the hand, wrist or elbow joint only, using a hand-held, vibrating percussive tool or object on more days than not, for a cumulative period of at least ten years, within the 25 years before the clinical worsening of osteoarthritis in that joint;
- (37) for osteoarthritis of a joint of the lower limb only:

Note: *joint of the lower limb* is defined in the Schedule 1 - Dictionary.

- (a) having:
 - (i) an amputation involving either leg; or
 - (ii) an asymmetric gait;
 for at least five years before the clinical worsening of osteoarthritis in that joint;
- (b) lifting loads of at least 20 kilograms while bearing weight through the affected joint:
 - (i) to a cumulative total of at least 150 000 kilograms within any ten year period before the clinical worsening of osteoarthritis in that joint; and
 - (ii) where the clinical worsening of osteoarthritis in that joint occurs within the 25 years following that period;

Note: *lifting loads* is defined in the Schedule 1 - Dictionary.

- (c) carrying loads of at least 20 kilograms while bearing weight through the affected joint:
 - (i) to a cumulative total of at least 3 800 hours within any ten year period before the clinical worsening of osteoarthritis in that joint; and
 - (ii) where the clinical worsening of osteoarthritis in that joint occurs within the 25 years following that period; or
 - (d) ascending or descending at least 150 stairs or rungs of a ladder per day, on more days than not, for a continuous period of at least five years, within the 25 years before the clinical worsening of osteoarthritis in that joint;
- (38) for osteoarthritis of a joint of the lower limb or hand joint only:
- Note: *joint of the lower limb* and *hand joint* are defined in the Schedule 1 - Dictionary.
- (a) being overweight for at least ten years before the clinical worsening of osteoarthritis in that joint;
- Note: *being overweight* is defined in the Schedule 1 - Dictionary.
- (b) for males, having a waist circumference exceeding 102 centimetres for at least ten years before the clinical worsening of osteoarthritis in that joint; or
 - (c) for females, having a waist circumference exceeding 88 centimetres for at least ten years before the clinical worsening of osteoarthritis in that joint;
- (39) for osteoarthritis of a hip or knee joint only:
- (a) kneeling or squatting for a cumulative period of at least one hour per day, on more days than not, for a continuous period of at two years before the clinical worsening of osteoarthritis in that joint; and
 - (b) where the clinical worsening of osteoarthritis in that joint occurs within the 25 years following that period;
- (40) for osteoarthritis of a knee joint only, having internal derangement of the affected joint before the clinical worsening of osteoarthritis in that joint;
- (41) for osteoarthritis of the patello-femoral joint only, having chondromalacia patella before the clinical worsening of osteoarthritis in that joint;
- (42) having a disorder associated with loss of pain sensation or proprioception involving the affected joint before the clinical worsening of osteoarthritis in that joint;
- (43) having Paget's disease of bone of the affected joint before the clinical worsening of osteoarthritis in that joint;

- (44) having acromegaly before the clinical worsening of osteoarthritis in that joint;

Note: *acromegaly* is defined in the Schedule 1 - Dictionary.

- (45) having joint instability or dislocation of the affected joint, at least one year before the clinical worsening of osteoarthritis in that joint;
- (46) for osteoarthritis of a hip joint only, having femoroacetabular impingement syndrome of the affected joint, before the clinical worsening of osteoarthritis in that joint;
- (47) inability to obtain appropriate clinical management for osteoarthritis.

10 Relationship to service

- (1) The existence in a person of any factor referred to in section 9, must be related to the relevant service rendered by the person.
- (2) The factors set out in subsections 9(24) to 9(47) apply only to material contribution to, or aggravation of, osteoarthritis where the person's osteoarthritis was suffered or contracted before or during (but did not arise out of) the person's relevant service.

11 Factors referring to an injury or disease covered by another Statement of Principles

In this Statement of Principles:

- (1) if a factor referred to in section 9 applies in relation to a person; and
- (2) that factor refers to an injury or disease in respect of which a Statement of Principles has been determined under subsection 196B(3) of the VEA;

then the factors in that Statement of Principles apply in accordance with the terms of that Statement of Principles as in force from time to time.

Schedule 1 - Dictionary

Note: See Section 6

1 Definitions

In this instrument:

acromegaly means a chronic disease of adults resulting from hypersecretion of growth hormone after closure of the epiphyses.

being overweight means having a Body Mass Index (BMI) of 25 or greater.

Note: **BMI** is also defined in the Schedule 1 - Dictionary.

BMI means W/H^2 where:

W is the person's weight in kilograms; and

H is the person's height in metres.

depositional joint disease as specified means one of the following:

- (a) alkaptonuria (also known as ochronosis);
- (b) calcium pyrophosphate dihydrate deposition disease (also known as pseudogout);
- (c) gout;
- (d) haemochromatosis; or
- (e) Wilson's disease.

disordered joint mechanics means maldistribution of loading forces on that joint resulting from:

- (a) a rotation or angulation deformity of the bones of the affected limb; or
- (b) a rotation or angulation deformity of the joint of the affected limb; or
- (c) a rotation or angulation deformity of the bones adjacent to the affected joint.

haemarthrosis means bleeding into the joint.

hand joint means the interphalangeal, metacarpophalangeal, carpometacarpal and intercarpal joints of the hand. This definition excludes the radiocarpal joint (wrist joint).

hand/power grip means activities mostly requiring forceful flexion of the fingers to hold an object.

Note: Examples of activities which require power grip include handling heavy tools, cutting with knives, carrying heavy objects and pushing a wheelchair.

increased bone mineral density means a bone mineral density at least one standard deviation above the mean bone mineral density of young adult sex-matched controls.

infection of the affected joint as specified means the bacterial infection of a joint resulting in inflammation within that joint or infection of a joint by a virus, fungus or parasite resulting in inflammation and destruction of articular cartilage within that joint.

inflammatory joint disease as specified means one of the following:

- (a) ankylosing spondylitis;
- (b) arthritis associated with Crohn's disease or ulcerative colitis;
- (c) psoriatic arthropathy;
- (d) reactive arthritis; or
- (e) rheumatoid arthritis.

intra-articular fracture means a fracture involving the articular surface of a joint.

joint of the lower limb means the hip, knee, ankle, sacro-iliac joint or any joint of the foot.

lifting loads means manually raising an object.

MRCA means the *Military Rehabilitation and Compensation Act 2004*.

osteoarthritis—see subsection 7(2).

pinch grip means activities requiring repetitive or sustained grip with the fingers being pressed together at their tips to hold an object; most often pinch grip involves primarily the thumb, the index finger and the middle finger.

Note: Examples of activities which require pinch grip include writing, sewing, knitting, painting with small brushes and holding dentistry instruments.

relevant service means:

- (a) eligible war service (other than operational service) under the VEA;
- (b) defence service (other than hazardous service and British nuclear test defence service) under the VEA; or
- (c) peacetime service under the MRCA.

Note: *MRCA* and *VEA* are also defined in the Schedule 1 - Dictionary.

repetitive activities means:

- (a) bending or twisting of the affected joint; or
- (b) carrying out the same or similar movements that involve the affected joint;

at least 50 times per hour.

terminal event means the proximate or ultimate cause of death and includes the following:

- (a) pneumonia;
- (b) respiratory failure;
- (c) cardiac arrest;
- (d) circulatory failure; or
- (e) cessation of brain function.

trauma to the affected joint means a discrete event involving the application of significant physical force to or through the affected joint, that causes damage to the joint and the development, within 24 hours of the event occurring, of symptoms and signs of pain and tenderness, and either altered mobility or range of movement of the joint. These symptoms and signs must last for a period of at least seven days following their onset, save for where

medical intervention for the trauma to that joint has occurred and that medical intervention involves one of the following:

- (a) immobilisation of the joint or limb by splinting or similar external agent;
- (b) injection of corticosteroids or local anaesthetics into that joint; or
- (c) surgery to that joint.

VEA means the *Veterans' Entitlements Act 1986*.