

Medical Coverage Policy | Hyperbaric Oxygen Therapy



EFFECTIVE DATE: 10 | 01 2015

POLICY LAST UPDATED: 06 | 21 | 2016

Overview

Hyperbaric oxygen therapy (HBOT) involves breathing 100% oxygen at pressures between 1.5 and 3.0 atmospheres (atm). It is generally applied systemically with the patient inside a hyperbaric chamber. HBOT can also be applied topically; that is, the body part to be treated is isolated (eg, in an inflatable bag and exposed to pure oxygen). HBOT has been investigated for various conditions that have potential to respond to increased oxygen delivery to the tissues,

MEDICAL CRITERIA

Blue CHiP for Medicare and Commercial

Failure to respond to standard wound care

*Failure to respond to standard wound care is defined as no measurable signs of healing after a minimum of 30 consecutive days of treatment. In addition, the clinical information submitted must document that all of the following have been addressed:

- I. assessment of a patient's vascular status and correction of any vascular problems in the affected limb if possible,
- II. nutritional status,
- III. glucose control (if diabetic),
- IV. debridement by any means to remove devitalized tissue,
- V. maintenance of a clean, moist bed of granulation tissue with appropriate moist dressings, appropriate off-loading, and
- VI. necessary treatment to resolve any infection that might be present.

PRIOR AUTHORIZATION:

Blue CHiP for Medicare and Commercial

Prior authorization is recommended and obtained via the online tool for participating providers. See the Related Policies section.

POLICY STATEMENT:

Blue CHiP for Medicare and Commercial

HBOT is covered with for the following conditions when filed with the applicable diagnosis noted in the coding section.

- Actinomycosis
- Acute carbon monoxide intoxication
- Acute traumatic peripheral ischemia
- Crush injuries and suturing of severed limbs
- Decompression illness
- Cyanide poisoning
- Gas embolism
- Gas gangrene
- Osteoradionecrosis
- Progressive necrotizing infections (necrotizing fasciitis)
- Soft tissue radionecrosis
- For any condition in which the severity warrants inpatient care (e.g., profound anemia with exceptional blood loss: only when blood transfusion is impossible or must be delayed)

- Pre- and post-treatment for patients undergoing dental surgery (non-implant related) of an irradiated jaw

For wounds that fail to respond to standard wound care, HBOT is medically necessary when the medical criteria is met.

HBOT is not medically necessary for services not meeting the medical criteria or diagnosis list as due to limited peer reviewed studies to support its clinical efficacy have not been established.

Topical hyperbaric oxygen therapy is not medically necessary its clinical efficacy has not been established.

For Simultaneous use of systemic HBOT and Negative Pressure wound closure, medical criteria for each device must be met using the web based authorization tool.

COVERAGE:

Benefits may vary between groups/contracts. Please refer to the appropriate Evidence of Coverage, Subscriber Agreement, or Benefit Booklet for applicable Rehabilitative/Surgery coverage.

BACKGROUND

Hyperbaric oxygen therapy (HBOT) is a technique of delivering higher pressures of oxygen to the tissues. Two methods of administration are available. In systemic or large hyperbaric oxygen chamber, the patient is entirely enclosed in a pressure chamber and breathes oxygen at a pressure greater than 1 atmosphere (atm; the pressure of oxygen at sea level). Thus, this technique relies on systemic circulation to deliver highly oxygenated blood to the target site, typically a wound. In addition, systemic HBOT can be used to treat systemic illness, such as air or gas embolism, carbon monoxide poisoning, or clostridial gas gangrene. Treatment may be carried out either in a monoplace chamber pressurized with pure oxygen or in a larger, multiplace chamber pressurized with compressed air, in which case the patient receives pure oxygen by mask, head tent, or endotracheal tube.

Topical hyperbaric therapy is a technique of delivering 100% oxygen directly to an open, moist wound at a pressure slightly higher than atmospheric pressure. It is hypothesized that the high concentrations of oxygen diffuse directly into the wound to increase the local cellular oxygen tension, which in turn promotes wound healing. Devices consist of an appliance to enclose the wound area (frequently an extremity) and a source of oxygen; conventional oxygen tanks may be used. The appliances may be disposable and may be used without supervision in the home by well-trained patients. Topical hyperbaric therapy has been investigated as a treatment of skin ulcerations resulting from diabetes, venous stasis, postsurgical infection, gangrenous lesion, decubitus ulcers, amputations, skin graft, burns, or frostbite. Note that this evidence review does not address topical oxygen therapy in the absence of pressurization.

The evidence for the use of systemic HBOT in individuals with nonhealing diabetic wounds of the lower extremities, acute traumatic ischemia, soft-tissue radiation necrosis (eg, radiation enteritis, cystitis, proctitis), osteoradionecrosis (ie, pre- and posttreatment), planned dental surgery (non-implant-related) of an irradiated jaw, gas gangrene, and profound anemia with exceptional blood loss when blood transfusion is impossible or must be delayed includes systematic reviews and/or recommendations from the Undersea and Hyperbaric Medical Society's (UHMS). Relevant outcomes include overall survival, symptoms, change in disease status, and functional outcomes. For all indications in the PICO note, evidence and/or USMS guidelines support use of HBOT. The evidence is sufficient to determine qualitatively that the technology results in a meaningful improvement in health outcomes.

The evidence for the use of systemic HBOT in individuals with any condition other than those specified in the policy are not medically necessary as the available studies do not demonstrate that HBOT improves relevant outcomes. The evidence is insufficient to determine the effects of the technology on health outcomes.

The evidence for the use of topical HBOT in individuals who might respond to increased oxygen delivery to tissues includes primarily of case series and case reports. Relevant outcomes are symptoms and change in disease status. Only 1 randomized controlled trial (RCT) was published on any indication. This study, in patients with diabetic foot ulcers, had a small sample size and did not find a significant benefit of topical HBOT. The evidence is insufficient to determine the effects of the technology on health outcomes.

CODING:

The following code is medically necessary when filed with a covered diagnosis or medical criteria have been met:

99183 Physician attendance and supervision of hyperbaric oxygen therapy, per session

G0277 Hyperbaric oxygen under pressure full body chamber,per 30 minutes

The following codes are not medically necessary:

A4575 Topical hyperbaric oxygen chamber, disposable

E0446 Topical oxygen delivery system, not otherwise specified, includes all supplies and accessories

The following are covered ICD 9 and ICD 10 diagnosis:

ICD-9-CM codes:

- 039.0** Cutaneous actinomycotic infection
- 039.1** Pulmonary actinomycotic infection
- 039.2** Abdominal actinomycotic infection
- 039.3** Cervicofacial actinomycotic infection
- 039.4** Madura foot
- 039.8** Actinomycotic infection of other specified sites
- 039.9** Actinomycotic infection of unspecified site
- 040.0** Gas gangrene
- 444.21** Arterial embolism and thrombosis of upper extremity
- 444.22** Arterial embolism and thrombosis of lower extremity
- 444.81** Embolism and thrombosis of iliac artery
- 526.89** Other specified diseases of the jaws
- 728.86** Necrotizing fasciitis
- 730.10** Chronic osteomyelitis, site unspecified
- 730.11** Chronic osteomyelitis involving shoulder region
- 730.12** Chronic osteomyelitis involving upper arm
- 730.13** Chronic osteomyelitis involving forearm
- 730.14** Chronic osteomyelitis involving hand
- 730.15** Chronic osteomyelitis involving pelvic region and thigh
- 730.16** Chronic osteomyelitis involving lower leg
- 730.17** Chronic osteomyelitis involving ankle and foot
- 730.18** Chronic osteomyelitis involving other specified sites
- 730.19** Chronic osteomyelitis involving multiple sites
- 902.53** Injury to iliac artery
- 903.01** Injury to axillary artery
- 903.1** Injury to brachial blood vessels
- 904.0** Injury to common femoral artery
- 904.41** Injury to popliteal artery
- 927.00** Crushing injury of shoulder region
- 927.01** Crushing injury of scapular region
- 927.02** Crushing injury of axillary region
- 927.03** Crushing injury of upper arm
- 927.09** Crushing injury of multiple sites of upper arm
- 927.10** Crushing injury of forearm

927.11	Crushing injury of elbow
927.20	Crushing injury of hand(s)
927.21	Crushing injury of wrist
927.8	Crushing injury of multiple sites of upper limb
927.9	Crushing injury of unspecified site of upper limb
928.00	Crushing injury of thigh
928.01	Crushing injury of hip
928.10	Crushing injury of lower leg
928.11	Crushing injury of knee
928.20	Crushing injury of foot
928.21	Crushing injury of ankle
928.3	Crushing injury of toe(s)
928.8	Crushing injury of multiple sites of lower limb
928.9	Crushing injury of unspecified site of lower limb
929.0	Crushing injury of multiple sites, not elsewhere classified
929.9	Crushing injury unspecified site
958.0	Air embolism as an early complication of trauma
986	Toxic effect of carbon monoxide
987.7	Toxic effect of hydrocyanic acid gas
989.0	Toxic effect of hydrocyanic acid and cyanides
990	Effects of radiation, unspecified
993.2	Other and unspecified effects of high altitude
993.3	Caisson disease
996.52	Mechanical complication due to other tissue graft, not elsewhere classified
996.90	Complications of reattached extremity or body part, unspecified extremity
996.91	Complications of reattached extremity or body part, forearm
996.92	Complications of reattached extremity or body part, hand
996.93	Complications of reattached extremity or body part, finger(s)
996.94	Complications of reattached extremity or body part, upper extremity, other and unspecified
996.95	Complications of reattached upper extremity or body part, foot and toe (s)
996.96	Complications of reattached extremity or body part, Other specified body part
996.99	Complication of other specified reattached body part
999.1	Air embolism as a complication of medical care, not elsewhere classified

ICD-10-CM codes:

A42.0	Pulmonary actinomycosis
A42.1	Abdominal actinomycosis
A42.2	Cervicofacial actinomycosis
A42.81	Actinomycotic meningitis
A42.82	Actinomycotic encephalitis
A42.89	Other forms of actinomycosis
A42.9	Actinomycosis, unspecified
A43.0	Pulmonary nocardiosis
A43.1	Cutaneous nocardiosis
A43.8	Other forms of nocardiosis
A43.9	Nocardiosis, unspecified
A48.0	Gas gangrene
B47.1	Actinomycetoma
B47.9	Mycetoma, unspecified
I74.2	Embolism and thrombosis of arteries of the upper extremities
I74.3	Embolism and thrombosis of arteries of the lower extremities

I74.4	Embolism and thrombosis of arteries of extremities, unspecified
I74.5	Embolism and thrombosis of iliac artery
L08.1	Erythrasma
M27.8	Other specified diseases of jaws
M72.6	Necrotizing fasciitis
M86.30	Chronic multifocal osteomyelitis, unspecified site
M86.311	Chronic multifocal osteomyelitis, right shoulder
M86.312	Chronic multifocal osteomyelitis, left shoulder
M86.319	Chronic multifocal osteomyelitis, unspecified shoulder
M86.321	Chronic multifocal osteomyelitis, right humerus
M86.322	Chronic multifocal osteomyelitis, left humerus
M86.329	Chronic multifocal osteomyelitis, unspecified humerus
M86.331	Chronic multifocal osteomyelitis, right radius and ulna
M86.332	Chronic multifocal osteomyelitis, left radius and ulna
M86.339	Chronic multifocal osteomyelitis, unspecified radius and ulna
M86.341	Chronic multifocal osteomyelitis, right hand
M86.342	Chronic multifocal osteomyelitis, left hand
M86.349	Chronic multifocal osteomyelitis, unspecified hand
M86.351	Chronic multifocal osteomyelitis, right femur
M86.352	Chronic multifocal osteomyelitis, left femur
M86.359	Chronic multifocal osteomyelitis, unspecified femur
M86.361	Chronic multifocal osteomyelitis, right tibia and fibula
M86.362	Chronic multifocal osteomyelitis, left tibia and fibula
M86.369	Chronic multifocal osteomyelitis, unspecified tibia and fibula
M86.371	Chronic multifocal osteomyelitis, right ankle and foot
M86.372	Chronic multifocal osteomyelitis, left ankle and foot
M86.379	Chronic multifocal osteomyelitis, unspecified ankle and foot
M86.38	Chronic multifocal osteomyelitis, other site
M86.39	Chronic multifocal osteomyelitis, multiple sites
M86.40	Chronic osteomyelitis with draining sinus, unspecified site
M86.411	Chronic osteomyelitis with draining sinus, right shoulder
M86.412	Chronic osteomyelitis with draining sinus, left shoulder
M86.419	Chronic osteomyelitis with draining sinus, unspecified shoulder
M86.421	Chronic osteomyelitis with draining sinus, right humerus
M86.422	Chronic osteomyelitis with draining sinus, left humerus
M86.429	Chronic osteomyelitis with draining sinus, unspecified humerus
M86.431	Chronic osteomyelitis with draining sinus, right radius and ulna
M86.432	Chronic osteomyelitis with draining sinus, left radius and ulna
M86.439	Chronic osteomyelitis with draining sinus, unspecified radius and ulna
M86.441	Chronic osteomyelitis with draining sinus, right hand
M86.442	Chronic osteomyelitis with draining sinus, left hand
M86.449	Chronic osteomyelitis with draining sinus, unspecified hand
M86.451	Chronic osteomyelitis with draining sinus, right femur
M86.452	Chronic osteomyelitis with draining sinus, left femur
M86.459	Chronic osteomyelitis with draining sinus, unspecified femur
M86.461	Chronic osteomyelitis with draining sinus, right tibia and fibula
M86.462	Chronic osteomyelitis with draining sinus, left tibia and fibula
M86.469	Chronic osteomyelitis with draining sinus, unspecified tibia and fibula
M86.471	Chronic osteomyelitis with draining sinus, right ankle and foot
M86.472	Chronic osteomyelitis with draining sinus, left ankle and foot
M86.479	Chronic osteomyelitis with draining sinus, unspecified ankle and foot
M86.48	Chronic osteomyelitis with draining sinus, other site

- M86.49** Chronic osteomyelitis with draining sinus, multiple sites
- M86.50** Other chronic hematogenous osteomyelitis, unspecified site
- M86.511** Other chronic hematogenous osteomyelitis, right shoulder
- M86.512** Other chronic hematogenous osteomyelitis, left shoulder
- M86.519** Other chronic hematogenous osteomyelitis, unspecified shoulder
- M86.521** Other chronic hematogenous osteomyelitis, right humerus
- M86.522** Other chronic hematogenous osteomyelitis, left humerus
- M86.529** Other chronic hematogenous osteomyelitis, unspecified humerus
- M86.531** Other chronic hematogenous osteomyelitis, right radius and ulna
- M86.532** Other chronic hematogenous osteomyelitis, left radius and ulna
- M86.539** Other chronic hematogenous osteomyelitis, unspecified radius and ulna
- M86.541** Other chronic hematogenous osteomyelitis, right hand
- M86.542** Other chronic hematogenous osteomyelitis, left hand
- M86.549** Other chronic hematogenous osteomyelitis, unspecified hand
- M86.551** Other chronic hematogenous osteomyelitis, right femur
- M86.552** Other chronic hematogenous osteomyelitis, left femur
- M86.559** Other chronic hematogenous osteomyelitis, unspecified femur
- M86.561** Other chronic hematogenous osteomyelitis, right tibia and fibula
- M86.562** Other chronic hematogenous osteomyelitis, left tibia and fibula
- M86.569** Other chronic hematogenous osteomyelitis, unspecified tibia and fibula
- M86.571** Other chronic hematogenous osteomyelitis, right ankle and foot
- M86.572** Other chronic hematogenous osteomyelitis, left ankle and foot
- M86.579** Other chronic hematogenous osteomyelitis, unspecified ankle and foot
- M86.58** Other chronic hematogenous osteomyelitis, other site
- M86.59** Other chronic hematogenous osteomyelitis, multiple sites
- M86.60** Other chronic osteomyelitis, unspecified site
- M86.611** Other chronic osteomyelitis, right shoulder
- M86.612** Other chronic osteomyelitis, left shoulder
- M86.619** Other chronic osteomyelitis, unspecified shoulder
- M86.621** Other chronic osteomyelitis, right humerus
- M86.622** Other chronic osteomyelitis, left humerus
- M86.629** Other chronic osteomyelitis, unspecified humerus
- M86.631** Other chronic osteomyelitis, right radius and ulna
- M86.632** Other chronic osteomyelitis, left radius and ulna
- M86.639** Other chronic osteomyelitis, unspecified radius and ulna
- M86.641** Other chronic osteomyelitis, right hand
- M86.642** Other chronic osteomyelitis, left hand
- M86.649** Other chronic osteomyelitis, unspecified hand
- M86.651** Other chronic osteomyelitis, right thigh
- M86.652** Other chronic osteomyelitis, left thigh
- M86.659** Other chronic osteomyelitis, unspecified thigh
- M86.661** Other chronic osteomyelitis, right tibia and fibula
- M86.662** Other chronic osteomyelitis, left tibia and fibula
- M86.669** Other chronic osteomyelitis, unspecified tibia and fibula
- M86.671** Other chronic osteomyelitis, right ankle and foot
- M86.672** Other chronic osteomyelitis, left ankle and foot
- M86.679** Other chronic osteomyelitis, unspecified ankle and foot
- M86.68** Other chronic osteomyelitis, other site
- M86.69** Other chronic osteomyelitis, multiple sites
- M86.8x0** Other osteomyelitis, multiple sites
- M86.8x1** Other osteomyelitis, shoulder
- M86.8x2** Other osteomyelitis, upper arm

M86.8x3 Other osteomyelitis, forearm
M86.8x4 Other osteomyelitis, hand
M86.8x5 Other osteomyelitis, thigh
M86.8x6 Other osteomyelitis, lower leg
M86.8x7 Other osteomyelitis, ankle and foot
M86.8x8 Other osteomyelitis, other site
M86.8x9 Other osteomyelitis, unspecified sites
S35.511A Injury of right iliac artery, initial encounter
S35.512A Injury of left iliac artery, initial encounter
S35.513A Injury of unspecified iliac artery, initial encounter
S45.001A Unspecified injury of axillary artery, right side, initial encounter
S45.002A Unspecified injury of axillary artery, left side, initial encounter
S45.009A Unspecified injury of axillary artery, unspecified side, initial encounter
S45.011A Laceration of axillary artery, right side, initial encounter
S45.012A Laceration of axillary artery, left side, initial encounter
S45.019A Laceration of axillary artery, unspecified side, initial encounter
S45.091A Other specified injury of axillary artery, right side, initial encounter
S45.092A Other specified injury of axillary artery, left side, initial encounter
S45.099A Other specified injury of axillary artery, unspecified side, initial encounter
S45.101A Unspecified injury of brachial artery, right side, initial encounter
S45.102A Unspecified injury of brachial artery, left side, initial encounter
S45.109A Unspecified injury of brachial artery, unspecified side, initial encounter
S45.111A Laceration of brachial artery, right side, initial encounter
S45.112A Laceration of brachial artery, left side, initial encounter
S45.119A Laceration of brachial artery, unspecified side, initial encounter
S45.191A Other specified injury of brachial artery, right side, initial encounter
S45.192A Other specified injury of brachial artery, left side, initial encounter
S45.199A Other specified injury of brachial artery, unspecified side, initial encounter
S45.201A Unspecified injury of axillary or brachial vein, right side, initial encounter
S45.202A Unspecified injury of axillary or brachial vein, left side, initial encounter
S45.209A Unspecified injury of axillary or brachial vein, unspecified side, initial encounter
S45.211A Laceration of axillary or brachial vein, right side, initial encounter
S45.212A Laceration of axillary or brachial vein, left side, initial encounter
S45.219A Laceration of axillary or brachial vein, unspecified side, initial encounter
S45.291A Other specified injury of axillary or brachial vein, right side, initial encounter
S45.292A Other specified injury of axillary or brachial vein, left side, initial encounter
S45.299A Other specified injury of axillary or brachial vein, unspecified side, initial encounter
S47.1xxA Crushing injury of right shoulder and upper arm, initial encounter
S47.2xxA Crushing injury of left shoulder and upper arm, initial encounter
S47.9xxA Crushing injury of shoulder and upper arm, unspecified arm, initial encounter
S57.00xA Crushing injury of unspecified elbow, initial encounter
S57.01xA Crushing injury of right elbow, initial encounter
S57.02xA Crushing injury of left elbow, initial encounter
S57.80xA Crushing injury of unspecified forearm, initial encounter
S57.81xA Crushing injury of right forearm, initial encounter
S57.82xA Crushing injury of left forearm, initial encounter
S67.20xA Crushing injury of unspecified hand, initial encounter
S67.21xA Crushing injury of right hand, initial encounter
S67.22xA Crushing injury of left hand, initial encounter
S67.30xA Crushing injury of unspecified wrist, initial encounter
S67.31xA Crushing injury of right wrist, initial encounter
S67.32xA Crushing injury of left wrist, initial encounter

S67.40xA Crushing injury of unspecified wrist and hand, initial encounter
S67.41xA Crushing injury of right wrist and hand, initial encounter
S67.42xA Crushing injury of left wrist and hand, initial encounter
S67.90xA Crushing injury of unspecified part(s) of unspecified wrist, hand and fingers, initial encounter
S67.91xA Crushing injury of unspecified part(s) of right wrist, hand and fingers, initial encounter
S67.92xA Crushing injury of unspecified part(s) of left wrist, hand and fingers, initial encounter
S75.001A Unspecified injury of femoral artery, right leg, initial encounter
S75.002A Unspecified injury of femoral artery, left leg, initial encounter
S75.009A Unspecified injury of femoral artery, unspecified leg, initial encounter
S75.011A Minor laceration of femoral artery, right leg, initial encounter
S75.012A Minor laceration of femoral artery, left leg, initial encounter
S75.019A Minor laceration of femoral artery, unspecified leg, initial encounter
S75.021A Major laceration of femoral artery, right leg, initial encounter
S75.022A Major laceration of femoral artery, left leg, initial encounter
S75.029A Major laceration of femoral artery, unspecified leg, initial encounter
S75.091A Other specified injury of femoral artery, right leg, initial encounter
S75.092A Other specified injury of femoral artery, left leg, initial encounter
S75.099A Other specified injury of femoral artery, unspecified leg, initial encounter
S77.00xA Crushing injury of unspecified hip, initial encounter
S77.01xA Crushing injury of right hip, initial encounter
S77.02xA Crushing injury of left hip, initial encounter
S77.10xA Crushing injury of unspecified thigh, initial encounter
S77.11xA Crushing injury of right thigh, initial encounter
S77.12xA Crushing injury of left thigh, initial encounter
S77.20xA Crushing injury of unspecified hip with thigh, initial encounter
S77.21xA Crushing injury of right hip with thigh, initial encounter
S77.22xA Crushing injury of left hip with thigh, initial encounter
S85.001A Unspecified injury of popliteal artery, right leg, initial encounter
S85.002A Unspecified injury of popliteal artery, left leg, initial encounter
S85.009A Unspecified injury of popliteal artery, unspecified leg, initial encounter
S85.011A Laceration of popliteal artery, right leg, initial encounter
S85.012A Laceration of popliteal artery, left leg, initial encounter
S85.019A Laceration of popliteal artery, unspecified leg, initial encounter
S85.091A Other specified injury of popliteal artery, right leg, initial encounter
S85.092A Other specified injury of popliteal artery, left leg, initial encounter
S85.099A Other specified injury of popliteal artery, unspecified leg, initial encounter
S87.00xA Crushing injury of unspecified knee, initial encounter
S87.01xA Crushing injury of right knee, initial encounter
S87.02xA Crushing injury of left knee, initial encounter
S87.80xA Crushing injury of unspecified lower leg, initial encounter
S87.81xA Crushing injury of right lower leg, initial encounter
S87.82xA Crushing injury of left lower leg, initial encounter
S97.00xA Crushing injury of unspecified ankle, initial encounter
S97.01xA Crushing injury of right ankle, initial encounter
S97.02xA Crushing injury of left ankle, initial encounter
S97.101A Crushing injury of unspecified right toe(s), initial encounter
S97.102A Crushing injury of unspecified left toe(s), initial encounter
S97.109A Crushing injury of unspecified toe(s), initial encounter
S97.111A Crushing injury of right great toe, initial encounter
S97.112A Crushing injury of left great toe, initial encounter
S97.119A Crushing injury of unspecified great toe, initial encounter
S97.121A Crushing injury of right lesser toe(s), initial encounter

- S97.122A Crushing injury of left lesser toe(s), initial encounter
- S97.129A Crushing injury of unspecified lesser toe(s), initial encounter
- S97.80xA Crushing injury of unspecified foot, initial encounter
- S97.81xA Crushing injury of right foot, initial encounter
- S97.82xA Crushing injury of left foot, initial encounter
- T57.3x1A Toxic effect of hydrogen cyanide, accidental (unintentional), initial encounter
- T57.3x2A Toxic effect of hydrogen cyanide, intentional self-harm, initial encounter
- T57.3x3A Toxic effect of hydrogen cyanide, assault, initial encounter
- T57.3x4A Toxic effect of hydrogen cyanide, undetermined, initial encounter
- T58.01xA Toxic effect of carbon monoxide from motor vehicle exhaust, accidental (unintentional), initial encounter
- T58.02xA Toxic effect of carbon monoxide from motor vehicle exhaust, intentional self-harm, initial encounter
- T58.03xA Toxic effect of carbon monoxide from motor vehicle exhaust, assault, initial encounter
- T58.04xA Toxic effect of carbon monoxide from motor vehicle exhaust, undetermined, initial encounter
- T58.11xA Toxic effect of carbon monoxide from utility gas, accidental (unintentional), initial encounter
- T58.12xA Toxic effect of carbon monoxide from utility gas, intentional self-harm, initial encounter
- T58.13xA Toxic effect of carbon monoxide from utility gas, assault, initial encounter
- T58.14xA Toxic effect of carbon monoxide from utility gas, undetermined, initial encounter
- T58.2x1A Toxic effect of carbon monoxide from incomplete combustion of other domestic fuels, accidental (unintentional), initial encounter
- T58.2x2A Toxic effect of carbon monoxide from incomplete combustion of other domestic fuels, intentional self-harm, initial encounter
- T58.2x3A Toxic effect of carbon monoxide from incomplete combustion of other domestic fuels, assault, initial encounter
- T58.2x4A Toxic effect of carbon monoxide from incomplete combustion of other domestic fuels, undetermined, initial encounter
- T58.8x1A Toxic effect of carbon monoxide from other source, accidental (unintentional), initial encounter
- T58.8x2A Toxic effect of carbon monoxide from other source, intentional self-harm, initial encounter
- T58.8x3A Toxic effect of carbon monoxide from other source, assault, initial encounter
- T58.8x4A Toxic effect of carbon monoxide from other source, undetermined, initial encounter
- T58.91xA Toxic effect of carbon monoxide from unspecified source, accidental (unintentional), initial encounter
- T58.92xA Toxic effect of carbon monoxide from unspecified source, intentional self-harm, initial encounter
- T58.93xA Toxic effect of carbon monoxide from unspecified source, assault, initial encounter
- T58.94xA Toxic effect of carbon monoxide from unspecified source, undetermined, initial encounter
- T65.0x1A Toxic effect of cyanides, accidental (unintentional), initial encounter
- T65.0x2A Toxic effect of cyanides, intentional self-harm, initial encounter
- T65.0x3A Toxic effect of cyanides, assault, initial encounter
- T65.0x4A Toxic effect of cyanides, undetermined, initial encounter
- T66.xxxA Radiation sickness, unspecified, initial encounter
- T70.20xA Unspecified effects of high altitude, initial encounter
- T70.29xA Other effects of high altitude, initial encounter
- T70.3xxA Caisson disease [decompression sickness], initial encounter
- T79.0xxA Air embolism (traumatic), initial encounter
- T80.0xxA Air embolism following infusion, transfusion and therapeutic injection, initial encounter
- T85.613A Breakdown (mechanical) of artificial skin graft and decellularized allodermis, initial encounter
- T85.623A Displacement of artificial skin graft and decellularized allodermis, initial encounter
- T85.693A Other mechanical complication of artificial skin graft and decellularized allodermis, initial encounter
- T86.820 Skin graft (allograft) rejection

- T86.821** Skin graft (allograft) (autograft) failure
- T86.822** Skin graft (allograft) (autograft) infection
- T86.828** Other complications of skin graft (allograft) (autograft)
- T86.829** Unspecified complication of skin graft (allograft) (autograft)
- T87.0x1** Complications of reattached (part of) right upper extremity
- T87.0x2** Complications of reattached (part of) left upper extremity
- T87.0x9** Complications of reattached (part of) unspecified upper extremity
- T87.1x1** Complications of reattached (part of) right lower extremity
- T87.1x2** Complications of reattached (part of) left lower extremity
- T87.1x9** Complications of reattached (part of) unspecified lower extremity
- T87.2** Complications of other reattached body part

RELATED POLICIES

Preauthorization via Web-Based Tool for Procedures

PUBLISHED

Provider Update, September 2016
 Provider Update, November 2015
 Provider Update, January 2015
 Provider Update, September 2012
 Provider Update, September 2011
 Provider Update, December 2010
 Provider Update, January 2010
 Policy Update, October 2007
 Policy Update, October 2006
 Policy Update, January 2006
 Policy Update, May 2004

REFERENCES

Bennett M, Best TM, Babul S, Taunton J, Lepawsky M. *Hyperbaric oxygen therapy for delayed onset muscle soreness and closed soft tissue injury (Cochrane Review)*. The Cochrane Library, Issue 1, 2006.

Blue Cross Blue Shield Association Medical Policy Reference. Policy 2.01.04 - Hyperbaric Oxygen Pressurization (HBO)/. Reviewed with literature search/ February 2010.

Carson S, McDonagh M, Russman B et al. *Hyperbaric oxygen therapy for stroke: a systematic review of the evidence*. Clinical Rehab;2005;19(8):819-33.

Cianci P MD. *Advances in the treatment of the diabetic foot: Is there a role for adjunctive hyperbaric oxygen therapy?* Wound Repair & Regeneration Jan/Feb 2004;12:1:2-11.

Garcia-Covarrubias L MD, Mcswain N E Jr MD, Van Meter K MD, Bell R M MD. *Adjuvant Hyperbaric Oxygen Therapy in the Management of Crush Injury and Traumatic Ischemia: An Evidence-Based Approach*. American Surgeon Feb 2005;71: 2:144151.

Raman G, Kupelnick B, Chew P, Lau J. *A horizon scan: Uses of hyperbaric oxygen therapy*. Technology Assessment Report. Prepared by the Tufts-New England Medical Center Evidence Based Practice Center for the Agency for Healthcare Research and Quality (AHRQ). Rockville, MD: AHRQ; October 5, 2006. Available at: <http://www.cms.hhs.gov/determinationprocess/downloads/id42TA.pdf>.

Rossignol DA, Rossignol LW, Smith S, Schneider C, Logerquist S, Usman A, Neubrandner J, Madren EM, Hintz G, Grushkin B, and Mumpers EA. *Hyperbaric treatment for children with autism: a multicenter, randomized, double-blind, controlled trial*. Biomedical Central Pediatrics;2009;9:21.

Rusyniak DE, Kirk MA, May JD, Kao LW, Brizendine EJ, Welch JL, Cordell WH, Alonso RJ. *Hyperbaric Oxygen Therapy in Acute Ischemic Stroke Results of the Hyperbaric Oxygen in Acute Ischemic Stroke Trial Pilot Study*. Stroke;2003;34:571-574.

Technology Assessment: A Horizon Scan: Uses of Hyperbaric Oxygen Therapy. Agency for Healthcare Research and Quality October 6, 2006

Weaver LK, Hopkins RO, Chan KJ, et al. *Hyperbaric Oxygen for Acute Carbon Monoxide Poisoning*. New England Journal of Medicine; October 3, 2002;347:14:1057-1067.

[CLICK THE ENVELOPE ICON BELOW TO SUBMIT COMMENTS](#)

This medical policy is made available to you for informational purposes only. It is not a guarantee of payment or a substitute for your medical judgment in the treatment of your patients. Benefits and eligibility are determined by the member's subscriber agreement or member certificate and/or the employer agreement, and those documents will supersede the provisions of this medical policy. For information on member-specific benefits, call the provider call center. If you provide services to a member which are determined to not be medically necessary (or in some cases medically necessary services which are non-covered benefits), you may not charge the member for the services unless you have informed the member and they have agreed in writing in advance to continue with the treatment at their own expense. Please refer to your participation agreement(s) for the applicable provisions. This policy is current at the time of publication; however, medical practices, technology, and knowledge are constantly changing. BCBSRI reserves the right to review and revise this policy for any reason and at any time, with or without notice. Blue Cross & Blue Shield of Rhode Island is an independent licensee of the Blue Cross and Blue Shield Association.

