

Appendix IV: Characteristics of Included Studies

Table 1: Characteristics of Included Case Reports

Study	Country	Setting/context	Participant characteristics	Patients	Description of main results
Gelmann D. 2021. ⁹	USA	Hyperbaric chamber case report	Chamber attendant treated with recompression for IEDCS	1 presentation in 1 chamber attendant	Persistent tinnitus, residual nystagmus
Gempp E LG. 2013. ¹⁰	France	Hyperbaric chamber case report	Diver treated with recompression for IEDCS	1 presentation	Incomplete recovery: transient dizziness, right ENG dysfunction
Inman AL SL. 2020. ¹¹	USA	Hyperbaric chamber case reports	2 divers treated with recompression for IEDCS	2 presentations	Both resolved at discharge and at 6 week follow up
Klingmann C KM. 2002. ¹²	Germany	Ear nose and throat, Neuroradiology and Neurology department case report	Recreational diver treated with recompression for IEDCS	2 presentations in 1 diver	Asymptomatic at discharge after both occasions Laboratory examination normal after second presentation.
Landsberg PG. 1979. ¹³	South Africa	Hyperbaric chamber record review 1969-1977	Divers treated with recompression for IEDCS	2 presentations in 2 divers	Both had full recovery of symptoms

Leverment J. 2003. ¹⁴	Australia	Hyperbaric chamber case report	Diver treated with recompression for IEDCS	1 presentation	Symptom free at follow up Balance normal on clinical examination Partial resolution of hearing loss on audiometry
McGeoch G. 2007. ¹⁵	New Zealand	Hyperbaric chamber case report	Recreational diver treated with recompression for IEDCS	1 presentation	Asymptomatic after treatment
Parsons D UE. 2024. ¹⁶	USA	Hyperbaric chamber case report	Military diver treated with recompression for IEDCS	1 presentation in 1 diver	Continued vertigo after 1 year
Reissman P SA. 1990. ¹⁷	Israel	Hyperbaric chamber case record	Recreational diver treated with recompression for IEDCS	1 presentation	Full recovery after discharge
Schmitz G AS. 2024. ¹⁸	Costa Rica	Hyperbaric chamber case report	Recreational diver treated with recompression for IEDCS	1 presentation in 1 diver	Asymptomatic after treatment
Tal D DL. 2005. ¹⁹	Israel	Hyperbaric chamber case reports	Divers treated with recompression for IEDCS	2 presentations	1 diver full resolution after 3 days, 1 diver full resolution 1 week
Wilson CM. 2015. ²⁰	UK	Hyperbaric chamber case report	Commercial diver treated with recompression for IEDCS	1 presentation of IEDCI	Complete resolution of symptoms and signs by discharge

Table 2: Characteristics of Included Case Series

Study	Country	Setting/context	Participant characteristics	Groups	Outcomes measured	Description of main results
Farmer JC TW. 1976. ²¹	USA	US Naval Experimental Unit and Otolaryngology department record review	Military divers presenting with IEDCS	23 presentations 5 not treated with recompression (excluded) 1 breath-hold diver (excluded)	Residual vestibular or auditory symptoms	11 divers recompressed within 42 minutes had relief during recompression 3 divers recompressed within 60-68 minutes, 1 had relief, 2 had partial relief 4 divers recompressed after 68 minutes, 3 had significant residua, 1 had partial relief
Gempp E LP. 2013. ²²	France	Hyperbaric chamber record review 1998-2011	Recreational divers treated with recompression for IEDCS	115 presentations	Residual dizziness or cochlear symptoms Laboratory evaluations	8 of 48 divers with vestibular symptoms had residual dizziness, 30 had signs of deficit on ENG 4 of 10 divers with cochlear symptoms had hearing loss or

						tinnitus, 4 had signs on audiometry
Gempp E. 2016. ²	France	Hyperbaric chamber record review 2009-2014	Divers treated with recompression for IEDCS	99 presentations	Subjective residual symptoms - auditory disorder, vestibular deficit assessed by the European Evaluation Vertigo Scale	25 divers had incomplete recovery at 3 months 58 who had investigations - 19 full recovery, 31 abnormal VNG, 6 audiometric deficit, 2 signs vestibular-cochlear deficit
Ignatescu M BP. 2012. ²³	UK	Hyperbaric chamber record review 2004-2010	Recreational divers treated with recompression for IEDCS	33 presentations	Subjective recovery of symptoms	7 divers recovered at discharge At 3 months 23 recovered 10 not recovered
Klingmann C BP. 2003. ²⁴	Germany	Otorhinolaryngology department case records 1997-2002	Divers presenting with IEDCS	11 presentations in 9 divers 5 not treated with recompression (excluded)	Audiometry and resolution of tinnitus Vertigo symptoms	1 no persisting symptoms 3 central compensation 2 hearing loss
Klingmann C PM. 2007. ²⁵	Germany	Otolaryngology department record review 2002-2005	Divers treated with recompression IEDCS	20 presentations in 18 divers	Symptoms, audiometry and energy video-oculography	6 divers symptom free (4 had no signs of residual damage) 7 divers residual dizziness 5

						loss of hearing, 4 tinnitus
Lindfors OH LR. 2021. ²⁶	Finland	Hyperbaric chamber record review 1999-2018	Divers treated with recompression for IEDCS	89 presentations	Residual function impairment scores	69% asymptomatic at discharge 73.5% asymptomatic at follow up
Mason JS. 2023. ²⁷	Australia	Hyperbaric chamber record review 2014-2020	Recreational divers treated with recompression for IEDCS	24 presentations in 23 divers	Residual symptoms at discharge	10 cases (42%) reported residual symptoms after the final treatment
Nachum Z. 2001. ²⁸	Israel	Hyperbaric chamber record review over 12 years	Divers treated with recompression for IEDCS	29 presentations in 24 divers 3 were not treated with recompression (excluded)	Physical examination and laboratory tests (electro-oculography, dix-hallpike, bithermal caloric tests, smooth harmonic acceleration tests)	7 of the 25 with vestibular injury (28%) had normal examination and testing 6 of the 19 with cochlear injury (32%) had normal examination and testing
Quatre R DB. 2024. ²⁹	France	Hyperbaric chamber record review 2014-2021	Divers treated with recompression for IEDCS within 48h	61 presentations	Vestibular recovery (disappearance of symptoms and normalisation of clinical examination/nystagmus) Cochlear recovery (audiometry)	Complete auditory recovery in 10 of 37 patients (27%) All vestibular injuries recovered completely, mostly within 10 days.

Shupak A. 2003. ³⁰	Israel	Hyperbaric chamber record review 1988-2003	Recreational divers treated with recompression for IEDCS	24 presentations	Otoneurological physical examination and laboratory evaluation	Of 11 patients followed up 10 were found to have cochleovestibular deficits, 7 had vestibular residua and 5 had hearing loss.
Smerz R. 2007. ³¹	USA	Hyperbaric chamber record review 1983-2006	Recreational divers treated with recompression for IEDCS	28 presentations in 26 divers	Comparison of pre and post treatment severity scores (iFIS)	19 divers discharged with rFIS of 0 (full functional recovery) 9 divers discharged with rFIS of 1 (mild residual symptoms), motion sickness with rapid movement, wide-based gait or residual hearing loss