Appendix 1

Table 1. Shows the three main population studies on water skiing injuries and some case studies.

Study	Participants & Method	Results	Body part injured	Type of injury
Hostetler et al. (2005) USA	Collected data on 517 water skiers from the National Electronic Injury Surveillance System (NEISS) to collect data from 98 emergency departments from 2001-2003.	72% of injures skiers were male. Age 20-24 had the highest injury rate. 36.3% of waterskiing related injuries recorded were strains or sprains; this was the leading cause of injury. With 55.7% being in the lower extremity.	Lower extremities (34%), trunk (27%), face and head (25%) and upper extremity (13%). In the lower extremity, knee (30%), upper leg (25%), foot (14%), lower leg (13%), ankle (13%).	Strain or sprain (36%), laceration (17%), contusion or abrasion (17%), fracture (9%), traumatic brain injury (2%), other (18%).
Radford et al. (1987) Australia	Letters were sent out to patients that had reported an injury to ask the cause of the injury and suggestions for preventative action. 89 waterskiers took part with a total of 145 injuries.	Injured males 5:1 with females. Mean age of injured skier 24.7 (SD 7.7). 40% of the injured skiers had been skiing > 5 years. 1/10 were in their first week of skiing. 1/5 in their first season. 13.5 consumed alcohol before the incident leading to injury.	head and neck injuries 2/5, lower limb 3/10, upper limb 2/10, trunk 1/10. 5% required surgery, 1/4 were x-rayed, 1/4 needed stitches.	strain or sprain (20%), contusion (19%), laceration (18%), ruptured ear drum (12%), fracture/dislocation (12%), rope burn (6%), back injury (4%), other (6%). Cause of injury: fall (51%), towrope (19%), hitting ski (14%), floating debris (5%), hitting bank of the river (6%).
Weyman et al. (1996) USA	Collected data on amateur skiers (AM) by putting a questionnaire in the American 'Water Ski Magazine', and collected data on professional skiers (PRO) retrospectively over 3 competitive seasons (1991-1993) they collected data from 22 athletes with 43 injuries. 227 replies to the questionnaire were received and 192 were used, with 245 injuries.	77% of all injuries occurred in slalom, 14% jump and 9% trick. PRO injuries: falls (40%), overuse (60%). AM injuries: falls (69%), collisions (15%), propeller (5%), towrope (4%), overuse (6%).	PRO: elbow/forearm/wrist AM: axial skeleton, elbow/forearm/ wrist, knee, ankle. 32% lower leg (knee, ankle and foot), 29% upper limb (shoulder, elbow forearm and wrist), 16% axial skeleton, 9% head & 4% hip/ femur.	Strain/sprain/contusion (43%), fracture (25%), laceration (10%), perforated eardrum (8%), dislocation (4%), meniscal tear (3%), amputation (1%).
Hummel & Gainor (1982) USA	From an injuries database in Missouri 1975-81. 26 case studies. 21 male, 5 female. Average age 26.	12 injuries cased by fall into unobstructed water, 5 propeller related, 5 collisions, 4 towrope. 4 deaths reported.	Head (21%), lower limb (39%), axial skeleton (10%), upper limb (28%). Knee and shoulder most common.	Fracture (38%), laceration (19%), ligament (9%), sprain (4%), dislocation (4%), head injury (4%), avulsion (4%), amputation (2%), rope burn (2%).
Roberts & Roberts (1996) UK	87 international competitors.	Two thirds of injuries during training.	Lower limb - ski catching the water, jumping. Upper limb (shoulder) –slack rope, slalom. Chronic lower back pain common in elite skiers.	
Sallay et al. (1996)	12 case studies. Six experienced skiers, six novice.	Injuries a result of, attempting getting out of the water (novice), a fall (experienced).	Complete or partial avulsion of proximal insertion of hamstring.	