Seacamp Association, Inc.

SCUBA Program

Parent Camper Information Packet

2025 Session Dates

Two week sessions

1st Session

June 25-July 9

2nd Session

July 12-July 26

SCUBA Programs are not offered during 1 week sessions.

Inside this Section:

SCUBA Overview

Seacamp's SCUBA program objective is to provide students with a valuable tool with which to study the marine environment. The SCUBA courses includes Snorkeling and SCUBA I, II, III, and IV. We have added an advanced SCUBA V class this summer for campers who have participated in all of our current SCUBA programs. Each phase is designed to *gradually* increase student skills and knowledge in the use of SCUBA for marine research.

Open water SCUBA dives are conducted from 26-foot platform boats in the waters around Big Pine Key. The certification courses (SCUBA I and III) are taught by nationally certified SCUBA instructors.

SCUBA II, IV, and V courses have a Science Instructor and certified SCUBA Instructor or Divemaster. Depending on class size, SCUBA courses may also be assisted by SCUBA certified Seacamp staff that have participated in a pre-camp diving leadership workshop, including a Rescue Diver certification. Snorkeling courses are taught by either a Skin Diving Instructor or a certified SCUBA Instructor.

The advanced SCUBA classes (III, IV, and V) have a minimum enrollment and we may not offer if there is not enough interest for each session.

Registration/Cost

The course fee covers all SCUBA and Science equipment (except mask, fins and snorkel) and instructional materials which include textbook, workbook, dive log, dive tables and slates. For SCUBA III, the course fee also includes American Red Cross Lifeguard certification. Campers will receive their materials before the first class meeting. If space allows, campers not enrolled in SCUBA III who are 15 years and older may be able to participate in Lifeguard Training. The course fee is $100.00.

Special Note: SCUBA enrollment is limited. Places are reserved on a first come, first served basis according to the receipt date of these required forms and payment. Each class group is limited to six to twelve campers.

Equipment/Insurance

Equipment

Seacamp maintains a diving locker with a large inventory of equipment (tanks, regulators with pressure gauge/depth gauge/compass/dedicated octo, and buoyancy compensators) for all students enrolled in these courses. There is also a considerable inventory of support equipment including compressor with bank tanks, weight belts, rescue equipment, oxygen, AED, etc. Audio-visual programs are available to instructors for lecture sessions and a reference library is available to staff and students for study and special projects.

All campers are required to have their own mask, fins, and snorkel. Personal SCUBA gear may be used if it is in good condition; however, there is no reduction in the fee. The camp will not be responsible for loss of or damage to personal equipment. No SCUBA equipment (personal or otherwise) may be used by campers except in the SCUBA courses described.

If you have your own SCUBA gear, it must be approved for use by Seacamp before you bring it. In order to review your SCUBA equipment prior to camp, please email us a picture of each piece. These requirements are in place to standardize equipment and improve safety when diving in groups. If you are going to purchase SCUBA gear before attending, please reach out to us prior to purchasing.

Minimum SCUBA Gear Requirements:

- Regulator must have a pressure gauge and depth gauge. If you use a wireless pressure transmitter, you still need an analog pressure gauge as a backup.
- Analog compass attached to regulator or clipped to BC.
- Regulator must have a dedicated octopus that is not part of your BC.
- While at camp you will required to use a weight belt and not integrated BC weights.

Dive Insurance

In the event of a Dive Accident you will be responsible for all professional care and transportation costs. If your camper is participating in SCUBA, D.A.N. has several dive insurance options. D.A.N., based at Duke University, Durham, NC, is a national screening house and medical information center for Divers. Their flyer is included with this mailing. You can find additional information on their website at www.dan.org.

We require all campers participating in our SCUBA program to carry dive insurance coverage. You must purchase D.A.N. membership in order to purchase the dive insurance; membership alone does not provide insurance.

Please use the following referral link for your purchases:

https://apps.dan.org/join-dan/?rc=030046

There are four membership levels you can choose from - Regular ($40 for an individual or $60 for family) or Enhanced ($75 for individual or $100 for family). Seacamp does not have a preference for the membership category you choose.

The state you live in, membership category, and dive insurance coverage limits will determine the premium for your insurance coverage. Prices are around $40-50 for the lowest coverage and $110-180 for the highest. The coverage is valid for one year. There are three levels of dive insurance coverage to choose from, and Seacamp recommends a minimum of the **Preferred Insurance Plan.** The least expensive Master plan has a lifetime coverage limit, while the higher plans do not.

CONTRAINDICATIONS TO DIVING

This list of relative and absolute contraindications is not all inclusive. Contraindications that are absolute permanently place the diver and his diving partners at increased risk for injury or death. Relative contraindications to scuba may be resolved with time and proper medical intervention or may be intermittent. A bibliography is included to aid in clarifying issues that arise. The Divers Alert Network (DAN) physicians are available for consultation by phone (919) 684-2948 during normal business hours. For diving related emergencies call, DAN at (919) 684-9111 24 hours, 7 days a week.

OTOLARYNGOLOGICAL

Relative Contraindications:

- History of...
  - –significant cold injury to pinna
  - –TM perforation
  - –tympanoplasty
  - –mastoidectomy
  - –mid-face fracture
  - –head and/or neck therapeutic radiation
  - –temporomandibular joint dysfunction
- Recurrent otitis externa
- Significant obstruction of the external auditory canal
- Eustachian tube dysfunction
- Recurrent otitis media or sinusitis
- Significant conductive or sensorineural hearing impairment
- Facial nerve paralysis not associated with barotrauma
- Full prosthodontic devices
- Unhealed oral surgery sites

Absolute Contraindications:

- History of...
  - –stapedectomy
  - –ossicular chain surgery
  - –inner ear surgery
  - –round window rupture
  - –vestibular decompression sickness
- Monomeric TM
- Open TM perforation
- Tube myringotomy
- Facial nerve paralysis secondary to barotrauma
- Inner ear disease other than presbycusis
- Uncorrected upper airway obstruction
- Laryngectomy or status post partial laryngectomy
- Tracheostomy
- Uncorrected laryngocele

NEUROLOGICAL

Relative Contraindications:

- History of...
  - –head injury with sequelae other than seizure
  - –spinal cord or brain injury without residual neurologic deficit
  - –cerebral gas embolism without residual, pulmonary air trapping has been excluded
- Migraine headaches whose symptoms or severity impair motor or cognitive function
- Herniated nucleus pulposus
- Peripheral neuropathy
- Trigeminal neuralgia
- Cerebral palsy in the absence of seizure activity

Absolute Contraindications:

- History of...
  - –seizures other than childhood febrile seizures
  - –TIA or CVA
  - –spinal cord injury, disease or surgery with residual sequelae
  - –Type II (serious and/or central nervous system) decompression sickness with permanent neurologic deficit
- Intracranial tumor or aneurysm

CARDIOVASCULAR

Relative Contraindications:

The suggested minimum criteria for stress testing is 13 METS.

- History of...
  - –CABG or PCTA for CAD
  - –myocardial infarction
  - –dysrhythmia requiring medication for suppression
- Hypertension
- Valvular regurgitation
- Asymptomatic mitral valve prolapse
- Pacemakers-Note: Pacemakers must be depth certified by the manufacturer to at least 130 feet (40 meters) of sea water.

Absolute Contraindications:

- Asymmetric sepal hypertrophy and valvular stenosis
- Congestive heart failure

PULMONARY

Asthma (reactive airway disease), COPD cystic or cavitating lung diseases all may lead to air trapping.

Relative Contraindications:

- History of...
  - –prior asthma or reactive airway disease (RAD)*
  - –exercise/cold induced bronchospasm (EIB)
  - –solid, cystic or cavitating lesion
- Pneumothorax secondary to: thoracic surgery *, trauma or pleural penetration*, previous over inflation injury*
- Restrictive Disease**

(*Air Trapping must be excluded)
(**Exercise Testing necessary)

Absolute Contraindications:

- History of spontaneous pneumothorax
- Active RAD (asthma), EIB, COPD or history of the same with abnormal PFS or positive challenge
- Restrictive diseases with exercise impairment

GASTROINTESTINAL

Relative Contraindications:

- Peptic ulcer disease
- Inflammatory bowel disease
- Malabsorption states
- Functional bowel disorders
- Post gastrectomy dumping syndrome
- Paraesophageal or hiatal hernia

Absolute Contraindications:

- High grade gastric outlet obstruction
- Chronic or recurrent small bowel obstruction
- Entrocutaneous fistulae that do not drain freely
- Esophageal diverticula
- Severe gastroesophageal reflux
- Achalasia
- Unrepaired hernias of the abdominal wall potentially containing bowel

METABOLIC AND ENDOCRINOLOGICAL

Relative Contraindications:

- Hormonal excess or deficiency
- Obesity
- Renal insufficiency

Absolute Contraindications:

- Diabetics on Insulin therapy or oral anti-hypoglycemia medication

PREGNANCY

Absolute Contraindications:

Venous gas emboli formed during decompression may result in fetal malformations. Diving is absolutely contraindicated during any state of pregnancy.

HEMATOLOGICAL

Relative Contraindications:

- Sickle cell trait
- Acute anemia

Absolute Contraindications:

- Sickle cell disease
- Polycythemia
- Leukemia

ORTHOPEDIC

Relative Contraindications:

Chronic Back Pain
Amputation
Scoliosis - assess impact on pulmonary function
Aseptic osteonecrosis

BEHAVIORAL HEALTH

Relative Contraindications:

- History of
  - –drug or alcohol abuse
  - –previous psychotic episodes
- Developmental delay

Absolute Contraindications:

- History of panic disorder
- Inappropriate motivation for scuba training
- Claustrophobia and agoraphobia
- Active psychosis or while receiving psychotropic medications
- Drug or alcohol abuse

BIBLIOGRAPHY

The Physiology and Medicine of Diving, 4th edition, 1993; *Diving and Subaquatic Medicine*, 3rd edition 1994; *Diving Physiology in Plain English*, 2nd edition, 1997

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Guidelines for Recreational Scuba Diver's Physical Examination

Instructions to the Physician:

Recreational **SCUBA** (Self-Contained Underwater Breathing Apparatus) can provide recreational divers with an enjoyable sport safer than many other activities. The risk of diving is increased by certain physical conditions, which the relationship to diving may not be readily obvious. Thus, it is important to screen divers for such conditions.

The **RECREATIONAL SCUBA DIVER'S PHYSICAL EXAMINATION** focuses on conditions that may put a diver at increased risk for decompression sickness, pulmonary overinflation syndrome with subsequent arterial gas embolization and other conditions such as loss of consciousness, which could lead to drowning. Additionally, the diver must be able to withstand some degree of cold stress, the physiological effects of immersion and the optical effects of water and have sufficient physical and mental reserves to deal with possible emergencies.

The history, review of systems and physical examination should include as a minimum the points listed below. The list of conditions that might adversely affect the diver is not all-inclusive, but contains the most commonly encountered medical problems. The brief introductions should serve as an alert to the nature of the risk posed by each medical problem.

The potential diver and his or her physician must weigh the pleasures to be had by diving against an increased risk of death or injury due to the individual's medical condition. As with any recreational activity, there are no data for diving enabling the calculation of an accurate mathematical probability of injury. Experience and physiological principles only permit a qualitative assessment of relative risk.

For the purposes of this document, **Severe Risk** implies that an individual is believed to be at substantially elevated risk of decompression sickness, pulmonary or otic barotrauma or altered consciousness with subsequent drowning, compared with the general population. The consultants involved in drafting this document would generally discourage a student with such medical problems from diving. **Relative Risk** refers to a moderate increase in risk, which in some instances may be acceptable. To make a decision as to whether diving is contraindicated for this category of medical problems, physicians must base their judgement on an assessment of the individual patient. Some medical problems which may preclude diving are **temporary** in nature or responsive to treatment, allowing the student to dive safely after they have resolved.

Diagnostic studies and specialty consultations should be obtained as indicated to determine the diver's status. A list of references is included to aid in clarifying issues that arise. Physicians and other medical professionals of the Divers Alert Network (DAN) associated with Duke University Health System are available for consultation by phone +1 919 684 2948 during normal business hours. For emergency calls, 24 hours 7 days a week, call +1 919 684 8111 or +1 919 684 4DAN (collect). Related organizations exist in other parts of the world – DAN Europe in Italy +39 039 605 7858, DAN S.E.A.P. in Australia +61 3 9886 9166 and Divers Emergency Service (DES) in Australia +61 8 8212 9242, DAN Japan +81 33590 6501 and DAN Southern Africa +27 11 242 0380. There are also a number of informative websites offering similar advice.

NEUROLOGICAL

Neurological abnormalities affecting a diver's ability to perform exercise should be assessed according to the degree of compromise. Some diving physicians feel that conditions in which there can be a waxing and waning of neurological symptoms and signs, such as migraine or demyelinating disease, contraindicate diving because an exacerbation or attack of the preexisting disease (e.g.: a migraine with aura) may be difficult to distinguish from neurological decompression sickness. A history of head injury resulting in unconsciousness should be evaluated for risk of seizure.

Relative Risk Conditions

- **Complicated Migraine Headaches whose symptoms or severity impair motor or cognitive function, neurologic manifestations**
- **History of Head Injury with sequelae other than seizure**
- **Herniated Nucleus Pulposus**
- **Intracranial Tumor or Aneurysm**
- **Peripheral Neuropathy**
- **Multiple Sclerosis**
- **Trigeminal Neuralgia**
- **History of spinal cord or brain injury**

Temporary Risk Condition

History of cerebral gas embolism without residual where pulmonary air trapping has been excluded and for which there is a satisfactory explanation and some reason to believe that the probability of recurrence is low.

Severe Risk Conditions

Any abnormalities where there is a significant probability of unconsciousness, hence putting the diver at increased risk of drowning. Divers with spinal cord or brain abnormalities where perfusion is impaired may be at increased risk of decompression sickness.

Some conditions are as follows:

- **History of seizures other than childhood febrile seizures**
- **History of Transient Ischemic Attack (TIA) or Cerebrovascular Accident (CVA)**
- **History of Serious (Central Nervous System, Cerebral or Inner Ear) Decompression Sickness with residual deficits**

CARDIOVASCULAR SYSTEMS

Relative Risk Conditions

The diagnoses listed below potentially render the diver unable to meet the exertional performance requirements likely to be encountered in recreational diving. These conditions may lead the diver to experience cardiac ischemia and its consequences. Formalized stress testing is encouraged if there is any doubt regarding physical performance capability. The suggested minimum criteria for stress testing in such cases is at least 13 METS.* Failure to meet the exercise criteria would be of significant concern. Conditioning and retesting may make later qualification possible. Immersion in water causes a redistribution of blood from the periphery into the central compartment, an effect that is greatest in cold water. The marked increase in cardiac preload during immersion can precipitate pulmonary edema in patients with impaired left ventricular function or significant valvular disease. The effects of immersion can mostly be gauged by an assessment of the diver's performance while swimming on the surface. A large proportion of scuba diving deaths in North America are due to coronary artery disease. Before being approved to scuba dive, individuals older than 40 years are recommended to undergo risk assessment for coronary artery disease. Formal exercise testing may be needed to assess the risk.

* METS is a term used to describe the metabolic cost. The MET at rest is one, two METS is two times the resting level, three METS is three times the resting level, and so on. The resting energy cost (net oxygen requirement) is thus standardized. (Exercise Physiology; Clark, Prentice Hall, 1975.)

Relative Risk Conditions

- **History of Coronary Artery Bypass Grafting (CABG)**
- **Percutaneous Balloon Angioplasty (PCTA) or Coronary Artery Disease (CAD)**
- **History of Myocardial Infarction**
- **Congestive Heart Failure**
- **Hypertension**
- **History of dysrythmias requiring medication for suppression**
- **Valvular Regurgitation**

Pacemakers

The pathologic process that necessitated should be addressed regarding the diver's fitness to dive. In those instances where the problem necessitating pacing does not preclude diving, will the diver be able to meet the performance criteria?

*** NOTE: Pacemakers must be certified by the manufacturer as able to withstand the pressure changes involved in recreational diving.**

Severe Risks

Venous emboli, commonly produced during decompression, may cross major intracardiac right-to-left shunts and enter the cerebral or spinal cord circulations causing neurological decompression illness. Hypertrophic cardiomyopathy and valvular stenosis may lead to the sudden onset of unconsciousness during exercise.

PULMONARY

Any process or lesion that impedes airflow from the lungs places the diver at risk for pulmonary overinflation with alveolar rupture and the possibility of cerebral air embolization. Many interstitial diseases predispose to spontaneous pneumothorax: Asthma (reactive airway disease), Chronic Obstructive Pulmonary Disease (COPD), cystic or cavitating lung diseases may all cause air trapping. The 1996 Undersea and Hyperbaric Medical Society (UHMS) consensus on diving and asthma indicates that for the risk of pulmonary barotrauma and decompression illness to be acceptably low, the asthmatic diver should be asymptomatic and have normal spirometry before and after an exercise test. Inhalation challenge tests (e.g.: using histamine, hypertonic saline or methacholine) are not sufficiently standardized to be interpreted in the context of scuba diving.

A pneumothorax that occurs or reoccurs while diving may be catastrophic. As the diver ascends, air trapped in the cavity expands and could produce a tension pneumothorax.

In addition to the risk of pulmonary barotrauma, respiratory disease due to either structural disorders of the lung or chest wall or neuromuscular disease may impair exercise performance. Structural disorders of the chest or abdominal wall (e.g.: prune belly), or neuromuscular disorders, may impair cough, which could be life threatening if water is aspirated. Respiratory limitation due to disease is compounded by the combined effects of immersion (causing a restrictive deficit) and the increase in gas density, which increases in proportion to the ambient pressure (causing increased airway resistance). Formal exercise testing may be helpful.

Relative Risk Conditions

- **History of Asthma or Reactive Airway Disease (RAD)***
- **History of Exercise Induced Bronchospasm (EIB)***
- **History of solid, cystic or cavitating lesion***
- **Pneumothorax secondary to:**
  - **-Thoracic Surgery**
  - **-Trauma or Pleural Penetration***
  - **-Previous Overinflation Injury***
- **Obesity**
- **History of Immersion Pulmonary Edema Restrictive Disease***
- **Interstitial lung disease: May increase the risk of pneumothorax**

* Spirometry should be normal before and after exercise

Active Reactive Airway Disease, Active Asthma, Exercise Induced Bronchospasm, Chronic Obstructive Pulmonary Disease or history of same with abnormal PFTs or a positive exercise challenge are concerns for diving.

Severe Risk Conditions

- **History of spontaneous pneumothorax.** Individuals who have experienced spontaneous pneumothorax should avoid diving, even after a surgical procedure designed to prevent recurrence (such as pleurodesis). Surgical procedures either do not correct the underlying lung abnormality (e.g.: pleurodesis, apical pleurectomy) or may not totally correct it (e.g.: resection of blebs or bullae).
- **Impaired exercise performance due to respiratory disease.**

GASTROINTESTINAL

Temporary Risks

As with other organ systems and disease states, a process which chronically debilitates the diver may impair exercise performance. Additionally, dive activities may take place in areas remote from medical care. The possibility of acute recurrences of disability or lethal symptoms must be considered.

Temporary Risk Conditions

- **Peptic Ulcer Disease associated with pyloric obstruction or severe reflux**
- **Unrepaired hernias of the abdominal wall large enough to contain bowel within the hernia sac could incarcerate.**

Relative Risk Conditions

- **Inflammatory Bowel Disease**
- **Functional Bowel Disorders**

Severe Risks

Altered anatomical relationships secondary to surgery or malformations that lead to gas trapping may cause serious problems. Gas trapped in a hollow viscous expands as the divers surfaces and can lead to rupture or, in the case of the upper GI tract, emesis. Emesis underwater may lead to drowning.

Severe Risk Conditions

- **Gastric outlet obstruction of a degree sufficient to produce recurrent vomiting**
- **Chronic or recurrent small bowel obstruction**
- **Severe gastroesophageal reflux**
- **Achalasia**
- **Paraesophageal Hernia**

ORTHOPAEDIC

Relative impairment of mobility, particularly in a boat or ashore with equipment weighing up to 18 kgs/40 pounds must be assessed. Orthopaedic conditions of a degree sufficient to impair exercise performance may increase the risk.

Relative Risk Conditions

- **Amputation**
- **Scoliosis must also assess impact on respiratory function and exercise performance.**
- **Aseptic Necrosis possible risk of progression due to effects of decompression (evaluate the underlying medical**

cause of decompression may accelerate/escalate the progression).

Temporary Risk Conditions

- **Back pain**

HEMATOLOGICAL

Abnormalities resulting in altered rheological properties may theoretically increase the risk of decompression sickness. Bleeding disorders could worsen the effects of otic or sinus barotrauma, and exacerbate the injury associated with inner ear or spinal cord decompression sickness. Spontaneous bleeding into the joints (e.g.: in hemophilia) may be difficult to distinguish from decompression illness.

Relative Risk Conditions

- **Sickle Cell Disease**
- **Polycythemia Vera**
- **Leukemia**
- **Hemophilia/Impaired Coagulation**

METABOLIC AND ENDOCRINOLOGICAL

With the exception of diabetes mellitus, states of altered hormonal or metabolic function should be assessed according to their impact on the individual's ability to tolerate the moderate exercise requirement and environmental stress of sport diving. Obesity may predispose the individual to decompression sickness, can impair exercise tolerance and is a risk factor for coronary artery disease.

Relative Risk Conditions

- **Hormonal Excess or Deficiency**
- **Obesity**
- **Renal Insufficiency**

Severe Risk Conditions

The potentially rapid change in level of consciousness associated with hypoglycemia in diabetics on insulin therapy or certain oral hypoglycemic medications can result in drowning. Diving is therefore generally contraindicated, unless associated with a specialized program that addresses these issues. [See "Guidelines for Recreational Diving with Diabetes" at www/wrstc.com and www.diversalertnetwork.org.]

Pregnancy: The effect of venous emboli formed during decompression on the fetus has not been thoroughly investigated. Diving is therefore not recommended during any stage of pregnancy or for women actively seeking to become pregnant.

BEHAVIORAL HEALTH

Behavioral: The diver's mental capacity and emotional make-up are important to safe diving. The student diver must have sufficient learning abilities to grasp information presented to him by his instructors, be able to safely plan and execute his own dives and react to changes around him in the underwater environment. The student's motivation to learn and his ability to deal with potentially dangerous situations are also crucial to safe scuba diving.

Relative Risk Conditions

- **Developmental delay**
- **History of drug or alcohol abuse**
- **History of previous psychotic episodes**
- **Use of psychotropic medications**

Severe Risk Conditions

- **Inappropriate motivation to dive – solely to please spouse, partner or family member, to prove oneself in the face of personal fears**
- **Claustrophobia and agoraphobia**
- **Active psychosis**
- **History of untreated panic disorder**
- **Drug or alcohol abuse**

OTOLARYNGOLOGICAL

Equalisation of pressure must take place during ascent and descent between ambient water pressure and the external auditory canal, middle ear and paranasal sinuses. Failure of this to occur results at least in pain and in the worst case rupture of the occluded space with disabling and possible lethal consequences.

The inner ear is fluid filled and therefore noncompressible. The flexible interfaces between the middle and inner ear, the round and oval windows are, however, subject to pressure changes. Previously ruptured but healed round or oval window membranes are at increased risk of rupture due to failure to equalise pressure or due to marked overpressurisation during vigorous or explosive Valsalva manoeuvres.

The larynx and pharynx must be free of an obstruction to airflow. The laryngeal and epiglotic structure must function normally to prevent aspiration.

Mandibular and maxillary function must be capable of allowing the patient to hold a scuba mouthpiece. Individuals who have had mid-face fractures may be prone to barotrauma and rupture of the air filled cavities involved.

Relative Risk Conditions

- **Recurrent otitis externa**
- **Significant obstruction of external auditory canal**
- **History of significant cold injury to pinna**
- **Eustachian tube dysfunction**
- **Recurrent otitis media or sinusitis**
- **History of TM perforation**
- **History of tympanoplasty**
- **History of mastoidectomy**
- **Significant conductive or sensorineural hearing impairment**
- **Facial nerve paralysis not associated with barotrauma**
- **Full prosthedontic devices**
- **History of mid-face fracture**
- **Unhealed oral surgery sites**
- **History of head and/or neck therapeutic radiation**
- **History of temperomandibular joint dysfunction**
- **History of round window rupture**

Severe Risk Conditions

- **Monomeric TM**
- **Open TM perforation**
- **Tube myringotomy**
- **History of stapedectomy**
- **History of ossicular chain surgery**
- **History of inner ear surgery**
- **Facial nerve paralysis secondary to barotrauma**
- **Inner ear disease other than presbycusis**
- **Uncorrected upper airway obstruction**
- **Laryngectomy or status post partial laryngectomy**
- **Tracheostomy**
- **Uncorrected laryngocele**
- **History of vestibular decompression sickness**

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10. Undersea and Hyperbaric Medical Society (UHMS) www.UHMS.org
11. Divers Alert Network (DAN) United States, 6 West Colony Place, Durham, NC www.DiversAlertNetwork.org
12. Divers Alert Network Europe, P.O. Box 64026 Roseto, Italy, telephone non-emergency line: weekdays office hours +39-085-893-0333, emergency line 24 hours: +39-039-605-7858
13. Divers Alert Network S.E.A.P., P. O. Box 384, Ashburton, Australia, telephone 61-3-9886-9166
14. Divers Emergency Service, Australia, www.rah.sa.gov.au/hyperbaric, telephone 61-8-8212-9242
15. South Pacific Underwater Medicine Society (SPUMS), P.O. Box 190, Red Hill South, Victoria, Australia, www.spums.org.au
16. European Underwater and Baromedical Society, www.eubs.org

ENDORSERS

Paul A. Thombs, M.D., Medical Director
Hyperbaric Medical Center
St. Luke's Hospital, Denver, CO, USA

Peter Bennett, Ph.D., D.Sc.
Professor, Anesthesiology
Duke University Medical Center
Durham, NC, USA
pbennett@dan.duke.edu

Richard E. Moon, M.D., F.A.C.P., F.C.C.P.
Departments of Anesthesiology and Pulmonary Medicine
Duke University Medical Center
Durham, NC, USA

Roy A. Myers, M.D.
MIEMS
Baltimore, MD, USA

William Clem, M.D., Hyperbaric Consultant
Division Presbyterian/St. Luke's Medical Center
Denver, CO, USA

John M. Alexander, M.D.
Northridge Hospital
Los Angeles, CA, USA

Des Gorman, B.Sc., M.B.Ch.B., F.A.C.O.M., F.A.F.O.M., Ph.D.
Professor of Medicine
University of Auckland, Auckland, NZ
d.gorman@auckland.ac.nz

Alf O. Brubakk, M.D., Ph.D.
Norwegian University of Science and Technology
Trondheim, Norway
alfb@medisin.ntnu.no

Alessandro Marroni, M.D.
Director, DAN Europe
Roseto, Italy
Hugh Greer, M.D.
Santa Barbara, CA, USA
hdgblgfpl@aol.com

Christopher J. Acott, M.B.B.S., Dip. D.H.M., F.A.N.Z.C.A.
Physician in Charge, Diving Medicine
Royal Adelaide Hospital
Adelaide, SA 5000, Australia

Chris Edge, M.A., Ph.D., M.B.B.S., A.F.O.M.
Nuffield Department of Anaesthetics
Radcliffe Infirmary
Oxford, United Kingdom
cjedge@diver.demon.co.uk

Richard Vann, Ph.D.
Duke University Medical Center
Durham, NC, USA

Keith Van Meter, M.D., F.A.C.E.P.
Assistant Clinical Professor of Surgery
Tulane University School of Medicine
New Orleans, LA, USA

Robert W. Goldmann, M.D.
St. Luke's Hospital
Milwaukee, WI, USA

Paul G. Linaweaver, M.D., F.A.C.P.
Santa Barbara Medical Clinic
Undersea Medical Specialist
Santa Barbara, CA, USA

James Vorosmarti, M.D.
6 Orchard Way South
Rockville, MD, USA

Tom S. Neuman, M.D., F.A.C.P., F.A.C.P.M.
Associate Director, Emergency Medical Services
Professor of Medicine and Surgery
University of California at San Diego
San Diego, CA, USA

Yoshihiro Mano, M.D.
Professor
Tokyo Medical and Dental University
Tokyo, Japan
y.mano.ns@tmd.ac.jp

Simon Mitchell, MB.ChB., DipDHM, Ph.D.
Wesley Centre for Hyperbaric Medicine
Medical Director
Sandford Jackson Bldg., 30 Chasely Street
Auchenflower, QLD 4066 Australia
smitchell@wesley.com.au

Jan Risberg, M.D., Ph.D.
NUI, Norway

Karen B.Van Hoesen, M.D.
Associate Clinical Professor
UCSD Diving Medicine Center
University of California at San Diego
San Diego, CA, USA

Edmond Kay, M.D., F.A.A.F.P.
Dive Physician & Asst. Clinical Prof. of Family Medicine
University of Washington
Seattle, WA, USA
ekay@u.washington.edu

Christopher W. Dueker, TWS, M.D.
Atherton, CA, USA
chrisduek@aol.com

Charles E. Lehner, Ph.D.
Department of Surgical Sciences
University of Wisconsin
Madison, WI, USA
celehner@facstaff.wisc.edu

Undersea & Hyperbaric Medical Society
10531 Metropolitan Avenue
Kensington, MD 20895, USA

Diver's Alert Network (DAN)
6 West Colony Place
Durham, NC 27705

Snorkeling and SCUBA Courses

Snorkeling

This course is required for all campers who wish to become certified in SCUBA I. The camper receives formal training in the skills of skin diving/snorkeling, which are the basis to becoming a successful SCUBA diver. Snorkeling skills must be excellent to conduct effective in-water observations of marine organisms and marine research. The classes are structured and progress along with the content of the Basic SCUBA training.

SCUBA Courses

Seacamp offers a variety of SCUBA courses including Open Water and Advanced Open Water SCUBA diver. Students must be at least 12 years old for SCUBA I. This course (unlike most dive shops) is especially geared to teenagers. Campers who are at least 12 years old and already certified are given a skills test to determine eligibility for a SCUBA II class (see SCUBA II prerequisite information on page 10 of this section). Sometimes an instructor may recommend that a beginning diver go through the basic certification course again. If this is recommended, the camper would participate in the SCUBA I course. Campers interested in any of our other SCUBA courses (SCUBA II, III, IV, V) must present a nationally recognized Open Water SCUBA certification card, current diving log, and a D.A.N. Membership and Dive Accident Insurance card at registration. For the SCUBA III, IV, and V advanced courses, campers must be 15 years old.

Each camper, whether or not a certified diver, must pass a water skills test. Students who do not pass the appropriate test(s) as indicated below cannot participate in the course.

- Basic SCUBA I candidate must pass a swim test.
- SCUBA II, III, IV, V candidates must pass a swim and snorkeling skills test.

Summary of Seacamp SCUBA Courses

SCUBA LEVEL	MIN. AGE	APPROX. # HRS.	OPEN WATER TRAINING	PREREQUISITES
I	12	50+	5 Dives	Strong Swimmer (must pass a swim test)
II	13*	20+	5-7 Dives	Basic Open Water SCUBA Certification
III	15	40+	5-8 Dives	SCUBA I&II, or a total of 12 varied, logged dives, lifeguard**
IV, V	15	30+	5-7 Dives	Two SCUBA II's or SCUBA III, or 16 logged dives. (Must also pass a skin and SCUBA check-out dive.)

*Campers at least 12 years old and already certified will be given a skills test to determine eligibility.
** See SCUBA III course section for specific guidelines on types of dives required. Lifeguarding and CPR must be taken simultaneously with SCUBA III unless the camper has a current Lifeguard/CPR certification.

Please remember that not all campers participate in SCUBA. If a camper chooses not to participate or is not eligible to participate this does not diminish the Seacamp experience. The local waters are beautiful and can be experienced through our snorkeling-based marine science courses.

SCUBA I - Open Water Diver Certification

This course provides the basic knowledge and skills necessary for the use of SCUBA. Certification in SCUBA provides a necessary tool for oceanographic studies and collection of scientific data. The course is open to campers 12 years and older wishing to receive a NAUI Open Water SCUBA Diver Certification. Participants are required to take snorkeling concurrent with SCUBA I.

Prerequisites: The camper must be a strong swimmer. A swim test given prior to participation must be passed to the examiner's satisfaction before acceptance into the course. Also the forms and documentation required for SCUBA must be completed and returned to Seacamp.

Required Course Materials: A text book, workbook, log book, NAUI dive tables and slate are required. These materials are provided.

SCUBA Diving Insurance: We require all campers participating in our SCUBA program to carry additional dive insurance coverage. See **Equipment/Insurance** section for additional information.

Schedule: Participation in SCUBA I is a significant time commitment for the camper. The course involves over 50 hours of instruction and training over a 13-day period. One 3-hour period each day involves a lecture concerning course material or a water skills development session. In addition, the snorkeling class meets 1 1/2 hours every other day. This schedule permits a camper one time block to take a marine science class.

The course is a combination of lecture material, SCUBA water skills development, and open water Skin and SCUBA Diving training.

- Dive planning and safety, including the use of dive tables
- Physics, physiology, and medical aspects as they relate to a diver's performance in the water
- Purpose, features, types, and use of snorkel and SCUBA equipment
- Rescue and first aid as it applies to diving
- Physical and biological aspects of the marine environment
- Basic snorkel and SCUBA skills (effective equipment use and training to handle emergency situations, etc.)
- Open water training with proper use of equipment

SAMPLE SCHEDULE FOR SCUBA I PARTICIPANTS

	MON WED FRI	TUES THURS SAT
9:00am TO 12:05pm	SCUBA I LECTURE SESSION	MARINE SCIENCE
Noon-2pm	LUNCH/REST PERIOD	
2:15pm TO 5:20pm	WINDSURFING (1 1/2 HOURS)	SCUBA I WATER SESSION
	SNORKELING	

Open Water Training: Boat trips are required on the last 4 days of the course when open water training is conducted. Dives are conducted in 15 to 55 ft. of water. There are a maximum of twelve (12) students per class. A certified SCUBA Instructor supervises the entire dive. In addition, there will be one Rescue Diver certified Staff Assistant for every two students.

Certification: After successful completion of both a written and water test, four open water scuba dives, and one open water skin dive (snorkeling), participants will receive NAUI Certification as follows:

Junior Open Water SCUBA Diver certification - 12 to 14 years

Open Water SCUBA Diver certification - 15 years or older

The course, materials, and requirements are identical for these two certifications. The difference is in the age of the diver and the requirement that a Junior SCUBA Diver may dive only under the direct supervision of an authorized adult SCUBA Diver. Upon reaching the age of 15, a Junior Diver may request from NAUI to convert the conditional Junior SCUBA Diver certification to a SCUBA Diver certification.

SCUBA II - Marine Investigations

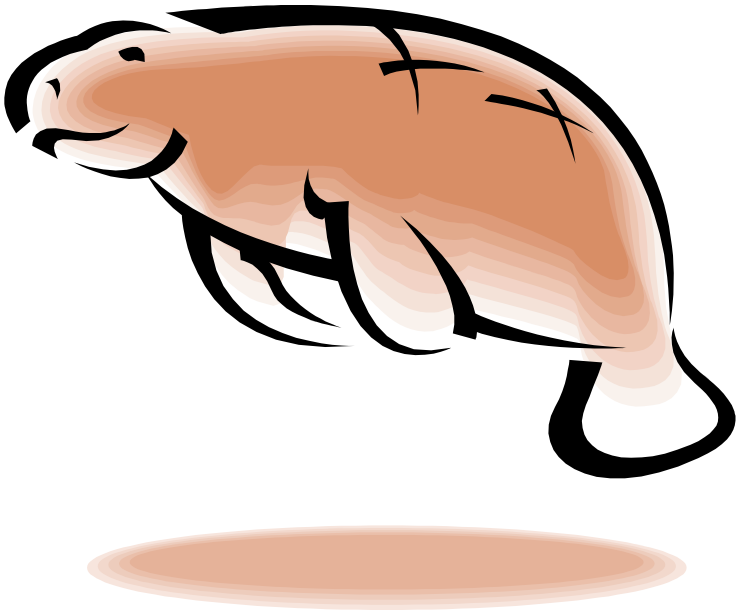
SCUBA II is designed for students who are already Open Water SCUBA certified. The course consists of different types of open water dives involving scientific data collection and marine life studies. It will provide the student with:

- Development of observational abilities
- Training in the collection of scientific data
- Experience in ocean diving
- Further development and refinement of diving skills

Prerequisites: The camper must pass a swim test and skin diving skills check-out prior to registration to ascertain the student's basic knowledge of SCUBA. At the start of the class, the first dive is a SCUBA skills review and evaluation to assure that students will perform safely. Students who do not successfully meet these requirements to the satisfaction of the Instructor will not be allowed to participate. As an alternative, they may be transferred to a SCUBA I course (on a space available basis) to strengthen skills, or they may take a skin diving course with a full refund of the SCUBA fee, provided the transfer is prior to the 2nd class meeting. Refunds for transfers after the 2nd class are prorated.

Required Course Materials: A log book, dive table and slate are required. Campers must bring their log books and certification card(s) to camp with them. Campers that do not bring their certification cards and log books with them will not be allowed to take SCUBA until proof of experience is provided. NAUI dive tables, slates, and log books are available for purchase at our Ship's Store.

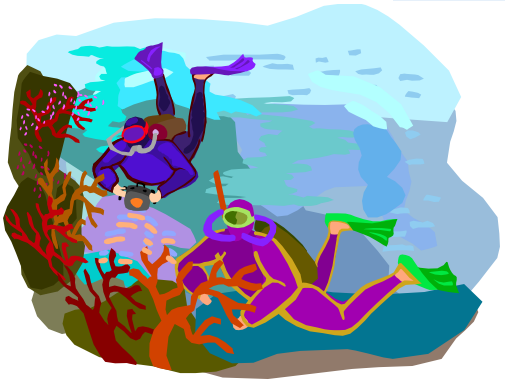
SCUBA Diving Insurance: We require all campers participating in our SCUBA program to carry additional dive insurance coverage. See **Equipment/Insurance** section for additional information.

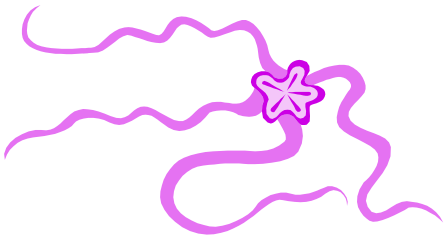


Marine Investigations Potential Courses (SCUBA II)

REEF RUBBISH RECYCLING

Investigates underwater pollution problems, marine recycling and man made habitats for animals. Contributes to an ongoing census of the various forms of marine debris and its effects on the flora and fauna in waters surrounding the Florida Keys.



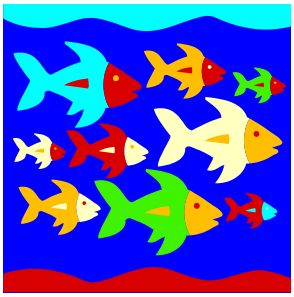


MARINE INVERTEBRATES

Study of marine animals without a backbone including behavioral and structural adaptations.

ANIMAL BEHAVIOR

Introduces the basic diver to a variety of behaviors which marine animals exhibit, i.e. feeding habits, defenses, protection, symbiosis, etc.



REEF FISH ECOLOGY

Investigates the various aspects of fish ecology, i.e. identification, fin structure, coloration, swimming styles, etc.

CORAL REEF ECOLOGY

Introduces the diver to coral distribution, zonation, biology and identification, in addition, students will explore the plants and animals that interact with this spectacularly diverse community.

MARINE RESEARCH TECHNIQUES

Teaches the use of various research techniques used by marine scientists, i.e. mapping, transecting, collection of specimens, lifting, etc. Methodologies utilized follow the Atlantic and Gulf Rapid Reef Assessment (AGRRA) protocol.

SCUBA III - Advanced Open Water Diver

SCUBA III offers continued training in the collection of scientific data (visual, census techniques) and training in advanced SCUBA skills. For campers to be able to plan and conduct underwater research effectively, certain advanced SCUBA skills and diver training are necessary. Methodologies utilized follow the Atlantic and Gulf Rapid Reef Assessment (AGRRA) protocol. This is over and above what is learned in SCUBA I or SCUBA II.

Prerequisites: This course is open to campers 15 years and older who have satisfactorily completed a SCUBA I and II course or who have 12 varied, logged dives. First time Seacamp campers may only enter this course by presenting a SCUBA certification card and a log of at least 12 environmentally varied open water dives. Examples may include the following types of dives prior to entering this course: a limited visibility or night dive, a deep dive, and a navigation dive. All campers must have either a current Red Cross Lifeguarding certification or must be willing to concurrently take a Red Cross Lifeguarding course (which includes First Aid and CPR) while at camp. Campers must pass a swim test and a snorkel and SCUBA checkout to the satisfaction of the instructor. All prerequisite dives must be verified with the SCUBA Director prior to camp. There must be a minimum of four students enrolled before this class will be offered. Preference will be given to previous campers who have completed SCUBA II.

Required Course Materials: A text book, workbook, log book, NAUI dive tables, certification card, and slate are required. Campers that do not bring their certification cards and log books with them will not be allowed to take SCUBA until proof of experience is provided. Text book, workbook, and other required materials are provided.

SCUBA Diving Insurance: We require all campers participating in our SCUBA program to carry additional dive insurance coverage. See **Equipment/Insurance** section for additional information.

Schedule: Participation in SCUBA III is a significant time commitment for the campers. One 3-hour period each day involves a lecture of course material or a training dive. In addition campers must simultaneously take a Lifeguarding course unless the camper has a current Lifeguarding/CPR certification. This schedule permits a camper one time block to take a marine science class.

Course Training: The advanced training may include the following areas:

- **Underwater Navigation:** Provides the diver with the skills needed to use a compass and natural aids for orientation in order to: establish relative position, swim in prescribed directions for set distances, and find locations while submerged and at the surface.
- **Limited Visibility Diving:** Prepares the diver to function safely and effectively in limited visibility (i.e. murky water) or at night. The problems, techniques, skill levels, hazards and safety procedures are covered.
- **Search and Recovery:** Provides the diver with the information and training needed to select an appropriate search pattern and method for a given area and then perform a search using the proper techniques. The problems, methods, procedures, and equipment are covered.
- **Light Salvage:** Prepares the diver to recover intermediate-sized objects with limited or basic equipment. The theory, problems, hazards, methods, gear, rigging, calculations, and principles are covered.
- **Diving Environment:** Provides the diver with a better understanding and appreciation of both the physical and biological aspects of the environment that affect the diver. Coverage includes plant and animal identification, relationships, dangers, regulations, and uses; conservation, preservation, and pollution; water movement and characteristics, shore, bottom and surface conditions; and diving locations.
- **Applied Sciences:** A review and continuation of the material covered in a basic SCUBA course. Included are physics, physiology, medical aspects, fitness, and hazards. Emphasis is placed on the applied aspects so that the diver is able to perform diving skills and tasks involving buoyancy control, pressure changes, air consumption and personal limitations.
- **Diving Equipment:** Reviews and expands upon the Basic SCUBA course by covering the care of equipment, detailed functioning, specialized gear and application, plus additional gear to be used in the Advanced SCUBA Diver Course.
- **Decompression and Recompression Theory:** Familiarizes the diver with the problems, planning, concepts, methods, and equipment involved in this type of diving. The diver acquires a thorough knowledge of the dive tables. Deep diving is defined as any dive made between 60 and 130 feet.
- **Emergency Procedure & Rescue:** This covers rescue, first aid, and emergency procedures as applied to diving in open water. Underwater communications, orientation, and navigation, the environment, dive planning and safety measures, including the benefits of emergency oxygen first aid. First aid includes the definition, types, causes, prevention, symptoms and care of shock, wounds, drowning, heart attack, fractures, sunburn, overheating and sea sickness. Lifesaving includes problems, possible situations, rescues, assists, carries, and artificial respiration.

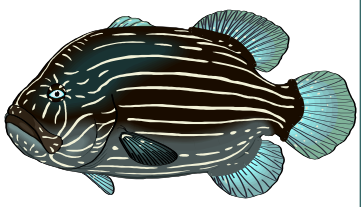
Classes: In addition to the above areas of training, students in the SCUBA III course will continue with marine science projects such as those listed in the SCUBA II curriculum.

Certification: Upon passing a written test and completing all dives to the satisfaction of the instructor, the camper will receive an Advanced Open Water SCUBA Diver certification from NAUI.

SCUBA IV - Advanced Marine Investigations

SCUBA IV is designed to give the camper experience in conducting underwater marine research. Under the guidance of a qualified marine science instructor, students do all the planning, execution and evaluation of the project undertaken. The specific research projects conducted depend on the scientific needs and/or interests of the camp, students, and Instructors.

Prerequisites: This course is open to campers 15 years and older who have satisfactorily completed two SCUBA II courses or the SCUBA III course. First time Seacamp campers may only enter this course by presenting to the SCUBA Director their SCUBA certification card(s) and a dive log of at least 16 open water dives. They must also pass a swim test and a skin and SCUBA check-out to the satisfaction of the instructor. There must be a minimum of four students enrolled before this class will be offered. Preference will be given to previous campers.

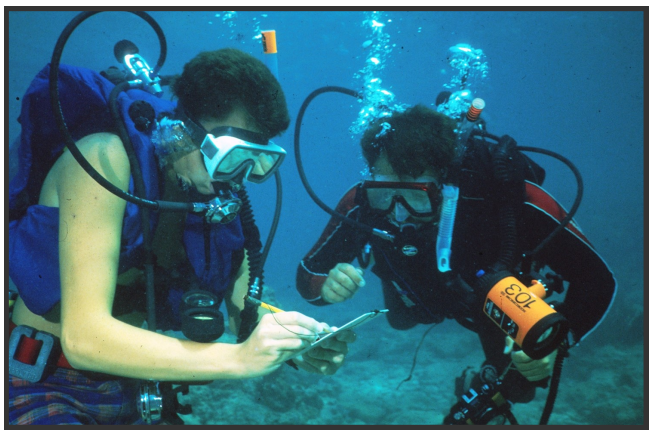


Required Course Materials: A log book, dive tables, certification card, and slate are required. Campers that do not bring their certification cards and log books with them will not be allowed to take SCUBA until proof of experience is provided. Dive tables and slates may be purchased at our Ship's Store.

SCUBA Diving Insurance: We require all campers participating in our SCUBA program to carry additional dive insurance coverage. See **Equipment/Insurance** section for additional information.

Schedule: Participation in SCUBA IV is a significant time commitment for campers. One 3-hour period each day involves a lecture of course material or a training dive. Campers must be dedicated to participating in the research as well as completing a research paper on the topic.

Sample Project: Coral Reef Study (near Big Pine Key, FL) - Coral reefs are threatened around the globe and face challenges from changing water temperatures, disease and human impacts. Seacamp SCUBA IV campers have examined inshore corals for several decades to document coral cover using transects, quadrats and photography. Campers will learn to identify local coral species and common coral diseases and will document percent cover of coral in a designated area.



DAN Visit **www.DAN.org** or click **here** to compare plans and rates for DAN coverage based on your home state/province.

Specialized Accident Insurance Coverage For Divers

DAN dive accident insurance* is an affordable way for divers to obtain insurance against the costs of dive injuries that are often left uncovered by typical health insurance.

- **Covers diving, nondiving and named water sports accidents & injuries**
- **Pays 100% of eligible accident medical expenses up to US$500,000**
- **Plans recognized worldwide**
- **Join DAN first, then add your insurance**
- **Annual coverage starts at US$40/year**
- **Also available for divers age 70 and over in the U.S. and Canada**

Available Plans*

for US > FL Plans vary by location, please visit www.DAN.org to see prices in your state	Guardian $15,995	Preferred $8,053	Master $4,411
Accident Medical Expense Coverage			
For Covered Diving Accidents	$500,000 (per occurrence)	$250,000 (per occurrence)	$125,000 (lifetime)
For Non-Dive Accidents while outside Home Country	$30,000	$10,000 ($250 deductible)	n/a
For Named Water Sports Accidents while on a Trip	$30,000	n/a	n/a
Accidental Death & Dismemberment			
For Covered Diving Accidents	$75,000	$40,000	$10,000
For Named Water Sports Accidents while on a Trip	$30,000	n/a	n/a
Permanent & Total Disability			
For Covered Diving Accidents	$75,000	$40,000	$10,000
For Named Water Sports Accidents while on a Trip	$30,000	n/a	n/a
Other Coverage			
Search & Rescue for covered diving accidents	$50,000	n/a	n/a
Extra Transportation for covered diving accidents	$10,000	$5,000	$1,000
Extra Accommodation for covered diving accidents	$10,000 $600/day	$5,000 $400/day	$1,000 $200/day
Lost Diving Equipment for covered diving accidents	$5,000	$2,500	$1,000

The world's most recognized and respected dive safety organization, Divers Alert Network (DAN) has remained committed to the health and well-being of divers for 40 years. The organization's research, medical services and global-response programs create an extensive network that supports divers with vital services such as injury prevention, safety and educational programs and lifesaving evacuations. Every year, hundreds of thousands of divers around the world look to DAN as their dive safety organization.

*Compare coverage for complete coverage details; coverage and availability varies by state, province and plan.
For residents of MN, NH and NY, insurance is underwritten by The United States Life Insurance Company in the City of New York, NAIC No. 70106 domiciled in the state of New York with a principal place of business of One World Financial Center, 200 Liberty Street, New York, NY 10281. It is currently authorized to transact business in all states, plus DC, except PR. This summary is a brief description of benefits only and is subject to the terms, conditions and limitations. Coverage may vary by state. AG 12070
For residents of all other U.S. states and the District of Columbia insurance is underwritten by National Union Fire Insurance Company of Pittsburgh, Pa., a Pennsylvania insurance company with its principal place of business at 175 Water Street, New York, NY 10038. It is currently authorized to conduct insurance business in all states and the District of Columbia. NAIC No. 19445. This summary provides only brief descriptions of the coverages available under Policy Series S30854DBG. The issued policy and certificate will contain reductions, limitations, exclusions, definitions and termination provisions. Full details of the coverage will be contained in the issued policy and certificate. If there are any conflicts between this summary and the issued policy and certificate, the policy and certificate shall govern in all cases. Coverage may vary by state.

SEACAMP MEMBERSHIP NUMBER - #030046