



What is DAN?

DAN - Your Dive Safety Association

For scuba divers worldwide, DAN means safety, health and peace of mind. DAN is a non-profit safety Organisation and is supported by the largest membership association of divers in the world. DAN was founded in 1980 to provide an emergency hotline to serve injured recreational divers and the medical personnel who care for them. Originally funded by government grants, DAN today relies on membership, dive industry sponsors, product sales and fund-raising to provide the high level of service the dive community has become accustomed to receiving.

DAN Mission Statement

Divers Alert Network (DAN), a non-profit organisation, exists to provide expert information and advice consistent with the current medical literature for the benefit of the diving public.

DAN's historical and primary function is to provide emergency medical advice and assistance for underwater diving accidents, to work to prevent accidents, and to promote diving safety.

DAN promotes and supports underwater diving research and education, particularly as it relates to the improvement of diving safety, first aid, and medical treatment.

DAN strives to provide accurate, up-to-date, and unbiased information on issues of common concern to the diving public and to advocate for diver's concerns, primarily, but not exclusively for diving safety.

Mission of the DAN Training Division

To provide comprehensive, educationally sound training in support of DAN's mission and obligation to the diving community.

To disseminate the latest information on topics related to diving safety through articles, reports, seminars, lectures, and training programs.

To develop programs and materials, which will complement currently available dive safety training throughout the diving community.

To foster cooperative efforts in dive safety in the worldwide diving and medical communities.

DAN Research

The Mission of DAN Research:

To promote diving safety and accident prevention and to improve first aid, emergency and definitive medical treatment, and rehabilitation of recreational underwater divers with diving injuries and illnesses by initiating, conducting, promoting and supporting research.

The Vision of DAN Research:



To be the leading source of research and information on issues of concern to underwater divers primarily, but not exclusively, on issues of diving safety, accident prevention, first aid, emergency, definitive treatment and rehabilitation.

The Principles of DAN Research:

DAN Research should be conducted in accordance with the following principles:

- It should be in the interest of DAN members and recreational divers at large
- It should be performed inclusively so as to add to the experience and credibility of DAN, its Directors and staff
- It should be ethical and scientifically rigorous in design and execution
- It should generate scientific results that are of immediate relevance to recreational divers
- It should be of a quality that would be eligible for publication in a recognized (accredited) peer reviewed journal
- It should be rendered for publication in a peer-reviewed accredited journal
- Results should be disseminated to DAN members and divers at large

IDAN – The International Divers Alert Network

Principles of Constitution

Recreational scuba diving has grown to become a relatively safe, relaxing activity enjoyed by millions of people the world over. Continued economic development around the world has enabled scuba diving education and participation to expand in the developed and developing nations. Diving's good safety record can only continue with efforts to provide for safety education, accident prevention, as well as communication, evacuation, and treatment systems for the divers who become injured.

The Divers Alert Network (DAN), founded in the United States in 1980, and the Divers Alert Network Europe (formerly IDA) founded in Italy in 1982, have been considered a model for providing for the continued safety and treatment of divers. International DAN (IDAN) has been created to provide a global safety net and information and expertise resource for the benefit of the diving public around the world.

We, the founders of the International DAN, have intended to establish a global federation of organizations to provide for dive safety worldwide, share information and expertise, and pool resources for the benefit of the diving public around the world.

Durham, NC, USA, May 21, 1995

The founding members of IDAN:

Peter B. Bennett, Ph.D., D.Sc.

Yoshihiro Mano, M.D., Ph.D.

Alessandro Marroni, M.D.

Purpose and objectives of IDAN

The organization shall be international in scope. The purposes for which this organization is formed are for scientific, educational, literary and charitable purposes within the laws, regulations and codes under which it is incorporated and in this connection to provide emergency medical advice and assistance relating to underwater diving accidents and diseases on an international basis; to foster and promote interest in safe underwater diving practices and methods; to promote and support



scientific and medical research into the improvement of underwater diving safety; to promote and support scientific and medical research in the improvement of health care methods, preventive care, and practices for diving diseases and injuries suffered in underwater diving accidents; to offer and promote training and education concerning safe underwater diving practices and the emergency medical treatment of underwater diving accidents; to promote the study, improvement and advancements in the field of underwater diving health care and safety; to represent the interests of underwater divers; to engage in all of the foregoing on an international basis; and to engage in any lawful act or activity for which corporations may be organized under the relevant nonprofit corporation act.

Its primary objectives shall be:

- To provide expert information and advice for the benefit of the diving public.
- To provide emergency medical advice and assistance relating to underwater diving accidents, to work to prevent accidents and to promote diving safety.
- To support underwater diving research and education, particularly as it relates to the improvement of diving safety, medical treatment and first aid.
- To provide the most accurate, up to date and unbiased information on issues of common concern to the diving public.

DAN Europe – The Divers Alert Network in Europe

“Founded in 1982, Divers Alert Network Europe (DAN Europe) exists to provide expert information and advice for the benefit of its members and the diving public. DAN Europe is a medical and research organization dedicated to the safety and health of professional and recreational scuba divers. DAN Europe provides emergency medical advice and assistance for underwater diving injuries; works to prevent injuries and to promote diving safety; promotes and supports underwater diving research and education; and strives to provide the most accurate, up-to-date and unbiased information on issues of common concern to the diving public.”

The International Divers Alert Network: History, Mission & Philosophy

HISTORY AND DEVELOPMENT OF THE DIVERS ALERT NETWORK

Alfred A. Bove, President, Undersea Medical Society

Chris Wachholz, Assistant Director, Divers Alert Network USA

The need for the Divers Alert Network (DAN) began with the increase in sport diving in the early 1960's and with it an expected increase in diving accidents. According to the U.S. Navy, the failure rate on initial recompression chamber treatment for diving injuries rose from 14% to 47% in 1964. This change occurred because the Navy was called upon to treat increasing numbers of civilian scuba divers who had not followed the strict guidelines followed by closely supervised Navy divers. The sport divers often responded poorly to treatment because of long delays between the accident and the initiation of treatment. Research into the effectiveness of the Navy standard air treatment tables resulted in the development of the far more efficient oxygen treatment tables V, VI, V A and VI A in



1967. These new tables, however, still could not be used effectively on many sport divers because of prolonged delays between injury and treatment. An important problem that became apparent when sport diving casualties increased was the ignorance of both divers and physicians of the symptoms of decompression sickness and arterial gas embolism and of the treatment for these illnesses.

Although diving medicine experts from Navy, Air Force, and academic centres could be called upon for advice about diving accidents, it simply was not appropriate to expect these facilities to always be available for civilian casualties. For example, Brooks Air Force Base once maintained a 24-hour chamber information service nicknamed Leo-Fast that no longer provides advice but generally refers callers to DAN. The absence of an organized nationwide referral service led us to propose such a service that would be available to everyone in need of advice on diving accidents.

Recognizing these needs, the Undersea and Hyperbaric Medical Society (UHMS) in 1977 began planning a national organisation where one phone call, from anywhere, could connect the caller to a specialist in diving medicine 24 hours a day, who could provide information and who had access to working hyperbaric chamber treatment facilities. DAN became a reality in September 1980 with a two-year grant from The National Oceanic and Atmospheric Administration (NOAA), and the National Institute for Occupational Safety and Health (NIOSH). The continental U.S. was divided into six regions including Alaska, with Hawaii and the Pacific trust territories composing the seventh. Regional coordinators volunteered who were experts in the field of diving medicine and the existing chamber facilities that had experience and capabilities in treating diving injuries composed DAN. DAN was managed by the Hyperbaric Facility at Duke University Medical Centre in Durham, North Carolina. Concern was expressed by the UHMS, the parent planning organisation, that short-term Federal support would jeopardize the development of DAN, and so DAN immediately began to seek support from other sources. DAN, the diving equipment industry, and the sport scuba certifying agencies all agreed that DAN's service was necessary and a worthy cause, but no one could agree how DAN should be funded. Much controversy ensued regarding various plans. A plan to add a DAN fee to C cards, equipment prices, or air fill was dismissed as "taxation without representation." A plan calling for direct funding by the certifying agencies and manufacturers was also not used. Eventually, with the assistance of the certifying agencies and several diving equipment companies, DAN began to solicit donation from the people DAN serves: The divers themselves. Divers from across the country donated enough funds that in 1982 almost a third of DAN's budget came directly from sport divers. Dive clubs and dive shops sponsored special events with the proceeds going directly to DAN. One dive club held a picnic and pig roast that yielded nearly \$1500 to DAN. Meanwhile, the concerns of the UHMS became reality. The money allocated by the Federal government was decreased by 50% in 1982 and then to 25% of the original budget in 1983. No money was allocated by the Federal Government as of 1984. The people at Duke University who managed DAN realized that an even more ambitious funding program would now be necessary.

From its beginning in late 1980, DAN began to actively assist in the consultation, treatment and referral of diving-related injuries. DAN also began to collect, scientifically and systematically, data on diving injuries and the effectiveness of treatment. Some in the diving industry viewed this with great alarm believing that the information would be used to enact restrictive or controlling legislation. None of the information that DAN has collected has ever been publicly released and DAN has a policy of only giving out identifiable information to those individuals or organisations directly involved in a particular accident case. In spite of this, the misconception of DAN aiding government control of diving continues to be held by some and is cautiously given up by others. The information collected by DAN is analysed on a neutral basis, confidentially, to the detriment of no one, but for the benefit of all. Without this kind of collective clinical information, we would never be able to identify good or bad



methods of treatment, analyse the results of treatment for different kinds of injuries, or propose safer ways to dive and to treat diving injuries.

The main result of the data collected to date has been the development of a practical guide to the emergency management of diving-related injuries. The DAN Underwater Diving Accident Manual is an easy-to-read description of the symptoms of the major diving-related injuries and the correct first aid for each. Additionally, there are guidelines for professional medical intervention that a physician can follow to institute the appropriate drug and intravenous fluid treatment of an injured diver.

Two things became apparent to the DAN staff by late 1982. One, there was a growing demand by divers for access to diving medicine information. Second, donations were too inconsistent for reliable financial support. In August 1983, the Diving Accident Network became a membership association with a new title: The Divers Alert Network. The diving emergency services composition of DAN remained unchanged. DAN's goals for improved dissemination of diving medicine information will be accomplished through DAN's newsletter "Alert Diver", DAN articles in diving periodicals, promotion of the DAN underwater Diving Accident Manual, and DAN sponsored sport diving medicine causes. Membership in DAN was designed to be inexpensive so that a greater number of divers could participate and benefit from the diving medicine information, while at the same time providing the vital support, which DAN needs. DAN members receive a diving accident manual, membership card with the DAN emergency number and "Alert Diver", DAN's newsletter that discusses diving medicine for the layman as well as professional.

THE ROLE OF DAN EUROPE AND THE INTERNATIONAL DAN FOR THE RESEARCH ON RECREATIONAL DIVING SAFETY AND IN THE MANAGEMENT OF RECREATIONAL DIVING ACCIDENTS

A. Marroni, DAN Europe - International Divers Alert Network

The Divers Alert Network (DAN), a membership supported non-profit organisation based at the Duke University Medical Center in Durham, North Carolina, was founded in 1980, under the guidance of Professor Peter B. Bennett.

Two years later, at the end of 1982, IDA - International Diving Assistance – the first between the current DAN Organizations to be started as a membership supported non-profit organisation, was founded in Italy by Dr. Alessandro Marroni; IDA officially started its activity in January 1983.

In 1984 the Diver Emergency Service (DES) was started in Australia and New Zealand by Drs. Des Gorman and "Fred" Gilligan and in 1987 the Civil Alert Network (CAN) began assisting diving emergencies in Japan, under the guidance of Professor Yoshihiro Mano of the University of Tokyo Medical School.

Although independently and not yet cooperating, the four organisations were supporting diving safety by providing very similar 24-hour Diving Emergency Hotlines and non-emergency Diving Medicine Information Services. In case of a diving accident, qualified Hyperbaric and Diving Medicine Specialists would be available to assist the injured diver and to consult with local emergency medical personnel to coordinate medical evacuation and treatment and to provide the best care possible.



Other important goals were also pursued by the four organisations in very similar ways and with surprisingly similar results, such as the regular collection of recreational diving accident data and the elaboration of periodical statistical reports on recreational diving accidents.

The need for an international organisation that would be available to all divers, wherever they dived around the world, became increasingly apparent and, during a historical meeting at DAN Headquarters in Durham, N.C., USA, in February 1991, the process to form an **International DAN** was started. The four existing organisations decided to adopt the common name of DAN and DAN Europe, DAN Australia and DAN Japan became parts of the INTERNATIONAL DAN (IDAN) organisation, together with DAN USA.

To day the **International DAN** is a worldwide network of multilingual 24 hours diving emergency alarm centres, over 300 hyperbaric facilities and many diving-hyperbaric specialists to treat diving emergencies and to accept diving medicine referrals. Every year the DAN Hotlines respond to more than 3000 diving emergencies calls and to over 30000 medical and safety questions.

The over 250.000 DAN members around the world have access to the same unlimited emergency medical evacuation service and to insurance covered medical-hyperbaric treatment worldwide, as well as to diving safety information and diving medicine training programs. *Alert Diver*, DAN's magazine, and its regional versions in Europe, Australia and Japan, regularly convey essential diving safety information to the thousands of DAN members in the world.

The introduction of the "**Oxygen First Aid in Dive Accidents**" course in 1992 and more recently other "DAN first aid" training programs, which are now taught by over 6000 DAN Instructors and 400 Instructor Trainers in Europe, further contributed to the improvement of effective first aid procedures for diving accidents. DAN promoted an international diving accident statistical evaluation protocol and regularly publishes annual reports on recreational diving accidents.

Finally, DAN started a prospective dive profile / bubble production research project which will involve International DAN members and diving instructors, the IDAN connected diving medical community, and the diving equipment industry.

An overview of recreational diving accidents. The recommended management of Recreational Diving Accidents.

Although not very common, decompression diving accidents do occur in recreational diving. The incidence of DCI in the population of DAN Europe Members from 1989 until 1993 has been of 1 case of DCI every 6.604 dive exposures (0,015%) and of 1 bent diver out of 264 (0,38%); these data match well with the ones reported by the international literature (1 -9).

Interestingly, if diving stress is reduced by diving to less than 30 meters and within the No-D limits the incidence of DCI cases among the DAN Europe population, thus corroborating the internationally shared opinion that the major and most recurrent DCI risk factors are deep and prolonged dives. When a diving accident occurs, immediate treatment is essential to obtain a satisfactory clinical outcome without significant sequelae, but DAN's statistics show that the delay to call for assistance and, consequently, the delay to treatment, is rarely less than 4 hours and exceeds 12 hours in almost 50% of cases of recreational diving DCI (3 - 11).

It has been demonstrated by Wolkiewicz et Al. (12) that a protocol for medically assisted transportation of decompression accidents to the hyperbaric facility could improve the success of hyperbaric



treatment and the overall clinical outcome by over 70% and the use of 100% oxygen and fluid therapy is now a widely recommended practice in the first aid of decompression accidents.

DAN recommends that all divers know how to provide adequate oxygen first aid in a decompression accident and introduced the *Oxygen First Aid in Dive Accidents* program, to train divers to recognize decompression diving accidents and to provide 100% oxygen first aid, while activating the local emergency medical services or DAN. (11- 13)

Since the inception of the program in 1992, the use of oxygen in the first aid of dive accidents reported to DAN increased from less than 18% to more than 37% in 1999, with very satisfactory results. Anecdotally, twelve cases of DCI with neurological involvement, one of which was a case of C.A.G.E., were assisted by European DAN Oxygen Instructors in 1993; in 7 cases the response to oxygen first aid was so good that no further recompression treatment was considered necessary after transportation to the hyperbaric centre.

Immediate administration of Oxygen and fluids is routinely recommended by the emergency operators of the DAN Hotlines, both to divers and to local EMS personnel, as one of the first actions to take in the management of a diving emergencies. DAN publications and guidelines for optimal management of diving emergencies are available and regularly circulated among the recreational diving and the diving medical communities.

DAN operates through an international network of Diving Emergency Hotlines, staffed by specially trained emergency operators and backed-up by a network of Diving-Hyperbaric Specialists on call. Diving Accident management and data collection criteria are standardized and a list of over 500 hyperbaric centres and of many diving-hyperbaric medicine specialists is regularly controlled and updated by the International DAN organisations worldwide.

The five central alarm centers are: in Australia at the Royal Adelaide Hospital, in Europe at the Dan Europe Travel Assist Hotline, in Japan at the Faculty of Medicine of the University of Tokyo, in the USA at the Duke University Medical Center of North Carolina, in South Africa in Johannesburg.

Due to the many languages and nationalities in Europe, a network of regional alarm centres is active in for example Belgium, Holland, Germany, Italy, Malta Spain, Switzerland and the United Kingdom with DAN Europe National Hotlines and in Denmark, France and Scandinavia with connected alarm centres.

In the recreational diving world, DAN is not only an important reference for divers, but also for the medical community and for the emergency medical services personnel, who often refer to DAN for consultation about the management of a relatively infrequent and unusual kind of emergency.

When any of the DAN Hotlines is called for a diving accident, qualified Hyperbaric and Diving Medicine Specialists will be immediately available to assist the injured diver, to consult with local emergency medical personnel, to coordinate medical evacuation and treatment and to provide the best care possible, wherever the diving accident occurred around the world. In order to assure adequate and timely assistance, especially when emergencies occur in remote areas of the world, DAN cooperates with SOS Assistance / Assist America and with some of the leading insurance companies in the world, to provide every DAN member with a global assistance plan, including unlimited evacuation or repatriation and insured medical / hyperbaric treatment.



By simply calling one of the International DAN Hotlines and Alarm Centres, any DAN member will access the DAN network being entitled to the same emergency assistance anywhere in the world.

DAN Europe's research program on the safety of diving, the DAN Diving Safety Laboratory

Since the very beginning, DAN's activity focused on research projects that would improve the safety of recreational diving. With time the annual reports on diving accidents and the many papers published by DAN became the classic references for reliable statistical evaluation of the risk connected to recreational diving.

Relatively new risk factors, such as multiday repetitive diving, were demonstrated with statistically significant evidence, while more commonly known risk factors, such as deep diving, decompression diving, age, etc. were corroborated with statistically reliable data. DAN Europe started a new prospective double blind study on the safety of diving.

The objective is to evaluate the safety of dive patterns followed by unrestricted divers during normal recreational diving activity. Collateral goals are to compare the performance of different dive tables and dive computers with respect to real time/depth exposure and to the actual / estimated bubble production ratio. The study involves standard recreational divers as well as professional scuba instructors and dive masters. The dive profiles will be recorded with dive computer-recorders, provided by a major European dive computer company. The instrument acts as a *Diver's Black Box* and is carried in a way that the diver can not look at it, to avoid influencing the original dive profile, which the diver will be stimulated to follow according to personal plans or preference, without any restriction. After the dives, the recorded data will be unloaded into a PC for subsequent analysis by a blinded team.

At the end of the dive, as the only imposed procedure, the diver is controlled for clinical signs and symptoms and in some occasions monitored with a precordial ultrasound Doppler probe, over a certain period after surfacing. All clinical data and Doppler tapes will be saved for subsequent evaluation by a second blinded team. Finally, the dive and clinical records will be confronted and correlated, after re-coupling the dive profiles with the appropriate Doppler recordings and clinical files. The study started in 1994 and is taking place during Research dives or trips. These dives are organized by Research Operators (RO) and Research Technicians (RT), Divemasters and Instructors who are trained by Research Specialists (RS), Research Area Supervisors (RAS) or research staff members in the use of DAN Research materials and protocols. Participation in this project is free and sponsored by DAN Europe.

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DAN Europe's Services to the Recreational Diving Community

DAN's primary mission is to assure 24/24hr:

1. Diving Medicine Specialised advice
2. Medical Evaluation Service
3. Acces to hyperbaric Units

DAN is also:

1. Non-emergency medicine information
2. Diving Medicine and Diving Safety Research
3. Diving Accident Annual Reports
4. Specific Insurance Plans for recreational and professional divers, diving schools and centres.
5. Safety orientated training courses and seminars
6. ...

DAN Europe's international Diving Emergencies Hotline (Primary mission)

DAN has a network of 24 hour, 365 days a year Alarm Centres which covers the entire world. Each Alarm Centre is interconnected with the others in the Network. The Travel Assist Centre, in addition, has a network of correspondents in every country (Medical Doctors, Ambulance Services, etc) to assure local assistance.

The international DAN network is formed by independent non-profit organizations (DAN America, DAN Europe, DAN Japan, DAN Southern Africa, DAN South East Asia Pacific) who, maintaining themselves through the fees paid by their own members, guarantee divers the best world-wide assistance.

The five central alarm centers are: in Australia at the Royal Adelaide Hospital, in Europe at the Dan Europe Travel Assist Hotline, in Japan at the Faculty of Medicine of the University of Tokyo, in the USA at the Duke University Medical Center of North Carolina, in South Africa in Johannesburg.

In Europe DAN has activated a network of regional alarm centers corresponding to the diverse linguistic areas, directed by the best known national specialists, working in co-ordination with the DAN



Europe Central Office and the International DAN. DAN Europe's responsibilities extends also to the Middle East and the Indian Ocean, where there are three alarm centers in Israel, Egypt and the Maldives.

Due to the difference of languages that characterizes Europe, it was necessary to set up a network of National European alarm Centers, (one for each Nation or linguistic area), which operates under the coordination of the central DAN Europe Travel Assist Hotline.

The National Alarm Centers of DAN Europe are in Belgium, Denmark, Germany, Greece, Holland, Italy, Malta, Norway, Poland, Spain, Sweden, Switzerland, and the United Kingdom. In general, all the centers are connected or coordinated with emergency services, such as Public or Military emergency Services that are operational in that country.

Criteria of Operations are the following:

1. The National Alarm Center is called, when in one's home-country; the case is managed locally from the National Center, according to Standard DAN Europe protocol.
2. The central European Center is called when one is abroad.
3. A diver that calls from abroad, is normally put into contact via a conference call, whenever possible, with a DAN specialist of the same nation/language as the victim, so that the case may be evaluated and interpreted without lingual difficulties, putting the victim at ease through talking to a Doctor of his own country/language.
4. In these cases, if the accident occurred in an area where a National DAN Center exists, this will be given charge to manage the emergency in coordination with the Central DAN Europe Hotline and the specialist of the National Center of the victim.
5. In cases where an accident occurs in a area without a National DAN Center, the intervention is organized directly by the Central DAN Europe Hotline.

To continually ensure an adequate assistance, especially in isolated and remote parts of the world, DAN teams up with various international emergency medical services and rescue groups, as well as some of the world's biggest Insurance Companies, in order to guarantee its members, in any circumstance, an adequate rescue, the necessary Medical-Hyperbaric treatment and eventual repatriation for medical emergencies.

DAN Europe's Non-emergency medical Information lines

DAN Europe also has a network of non-emergency or medical information lines. These lines are national numbers, so divers can talk to someone who speaks the same language. Also, divers may visit the medical pages of the DAN Europe website where they can find answers to general questions on diving fitness and health. DAN members can also send a medical question by filling in a form on this website. This question will be answered by a diving medicine specialist. For a more detailed response, callers may make non-emergency medical inquiries of a more specific nature.



When divers have questions about their health in relation to diving or if they have questions on medicines and diving, diving after surgery or other dive-related issues, DAN's medical information specialists are there to help. The medical information line allow divers to talk to a specially trained diving medicine technician about non-emergency diving safety and health concerns. Respondents include DAN medics with the resources of DAN's senior medical staff, on call physicians, dive researchers and other experts in dive medicine.

In some cases, DAN may refer callers to a diving medical specialist in their region for further evaluation. In 2000, DAN's Medical Department received over 30.000 information calls (and emails). Since its beginning in 1980, DAN has helped more than 200.000 callers through these telephone services.

DAN Dive Health and Safety Research

DAN's Research Department is dedicated to the study of diving health issues. Prospective experimental research, such as the Ascent Rate Study, is conducted in the pressure chambers of the Centre for Hyperbaric Medicine and Environmental Physiology at Duke University Medical Centre and during special research dives "in the field". The research conducted by DAN requires the use of specialised hypo-hyperbaric scientists and physicians, software development and technical staffing. DAN projects are privately funded through DAN membership.

Diabetes and Diving Project

In 1996, DAN Research began a project to determine the relative safety of people diving with insulin-requiring diabetes. Approved by DUMC's institutional review board, this project was launched in 1997. As of December 2000, 561 dives had been collected from 41 divers with insulin-requiring diabetes. Data collected on control divers (non-diabetics) was 504 dives from 43 divers. The study is testing guidelines for blood glucose monitoring and collecting data on blood glucose levels before and after diving. Data collection was completed in 2000. Data was presented at the Undersea and Hyperbaric Medical Society (UHMS) Annual Scientific Meeting and the American Society of Exercise Physiologists.

Flying After Diving Study

One of DAN's most ambitious research programs, a study of flying after diving, was completed in December 1998. The goal was to develop guidelines for recreational divers for safe intervals between diving and flying aboard a commercial airliner.

Aging Diver Study

Begun in 1999, DAN's Aging Diver Study uses PDE methodology to identify special concerns or issues for divers who are 50 or older. Of particular interest is the occurrence of equipment problems, diving medical problems, non-diving medical problems and other diving-related incidents. In addition to PDE data collection, this study includes an additional medical history form and a dive lifestyle survey.

Ascent Rate

The Ascent Rate Study is designed to evaluate the interaction between depth, bottom time and ascent rates on decompression safety. Its goal is to determine if differences exist in the incidences of decompression sickness and venous gas embolism between 3 and 18 metres-per-minute ascents after dives to 100 feet / 30 meters. Study dives are conducted at the Centre for Hyperbaric Medicine



and Environmental Physiology (Hyperbaric Centre) of Duke University Medical Centre and during special research dives in the field (Italy). A research specialist examines the divers over a 90 minute period after the dive, using a Doppler recorder. Every dive, the same research divers will dive according to a specific dive plan and with different ascent rates and.

NASA

Another chamber project is a NASA-funded study to determine how exercise and micro gravity affect decompression illness in astronauts during "space walks," or extravehicular activity (EVA). This was in preparation for the construction of the International Space Station.

DAN Europe website - www.daneurope.org

DAN's website on the World Wide Web provides a wealth of information on scuba health and safety and the many benefits of DAN membership. This might include answers to frequently asked dive medical questions, oxygen course listings or the location of a DAN Instructor near you. Members can order DAN products, and newcomers to DAN will be able to sign up online. DAN's Research Department uses the website to communicate information on DAN Research. DAN Europe Training Programmes are also described on this website.

DAN Europe Membership Services

In addition to supporting diving's only 24-hour diving emergency hotline, DAN members receive a number of valuable benefits, including a dive accidents insurance, emergency travel assistance, a subscription to the award-winning *Alert Diver* magazine, material discounts, a personalized membership card with the most important hotline numbers and more. DAN members can also order the exclusive DAN Tag™, diving's medical emergency ID.

DAN Travel Assist

One of the included benefits of membership with Divers Alert Network is *DAN Travel Assist*. This service provides emergency medical evacuation assistance for any injury or illness - dive-related or not - incurred at least 80 kilometres from home by a DAN member or a DAN family member. Services not directly provided by *DAN Travel Assist* shall not be reimbursed. When you have a non-diving related accident when travelling abroad, call DAN first.

Alert Diver Magazine

DAN members receive a subscription to award-winning *Alert Diver* magazine, the only publication dedicated to diving safety and health. The European version is a multi lingual magazine, which members will receive 4 times a year.

DAN Dive Accident Insurance

DAN has a wide range of Dive Accident Insurances. 2 Insurance types for the recreational diver. 3 for the professional divers (such as Divemasters and instructors) and 4 types for dive centres or schools. Refer to the membership brochures or website for up-to-date info.

DAN Dive Safety and Health Products



DAN members receive a special price on DAN products. DAN's product line includes a variety of books on the subject of dive safety and health, as well as emergency oxygen equipment and diver first aid kits. These and other DAN products are available on DAN's website.

DAN Tags

In 1995, DAN introduced the first medical ID tag created exclusively for divers - the DAN Tag™. Each clip-on tag is personalised with vital membership, medical and contact information in the unlikely event of a diving emergency. Only DAN members can purchase the DAN Tag. A portion of DAN Tag sales goes directly to support DAN's Diving Emergency Hotline and DAN dive research. As of December 2006, nearly 80,000 DAN tags were in use.

DAN tags can be ordered online and can be purchased only by DAN members.

DAN 24-Hour Diving Emergency Hotline with Immediate Insurance Verification

Dive and travel medical emergencies can happen any time. Callers to DAN's 24-Hour Diving Emergency Hotline can reach experienced medical professionals who are specially trained to handle dive and travel medical emergencies at any time, day or night.

With DAN's exclusive record-keeping system, DAN member emergency medical evacuation assistance and dive accident insurance policy records are kept in one central secure location at DAN. As a DAN member, if you (or your friend, spouse or physician) call DAN's Hotline with a diving emergency, DAN can immediately verify membership benefits and insurance coverage and make arrangements for timely evacuation and / or recompression treatment.

DAN Membership Discounts

DAN Members are eligible for special discounts on DAN products and other services. Check the website for further info and an up-to-date pricelist and catalogue.