

CLIMBING WALL ASSOCIATION, INC.

CWI CERTIFICATION PROGRAM STUDENT MANUAL

FIRST EDITION
MAY 2011



Copyright © 2011-2017, Climbing Wall Association, Inc., All rights reserved.
This document may not be reproduced without permission.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the copyright owner. Contact the Climbing Wall Association, Inc. for permission requests.

I. Introduction

Climbing Wall Association, Inc. (CWA), a non-profit corporation, sponsors the “Climbing Wall Instructor Certification Program” (CWI). The purpose of the certification program is to establish a voluntary certification for climbing instructors and a uniform set of consensus performance standards that can be easily integrated into existing staff training programs and adopted anywhere.

Certification refers to the confirmation of certain characteristics and/or skills of a person at a particular time. This confirmation is often provided or confirmed by some form of educational preparation, review, and assessment. One of the most common types of certification is professional certification, where a person is certified as able to competently conduct a job or task, usually by passing an examination. The focus of the Climbing Wall Instructor certification program is to assess the ability of the candidate to teach technical climbing skills, especially belay technique, on artificial terrain.

The CWA Climbing Wall Instructor Certification must be renewed every three years. The CWI certification program includes two levels of certification:

1. a certification for climbing wall instructors, and
2. a certification for certification program providers.

Certification is a *voluntary process of training and evaluation* that credits an individual with conforming to a prescribed set of standards that existed at the time of the evaluation or examination.

The CWI certification program is the responsibility of the CWA. Responsibility for oversight of the program, program policy, day-to-day administration, and development and support of the program provider pool is the responsibility of the CWA. Responsibility for maintenance of the certification standards is delegated to a chartered committee of the CWA called the Certification Standards Committee. The program and committee have been established and empowered by the CWA Board of Directors.

The CWA is responsible for safeguarding the integrity of the CWI certification program. Therefore, the CWA reserves the right to confer, deny, temporarily suspend, or permanently withdraw certification or program provider status at any time for any reason. The CWI certification program’s decision to confer, deny, temporarily suspend, or permanently withdraw certification or program provider status is in no way intended as a judgment by the CWA on any aspect of the certificant’s or program provider’s programs or services other than the ability to participate in the CWI certification program.

The primary goals of the CWI Certification program are:

1. To increase the level of professionalism in indoor climbing;
2. To improve the level of consistency and competency in indoor climbing technical instruction;
3. To define a consistent standard of care for climbing instructors in the following areas:
 - a. client orientation and instruction;
 - b. teaching general climbing skills including movement;
 - c. teaching proper belaying techniques;
 - d. teaching proper leading techniques;
 - e. teaching proper equipment care and use;
 - f. proper facility use, care, and inspection; and
 - g. emergency procedures;
4. To evaluate the technical skills of climbing instructors;
5. To provide candidates with guidance for further professional development.
6. To provide a means of promoting consistency and quality assurance in climbing instruction for the benefit of the public.

The CWI certification program focuses on education, review and skills evaluation of individual candidates using consensus performance standards developed by leading professionals in the field of climbing sports which have been subjected to public review. Certification standards are intended to address the minimum criteria a candidate should meet to be able to comply with prevailing industry practices and standards of care. Compliance with the certification standards is determined by members of the CWI provider pool, who work in the field and maintain their provider status.

The CWI certification program maintains program eligibility requirements and recommendations. Eligibility requirements and recommendations are overseen by the Climbing Wall Instructor Certification Standards Committee. The committee is required to take stakeholders into account when developing, evaluating, or modifying eligibility requirements and recommendations.

Any person meeting the pre-requisites for CWI certification may stand as a candidate for certification. Eligibility is determined based upon review of the pre-requisites by the course provider. Pre-requisites for CWI certification include:

1. The candidate will be at least 16 years of age by the conclusion of the course. (Note: persons less than 16 years of age may audit the course and will not receive certification, but will receive a letter of completion.)
2. The candidate can demonstrate basic climbing movement skills.
3. The candidate can climb 5.8 top rope demonstrating calm, confidence, and good position without falls.

4. The candidate can climb 5.7 lead demonstrating calm, confidence, and good position without z-clips, back clips, or falls (optional: for lead endorsement only).
5. The candidate has or is provided with appropriate equipment in good condition.
6. The candidate can demonstrate proper care, use, and inspection of climbing equipment.
7. The candidate can demonstrate proficient belay technique.

A determination that the candidate is eligible to apply for certification in no way expresses or implies that the candidate will meet the requirements for certification.

The CWA Climbing Wall Instructor Certification Course will address the basic technical skills necessary to participate in an instructional program at a climbing facility, and will address the following general topic areas:

- equipment and facility inspection
- client orientation and instruction
- teaching top rope skills
- teaching lead skills (optional)
- bouldering and spotting
- emergency procedures

The CWI certification program is a voluntary program and is employed as a means of industry self-regulation. Neither the CWA nor CWI certification program personnel have the authority to bar or ban an individual from the practice of his or her chosen profession. The CWI certification program only has the authority to confer, deny, suspend, or remove certified status within the program.

While certification is a credential conferred to an individual by the CWI certification program provider, this credential has limits. Certification is an assessment by the provider that an individual has met, or appears to meet, the specific minimum standards current at the time of the examination. These certification standards are contained in a published document which is readily available to applicants and the public.

The certification credential is further limited by other factors. Given the varied prior experience of the candidates, the varied experience and perspectives of the providers, the finite time available to complete the course and evaluation, and the nature of the performance standards, it is not possible to guarantee absolute consistency from provider to provider, course to course, or certification decisions from different providers. However, identical course materials, evaluation instruments, and performance standards are adopted, made available and applied throughout the program. A certain degree of consistency is the goal of the certification program.

Compliance with the certification standards must be observed directly, and an informed conclusion should be reached by the provider(s) with respect to the candidates' compliance with the current certification standards. A person's compliance with the standards is assessed through a variety of methods including: interviews, knowledge of written material, reasonable inference, and most importantly, *direct observation of the candidate's performance of skills and tasks listed on the evaluation instrument*. The CWI certification program providers evaluate the candidates' actual performance with the understanding that if these skills and tasks are performed adequately, then the candidate has the requisite knowledge, skills, and abilities and may be certified as a climbing wall instructor.

While certification standards focus on the performance of technical skills, abilities, sound instructional practices, and risk management practices; CWI certification is not a guarantee that certified individuals or their clients will be free from harm. In fact, risks are inherent in climbing instruction and in the sport of climbing in all of its forms. Risk and the uncertain outcomes associated with climbing activities help to provide the endeavor with its allure, its value, and its power as a life-long recreational pursuit.

II. Professionalism & Ethics

A profession can be described as a vocation that requires specialized knowledge, demonstrated skill and study. A professional is a person conforming to the technical and ethical standards of a profession, in this case technical climbing instruction. A professional is also characterized by exhibiting a conscientious, helpful and generally business-like manner in the workplace. There are duties and expectations associated with being a professional climbing instructor that may not exist for an amateur climber. However, there are privileges and rewards for the professional instructor also: advancement, respect, enjoyment and satisfaction in a career.

What does it mean to be a professional climbing instructor? First, a professional has an understanding of the ethics that govern his or her profession. For example, a professional climbing instructor:

- Respects the basic rights and dignity of peers, employees and clients;
- Performs according to accepted standards, and commonly accepted practices;
- Conducts work with competence and quality;
- Maintains appropriate relationships with clients;
- Informs clients of inherent and reasonably foreseeable risks;
- Accurately represents his or her qualifications, skills, knowledge, experience and services;
- Generally promotes the well-being of clients; and
- Exercises sound judgment gained from education and experience.

Professionals are not merely technically skilled; professionals possess specialized knowledge and perform at a level of proficiency in climbing and teaching that far exceeds an amateur climber. As a professional one must not only be competent, but also demonstrate good behavior and good judgment in the working environment.

Whether you are working with children or adults, you should aim to give 100% to your efforts. You should aim to treat others as you would like to be treated. You should work to continuously improve your competencies and knowledge, realizing that knowledge advances and that you will never know it all! Your approach to co-workers and clients should be courteous, engaged and compassionate.

In short, professionalism is a demeanor that invokes the highest standards of knowledge, skill, learning and behavior.

III. An Overview of Practical Risk Management

As a climbing wall instructor, you must be aware of the risks involved when instructing others. Risk is defined by Webster's dictionary as the "possibility of loss or injury." For a climbing facility or instructor, risk may include loss of income, loss of property, damage to property, damage to reputation, injury, and death.

In climbing, the question is not necessarily if you will face a risk, but rather how often and with what consequences.

Risk management is a proactive approach to preventing or reducing all types of incidents, injuries, losses or potential losses (i.e. frequency, severity, or both frequency and severity). Practically speaking, a risk management system can be thought of having three aspects:

1. identification and prioritization of risks
2. mitigation or intervention, and
3. monitoring

Risks must be assessed by the climbing wall instructor each and every time he or she instructs a course.

The first aspect of risk management is important because it dictates what you will be occupying your time with as a climbing instructor. It makes sense to focus a lot of effort on identifying and prioritizing the most likely and the most severe types of risks you will face. It makes little sense to focus a lot of effort on unlikely or very inconsequential risks. So, accurately identifying and prioritizing risks for your business or your workplace will be the key to the risk management exercise.

Once risks have been identified, it is time to intervene or mitigate the risks you might face. There are four basic strategies generally employed to address risks. These strategies are at the heart of practical risk management:

1. elimination
2. reduction
3. transfer, and
4. retention

Elimination

Some risks can be eliminated by avoiding or discontinuing an activity altogether. Risks that are deemed to be too great or "unacceptable" should be eliminated. Eliminating risks involves identifying occurrences beforehand and modifying or curtailing your activities accordingly. An example of this strategy might be prohibiting an activity altogether,

discontinuing or forbidding the use of certain techniques (e.g. a body belay), or eliminating certain equipment in a climbing facility (e.g. Whillans harnesses).

Reduction

Many risks cannot be eliminated, some are unpredictable (e.g. lightning or “acts of God”), and some are inherent – they just come with the territory. Inherent risks are those that cannot be eliminated without fundamentally changing the nature of the activity itself. Many risks attendant to adventure programming are inherent, they are obvious and unavoidable. For example, if you climb, you can fall. If you fall, you can get hurt or killed. Falling is an inherent risk of climbing; there are many others.

However, the presence of inherent risk in some activities contributes to their value and, one could argue, should not be eliminated. Risks that cannot be eliminated can be managed by minimizing the frequency and/or severity of occurrences. A good example of this strategy might be making sure that the climbing facility has a sound belay training and testing protocol in place for clients that the protocol is followed consistently and that the facility has a sound supervisory system in place.

Transfer

Transfer is a strategy that attempts to re-allocate financial or legal risk to another party by means of a contract or some form of “Participation Agreement.” Examples include: purchasing appropriate types and levels of insurance and employing legal documents such as exculpatory agreements. Examples include having patrons sign a contract that contains clauses such as an acknowledgement and assumption of risk clause, a release of liability and waiver clause, and an indemnification clause (where these are valid and enforceable – most US states and Canadian provinces). Transfer is a strategy of spreading the risk around or attempting to give it to someone else.

Retention

This strategy is the keeping of risk, either in whole or in part. For example, one might understand the risks associated with an activity and continue to engage in it regardless of the risks. Presumably there is some compelling purpose, rationale, or justification for retaining risk – some benefit. The key point is that one is intentional about the risks one is willing to retain. Retention is a strategy of acceptance, and in our industry of taking personal responsibility. As a business owner or instructor, you want to be clear with your clients regarding the nature of the risks they should be willing to assume. If they are not willing to assume the requisite risks – then they should not be your clients and they should not climb in your facility.

IV. Legal Principles – A Primer for Climbing Wall Instructors

by Charles R. Gregg

Climbing wall instructors are on the front line when it comes to the physical and emotional well-being of clients. Instructors are expected to understand and inform clients of the activity's *inherent risks* (those which "come with the territory", and without which the activity would lose its appeal and value); and, in varying degrees, depending on the activity and the client's relationship to it, prevent an enlargement of those risks. Instructing, demonstrating and teaching basic movement skills in the bouldering area of the gym could well include inherent risks. Failing to discuss bouldering risks, facility rules, how to fall and principles of spotting prior to bouldering arguably enlarges those risks.

This distinction between inherent risks and other risks which arise and may be created by events on the floor - conditions of the environment, equipment and gear, and the conduct of instructors or participants - is important to an instructor's understanding of legal liability issues. Instructors have no legal duty to protect clients from the *inherent risks* of an activity.

Risk is an unavoidable - some would say a desirable - element of adventure recreation activities. Every business, institution, or program hopes to develop good judgment in its staff and promote sound strategies for dealing with risk, desirable or otherwise, including the avoidance of enlarging inherent risks. This risk management responsibility falls squarely on the shoulders of the instructor.

A number of organizations, in their Participation Agreements, ask clients to agree that they will not make a claim against the program, even if the instructor is negligent. This seems unusual - even offensive - to some. An organization does this to reserve to itself the opportunity to determine, presumably fairly, where the line should be drawn between an injury caused by an inherent risk and one that gives rise to a cause of action.

Many frivolous lawsuits arise out of either a misunderstanding, or an intentional misinterpretation, of where that line should be drawn. Falling off a bouldering problem is an inherent risk of bouldering. Pieces of exercise equipment too close to the bouldering area, a separation of sections of floor mats, or faulty maintenance of an auto belay system probably are not inherent risks of a climbing experience. An error in instructor judgment regarding a client's preparedness, the difficulty of the climbing route or the physical or emotional condition of a client, may or may not be an inherent risk depending on the nature of the activity. Certain such errors are forgiven by prevailing law in an instructional context, where the student/client is being encouraged to "push the envelope". (They are also forgiven in certain sporting and recreation activities where, to impose legal liability for simple negligence, would chill active participation). Faced with the need for an immediate choice in an adventure recreation setting, including the forces of nature and human behavior a number of options may appear reasonable. With the benefit of hindsight,

experts might agree that only one decision was the proper one. Do the inherent risks of an activity include the possibility that an instructor might make one of those "reasonable", but ultimately wrong, decisions? We in the industry understand that errors in judgment do in fact "come with the territory" in certain adventure recreation activities, but the public is slow in coming to this same understanding. Continuing to identify inherent risks and informing the public about those risks, including the risks of errors of judgment of participants and staff, is one of the most important tasks of a good business, institution or climbing program. Obviously, and importantly, understanding that risks are inevitable is no reason to relax in management of those risks.

The area of the law which is most likely to be involved in a client's complaint about events on the floor is negligence.

Negligence is the failure to behave reasonably toward another person to whom a duty is owed. Negligence has the following components: (1) the party charged must have owed a duty of reasonable care to the person claiming an injury or other loss; (2) that duty must have been violated; and (3) a loss must have been suffered, which arose out of the breach of duty and was reasonably foreseeable.

Instructors should assume that a duty is owed to any participant under their direct or indirect supervision. (The same might not be true of a stranger who trespasses into the gym.) Again, the nature of that duty will change as activities change, and the relationship of clients and staff to those activities changes. For example, the duty may diminish as the client's level of experience and demonstrated competence increases. A greater duty is owed to a novice in a class or clinic than is owed to a veteran of national competitions. If there is a loss, the question then becomes whether it was caused by an instructor's breach of his or her duty – that is, he or she did not act as a reasonable professional would have acted in the same or similar circumstances. This is what is sometimes referred to as the "reasonable person" test. For a professional, it really becomes a "reasonable professional" test. Instructor conduct will be judged on the basis of what professionals in the field, similarly situated, would have done under the same circumstances. As we have noted above, these circumstances might include, the nature of the activity (was it purely recreational, was it instructional, did it involve co-participants?), and the age, maturity and experience of the client.

In the bouldering example above, a duty of care clearly exists. The issue of "breach of duty" would be answered by an analysis (often made by hired experts) of whether a reasonable professional would have selected that bouldering problem, or discussed the basics of movement, bouldering rules, how to fall and spotting prior to climbing. The issue of responsibility for an injury would require an analysis of the causal connection between the alleged breach of duty – the decisions described above - and that loss. The program would not be liable, for example, if there was an unforeseen and spontaneous incident such as a missed spot by an attentive spotter, or if the incident was caused by some third party such as another patron.

In summary, the defenses to a claim of negligence include:

1. the absence of a duty,
2. no breach of a duty, and
3. no loss, or no causal connection between the breach and the loss.

Other defenses might include a claim that what happened was an "inherent risk" of the activity (again, there is no duty to protect another from the inherent risks of an activity); or that the injured person executed a valid contract including a release or waiver provision, or expressly assumed the risk that caused the injury.

The claimant may have contributed to the loss by his or her conduct, including voluntarily and knowingly participating in an activity in which risks had been enlarged, in violation of duties owed to the claimant. In such a case, a judge or jury may be asked to determine the claimant's share of the blame for what finally happened and adjust any monetary award accordingly.

"Simple" negligence - not acting as a reasonable professional would have acted - can be aggravated by conduct which is so extreme in ignoring the probability of harm and the severity of that harm, that it reasonably appears the actor was indifferent to the welfare of the person or persons injured. Such conduct - or failure to act - is "gross negligence". In cases of gross negligence and intentional wrongs, the injured party may be awarded exemplary or punitive damages above those actually suffered, to teach the wrong-doer a lesson. Generally, such acts or omissions cannot be forgiven by release or waiver provisions of an agreement, or an assumption of the risk of such offensive conduct.

Situations in the facility which give rise to charges of negligent conduct might include the manner in which emergency protocols are exercised, ill-fitting, inappropriate or defective gear, hiring of incompetent or inexperienced staff, inadequate screening, inadequate instruction or supervision of patrons, passing students from a class who are not qualified, overlooking abusive behavior which causes emotional trauma to a fellow patron, and failure to identify environmental or other hazards (for example, a ledge a climber might fall onto, or terrain features into which a falling climber might swing.)

Other legal issues can arise on the floor, such as a staff person's misrepresentations regarding certain conditions: "You can climb in your bare feet; nothing here can hurt you"; "No one has ever been hurt doing this - give it a try ". Instructors must understand the impact and legal ramifications of such statements. Random statements can create expectations and modify the duty of care owed. A misleading statement which induces participation can nullify the effect of an agreement to release future claims. So be very careful with verbal statements.

Instructors are responsible for adequate and true reporting of events in the facility, such as a near-miss, reasons for failing a student, a dangerous condition, or evaluation of a peer. Carelessness or falsehoods in such reporting can lead to problems in determining the truth of certain events and the qualifications of other staff or patrons. How does the administration convince a parent that a child was separated from a program for a valid reason, when the reason given on an incident report is less supportable? How does a manager explain a failure to document or report a condition or behavior issue on the floor, when harm later arises from that condition?

Qualified instructors are vital to a successful climbing program. Instructors have important legal obligations and responsibilities. Instructors are the keepers and communicators of the climbing program's mission, promises and representations.

We must keep these legal issues in perspective, of course. The law, with its "reasonable professional" standard, attempts to protect those who do their work well and in accordance with the standards of the climbing industry. This is where your energy should be directed - to doing the job you've been trained to do, and doing it well. If you do, the legal issues generally will take care of themselves. See Annexes A and B for further discussion of legal issues.

V. Orientation and Check-In

Perhaps the most important thing a climbing wall instructor can do is to provide good information to new climbers and clients. It is very important that clients are informed of the nature of climbing and the inherent and other risks associated with climbing in a climbing facility during their initial orientation and at other appropriate times.

Orient the new client to the climbing facility, or to the portions of the facility the client will have access to, and to the belay systems in use. You should also provide the client with general information about the climbing areas, the types of climbing allowed in various areas (bouldering, top-rope, lead, auto-belay devices, etc.), or where climbing is not allowed. Introduce climbers to the ClimbSmart!™ information posted in your facility. If your facility employs auto belay devices, the client is provided an orientation to their proper functioning and use.

Personal Responsibility

New clients must be willing to acknowledge, accept, and assume the reasonably foreseeable risks in a climbing wall environment before they are allowed to climb. It should be made clear to new climbers or clients that these risks exist, they are participating willingly and voluntarily, and that they must acquire some knowledge about climbing, demonstrate basic climbing and belaying skills, understand and follow the facility's rules, and take personal responsibility for their own safety and not jeopardize the safety of others before they are granted full and unrestricted access to the climbing facility.

Screening

A new climber or client will typically undergo a screening process. The screening process will assist you in determining the new client's ability to climb in the facility; to assess the client's prior climbing experience, knowledge, and skills (if any); to inform the client of the nature of the sport of climbing; and to introduce the facility's rules for access and participation. Customer screening may include questions that will provide a sound basis for the decision to allow access and to make an appropriate decisions regarding orientation, training, and testing such as:

- Climber's age, height and weight;
- Years of climbing experience;
- Climbing experience in a climbing facility;
- How often and how recently has the client climbed;
- Level of climbing competency (using the Yosemite Decimal System, bouldering scale or other recognized rating system);
- Type of climbing experience (sport or traditional climbing, mountaineering, bouldering);

- Proficiency in top rope climbing and belaying;
- Proficiency in lead climbing and belaying;
- Pertinent medical or health history; or
- Any other information the client deems relevant to participation in climbing sports.

It is the client's responsibility to notify you of any pre-existing medical condition or health history that may negatively affect the client's (or any other persons) health and safety in the facility. Under certain circumstances, it may be prudent to advise a new client or potential client to consult with their health care provider prior to climbing. Climbing and related activities are strenuous and potentially stressful for new climbers and may put unaccustomed demands on the body and cardiovascular system. Clients may want to seek medical advice prior to participation in climbing sports if they have any medical condition that may adversely affect their health or ability to adequately perform activities such as belaying or spotting. The facility may encourage seeking medical advice by posting signage in the climbing gym, incorporating appropriate language in the participation agreement, using a separate health history questionnaire, or requiring the gym staff to provide a verbal warning upon check-in. Furthermore, participants might also be advised that if their health or medical conditions change, it may be advisable to consult their physician again.

Instructors should be sensitive to information received from customers during the screening process and in making decisions based on the screening process. If any health information is collected, it is handled confidentially and secured.

Written Agreements

Written agreements such as a "Participation Agreement" or documents that attempt to shift, reallocate, or release an organization from liability may take different forms. Written participation agreements may include various types of information (for example, a release of liability provision, a waiver of claims provision, an agreement to indemnify or defend, or other provisions). The agreement should be developed or approved by your employer's legal counsel, reviewed for enforceability in your jurisdiction, and revised periodically as necessary. Please note that statutes, regulations, case law, and other factors may affect the efficacy of these types of agreements, it is imperative that these agreements are properly drafted and reviewed periodically by counsel. It should be made clear to new clients that this document is not intended to include or provide an exhaustive description of all risks and hazards associated with climbing in a climbing facility.

Facility Rules

Review the facility rules with new clients prior to granting access to the climbing facility. Clients must agree to follow the facility rules and should be shown where rules and other warnings are posted in the facility. Clients should be asked to obey all rules, instructions,

oral and written warnings in the facility. Finally, clients should be informed that compliance with rules, instructions, or warnings does not guarantee safety.

Registration or Check In

All clients should register or check in prior to climbing. The new climber's level of qualification or access to the climbing facility should be checked upon entering or prior to climbing in the facility. Clients that have not demonstrated proficiency in required climbing or belaying skills must be supervised by staff or a qualified climbing partner, or their access to the facility must be limited accordingly.

VI. Climbing Instruction

As a climbing wall instructor you will provide instruction for novice climbers and conduct belay tests for experienced climbers. Instruction should be appropriate for the client profile (age, experience, knowledge, etc.), the program being offered, employer's policies and practices, level of access to the facility, and the belay systems and equipment in use at the facility. Other considerations include instruction appropriate the objectives of the course or program climbers are participating in, the level of supervision provided or required, the skills the climbers are expected to perform, etc. For example, if the climber is participating in a supervised program and will not be expected to perform a belay for another climber; then belay training and assessment would not be necessary.

Top Rope Instruction

If the client intends to climb and provide a top rope belay, the instructor will administer a top rope belaying and climbing test that each belayer must pass before being allowed to belay or climb without assistance or direct supervision. The belay test should assess all of the skills necessary to perform a proper belay using the belay system or systems employed at the facility. The test should address proper use of all climbing equipment according to the manufacturers' instructions, proper set up of the belay system on the harness, the use of an appropriate knot to tie into the rope (or the correct use of locking carabiner(s) to clip into the rope -- if this practice is permitted), proper checking of the climbing partner's equipment, proper commands between the climber and belayer, proper use of the belay device, the ability to catch a fall, and the ability to lower the climber to the ground. Please see Annex C on methods to clip into a rope.

Regardless of the belay system in use, the essential criteria for effective belays include:

- a. proper configuration and use of the belay device according to manufacturer's instructions;
- b. ability to properly feed rope through the device;
- c. maintaining a brake hand grasped on the rope **at all times**;
- d. ability to brake **at all times**, in other words the brake strand is always under control;
- e. ability to demonstrate an appropriate behavioral reaction to a fall (i.e. the belayer must reflexively react to brake a fall -- even if surprised, stressed, fearful, etc.)

Please see Annex D – Sample Top-Rope Belaying and Climbing Test Procedure.

Lead Instruction

If the client intends to climb and provide a lead belay, the instructor will administer a lead belaying and climbing test that each belayer must pass, before being allowed to belay a leader or lead climb without assistance or direct supervision. The lead belay test should assess all of the skills required to perform a proper belay for a lead climber. The test will incorporate some material from the top rope test plus additional skills. The test should address proper use of all climbing equipment according to the manufacturers' instructions, proper set up of the belay system on the harness, the use of an appropriate knot to tie into the rope, proper checking of the climbing partner's equipment, proper commands between the climber and belayer, proper use of the belay device, proper feeding of rope to the climber, proper belayer positioning, the ability to catch a fall, the ability to recognize and avoid back clips and z clips, and the ability to lower the climber to the ground. The climber demonstrates proper clipping of the rope into each protection anchor without skipping clips; is confident in route finding and maintains a secure stance while clipping lead protection. The lead climber also demonstrates proper body position in relation to the rope (e.g. does not let the rope run behind the leg). Finally, the lead climber clips correctly into the top anchor(s). Please see Annex E – Sample Lead Belaying and Climbing Test Procedure.

Auto Belay Instruction

There are a number of types of auto belay devices: mechanical, pneumatic/hydraulic and magnetic eddy current resistance brakes. The braking mechanisms in the various types of devices are fundamentally different and work on different physical principles.

Briefly, mechanical brakes work by use of one-way bearings which rotate freely in one direction and not in the other direction. Mechanical brake mechanisms may or may not have redundant bearings or back-up friction brake mechanisms. Pneumatic/hydraulic brake mechanisms work by forcing a viscous fluid through apertures of differing sizes. The fluid is essentially incompressible, therefore a given volume of fluid moves more slowly through a small aperture than a large one. A magnetic eddy current brake slows an object, such as a rotor or arm using electromagnetic induction which creates resistance, and in turn heat. Electromagnetic brakes contain non-ferromagnetic metal arms which are physically connected to a rotating axle. The movement of the non-ferrous metal through the magnetic field creates eddy currents generating an opposing magnetic field which then resists the rotation of the arms connected to the axle providing a braking force. The net result is to convert the rotational motion into heat slowing the climber.

If the client intends to use an auto belay device, the instructor will administer an auto belay device orientation and proficiency test for each climber before being allowed to use the auto-belay device without assistance or direct supervision. A climber may use the auto belay device without training or qualification if directly supervised by a qualified staff member or assisted by a qualified person. Otherwise, climbers must be trained in the proper use of an auto belay device prior to first use without direct supervision. Climbers

should have an understanding of the normal functioning and operation of the auto belay device. Climbers should be instructed to report any potentially unsafe condition or unauthorized use of the device such as slack in the cable, lanyard or rope, improper retraction of the cable, lanyard or rope, uncharacteristic noises coming from the device, climbers not clipped in properly or not clipped in at all, etc. Instructors should be familiar with the auto belay device manual or operating instructions and should have access to a copy of the manufacturer's instructions for use. Please see Informative Annex F – Sample Auto Belay Device Orientation and Test Procedure for more information.

Teaching Belaying

Belaying, in a traditional climbing context, is a rope management technique that allows a climber to ascend and descend or be lowered from a wall while being secured to an anchor or anchors with the assistance of a belayer.

The climber is attached to one end of the rope; the rope is rigged through an anchor or anchors, and the belayer is attached to the other end of the rope through a belay device. The belayer controls the taking in or paying out of rope to the climber and arrests the climber's fall. The belayer is responsible for the climber while the climber is on belay. Control of the rope is regulated by a brake hand which must be in control of the rope *at all times*.

Teaching proper belay technique is perhaps the most important lesson a climbing wall instructor can teach. Proper belay technique depends, to a certain extent, on the type of belay device one selects. However, the principles of effective belaying are the same regardless of the equipment used. There are two general types of belay devices: passive devices (tube or plate types such as the Black Diamond ATC or Petzl Verso) and so-called mechanical-assist devices (camming types such as the Petzl GriGri or Trango Cinch).

We recommend teaching belaying using a passive device first and then, once that type of device is mastered, to introduce the mechanical-assist device to the novice climber. Mechanical assist devices are more complex mechanisms, more complicated to use, are counter-intuitive in some respects (use of the cam lever to lower the climber) and require additional training to use properly, especially for lowering, descending or belaying a leader. Additionally, most manufacturers consider mechanical-assist devices advanced devices requiring sound technique to use properly. For these and other reasons, including reinforcing the importance of controlling the brake strand of the rope *at all times* and promoting the development of basic climbing skills, we recommend training novices using simpler, passive devices first then graduating to more complex devices and techniques once the basic belay technique is mastered.

Rigging a Passive Belay Device

To rig a passive device, follow the manufacturer's instructions specific to your device; the general procedure is:

1. Insert a loop (bight) of rope through the device from the opening opposite the cable.
2. Clip the loop of rope and the cable to a locking carabiner that is attached to the belay loop (or the harness manufacturer's recommended load bearing component of the harness, if it does not have a belay loop).
3. Lock the carabiner.

Top Rope Belay Technique Using a Passive Device

The belay device allows the belayer to introduce a sharp bend in the rope that creates friction that in turn allows the belayer to control the rope, slow a descent or arrest a fall. One should be able to both feed rope freely through the device and apply a brake quickly once the device is configured properly. The belay device and rope should be oriented so the standing end of the line is running toward the climber and the brake strand is running toward the brake hand.

We will describe a belay technique that keeps the rope in a brake position unless rope is being pulled through the device. In other words, the rope is in a brake position a high percentage of the time. Therefore increasing the likelihood the belayer can catch an unexpected fall without unnecessary movement.

Proper belayer positioning is also important. The belayer should find a stable stance away from the fall zone, but close enough to the wall so that there is not a large lateral component force on the belayer in the event of a fall. Also, if the belayer is positioned too far away from the wall excessive rope may be introduced into the belay system (called a catenary) which introduces a potential fall hazard.

The top rope belayer takes in rope as the climber ascends keeping slack in the system to a minimum and feeds out rope as the climber descends. To stop a fall, the belayer grasps the rope tightly and pulls down with the brake hand so that the rope makes a sharp bend over the edge of the device.

1. Start with both hands in a ready position; the non-dominant hand on the standing end of the rope at eye level (the guide hand), the dominant hand on the braking strand of the rope with the rope in brake position (the brake hand).
2. Place the brake hand far enough away from the device to prevent it from being pinched between the rope and the device in the event of a fall. A few inches or a finger's length is sufficient.
3. Pull the rope in with the guide hand while pulling it through the device with the brake hand. One will need to move the rope out of the brake position with the brake hand in order to pull rope through the device.
4. Immediately move the brake hand back to the brake position.
5. Bring the guide hand down and grasp the rope below the brake hand maintaining the brake.
6. Slide the brake hand up the rope to the ready position.
7. Return the guide hand back to the standing end of the rope to the ready position and prepare for the next cycle.

Note: *there are alternative techniques and sequences that allow one to maintain the brake position a high percentage of the time. Any generally accepted technique that allows*

continuous control of the brake strand is acceptable. The technique described above is conservative.

Lowering a Climber with a Passive Device

Once the climber has reached the top of the wall or cannot ascend further you can lower the climber to the ground using the belay device. To lower the climber using a passive device:

1. Remove any slack from the rope system.
2. Bend the rope over the belay device to lock the rope off.
3. Weight the rope.
4. Bring the guide hand down and grasp the brake strand of the rope with both hands.
5. Adjust the angle of bend on the rope to allow the rope to slide through the device smoothly while maintaining control of the descent speed.
6. Lower the climber to the ground, slowing the descent as the climber approaches the ground to allow the climber to stand and regain balance.

Rigging a Mechanical-Assist Device

Mechanical assist devices make use of a cam which pivots when the rope is suddenly tensioned. The cam pinches the tensioned rope assisting the belayer in holding the fall. In order for the system to work properly, the device attached to the carabiner must be able to move freely and the cam inside the device must be able to move freely. The tensioned brake strand helps engage the cam, so you must always hold the brake strand of the rope with your brake hand. If the brake strand is not tensioned, there is a remote chance the cam will not engage as expected.

The use of mechanical assist devices is similar to passive devices: paying out and taking in of rope is done with both hands working together and arresting a fall is done by holding the brake strand of the rope in a brake position. However, there are some differences with mechanical assist devices: while lowering and descending, the cam is released using a release handle, which releases the cam, and the rate of descent is maintained by holding the brake strand of the rope. It is important to note that even with a mechanical-assist device, the belayer must maintain control of the brake strand of the rope *at all times*.

To rig a mechanical-assist device, follow the manufacturer's instructions specific to your device; the general procedure is:

1. Ensure compatibility with the rope you are using.
2. Open the side plate.
3. Lay the rope around the cam per the manufacturer's instructions.
4. Close the side plate.

5. Clip the device to a locking carabiner that is attached to the belay loop (or manufacturer approved load bearing component of the harness, if it does not have a belay loop).
6. Lock the carabiner.
7. Test the function of the device.

Top Rope Belay Technique Using a Mechanical-Assist Device

The mechanical assist belay device employs a cam but also allows the belayer to introduce a bend in the rope that creates additional friction to control the rope, slow a descent or arrest a fall. As with a passive device, one should be able to both feed rope freely through the device and apply a brake quickly once the device is configured properly. The belay device and rope should be oriented so the standing end of the line is running toward the climber and the brake strand is running toward the brake hand.

The top rope belayer takes in rope as the climber ascends and feeds out rope as the climber descends. To stop a fall, the cam will engage, provided that the belayer maintains control of the brake strand of the rope. Mechanical assist devices have a designated rounded bearing surface over which the brake strand is intended to rest. It is important to note, mechanical assist devices are designed to be oriented in a particular way with the left hand controlling the standing end of the rope and the right hand controlling the brake strand of the rope.

1. Start with both hands in a ready position; the left hand on the standing end of the rope at eye level (the guide hand), the right hand on the braking strand of the rope with the rope in brake position (the brake hand).
2. Place the brake hand far enough away from the device to prevent it from being pinched between the rope and the device in the event of a fall. A few inches or a finger length is sufficient.
3. Pull the rope in with the guide hand while pulling it through the device with the brake hand. One will need to move the rope out of the brake position with the brake hand in order to pull rope through the device.
4. Immediately move the brake hand back to the brake position.
5. Bring the guide hand down and grasp the rope below the brake hand maintaining the brake.
6. Slide the brake hand up the rope to the ready position.
7. Return the guide hand back to the standing end of the rope to the ready position and prepare for the next cycle.

Lowering a Climber with a Mechanical-Assist Device

To lower the climber using a mechanical assist device:

1. Remove any slack from the rope system.

2. Bend the rope over the belay device's rounded bearing surface putting the rope in brake position.
3. Weight the rope.
4. Maintain control of the brake strand with the brake hand.
5. Slowly pull back on the release lever with the left hand (guide hand) to release the cam.
6. The rate of descent is controlled by the right hand (brake hand) on the rope.
7. Lower the climber to the ground, slowing the descent as the climber approaches the ground to allow the climber to stand and regain balance.

Climbing calls or belay signals are standardized communication between climber and belayer. Despite the relatively simple needs for communication in the gym, use a communication system that will transfer to outdoor sport climbing and multi pitch climbing. A suggested list for indoor belay signals is below. Of course, if a climbing gym has preferred signals that deviate from this list, the local list prevails.

Climbing Calls

The Belayer	The Climber	Meaning
	"On belay?"	Is the system set up and checked?
"Belay on"		System is set-up, and double checked.
	"Climbing?"	May the climber begin climbing?
"Climb on" or "Climb"		Climber may begin climbing.
	"Up Rope"	Take in the slack on the rope.
	"Tension"	Put tension on the rope to assist climber.
	"Slack"	Give the climber some slack.
	"Falling"	Climber is falling
	"Take"	Climber wants the rope tight to lower or rest
	"Rock"	Some object is falling from above.
	"Rope"	I'm throwing or pulling a rope to the ground.
"Got you"		Belayer has the rope tight
	"Lower me"	Climber chooses to lower
"Lowering"		Belayer lowers climber
	"Off Belay?"	I am ready to be taken off belay.
"Belay off"		Belayer has released the brake hand

Lead Belay Technique Using a Passive Device

The forces exerted on a belay system by a falling lead climber are immense. Therefore, belayer positioning and protection are very important. As with top rope belaying, the belayer should find a stable stance away from the fall zone, but also be in a position that does not expose the belayer to unnecessary hazards.

We do not recommend anchoring the lead belayer to the ground in an indoor setting, unless the weight differential between the climber and the belayer is very large. Even in this circumstance it may be preferable to ballast the belayer to equalize the weight. Tying the belayer to the ground significantly increases the forces on the climber, belayer, equipment and the anchors in the event of a fall.

The lead belayer pays out rope as the climber ascends and takes in rope as the climber descends, down climbs, or creates slack in the rope system. Lead belaying is a dynamic activity with the belayer paying out or taking in rope as needed by the climber without interfering with the climber's progress. To stop a lead fall, the belayer should maintain the rope in the brake position unless actively feeding rope through the device. It is possible to allow a little rope to slip through the device to soften a leader fall, but use caution when the climber is near a ledge or other obstruction or close to the ground, too much slack in the system could allow the leader to hit the obstruction or fall to the ground.

1. Start by spotting the climber to the first anchor with the belay system rigged.
2. Once the first anchor is clipped, assume a ready position with the guide hand on the standing end and brake hand on the brake end ready to feed rope to the leader or take rope in.
3. Keep a little slack in the belay system to be able to anticipate paying out or taking in rope quickly.
4. Place the brake hand far enough away from the device to prevent it from being pinched between the rope and the device in the event of a fall. A few inches or a finger's length should be sufficient.
5. When the lead climber clips protection be prepared to pay out rope quickly so the leader can clip the rope without interference.
6. Immediately take in any extra slack once the anchor is clipped to the anchor and the climber is protected, or if the climber is down climbing.
7. A lead climbing fall can occur at any time; the belayer must be prepared through proper position and sound technique to move the brake hand into brake position immediately.

Lead Belay Technique Using a Mechanical-Assist Device

Recall the use of mechanical assist devices is similar to passive devices: paying out and taking in of rope is done with both hands working together and arresting a fall is done by holding the brake strand of the rope in a brake position. Both the device and the cam within the device must be able to move freely for the system to function properly. Therefore, do not impede the movement of the device by gripping it with your entire hand. One may release the cam by bracing the index finger of your brake hand against the lip on the side plate and pressing the cam with your thumb. Important: releasing the cam is only done momentarily to feed slack to the leader, once the slack has been provided, return to a brake position. The belayer must maintain control of the brake strand of the rope *at all times*, even when paying out rope to a lead climber attempting to clip a piece of protection.

1. Start by spotting the climber to the first anchor with the belay system rigged.
2. Once the first anchor is clipped, assume a ready position with the guide hand on the standing end and brake hand on the brake end ready to feed rope to the leader or take rope in.
3. Keep a little slack in the belay system to be able to anticipate paying out or taking in rope quickly.
4. Place the brake hand far enough away from the device to prevent it from being pinched between the rope and the device in the event of a fall. A few inches or a finger's length should be sufficient.
5. When the lead climber clips protection be prepared to pay out rope quickly so the leader can clip the rope without interference using the technique described above.
6. Immediately take in any extra slack once the anchor is clipped to the anchor and the climber is protected, or if the climber is down climbing.
7. A lead climbing fall can occur at any time; the belayer must be prepared through proper position and sound technique to move the brake hand into brake position immediately.

VII. Equipment and Facility Inspection

Personal Protective Equipment (PPE) is extremely important in the sport of climbing. PPE is life safety equipment. As a climbing instructor you should possess adequate knowledge of manufacturers' instructions for use, care, storage and inspection of climbing equipment. Adequate knowledge of inspection procedures comes from formal training, reading and understanding manufacturers' instructions, and hands on experience.

All personal protective equipment should be used and inspected in accordance with the original equipment manufacturer's instructions. You should be able to recognize if equipment is intended for climbing use, is of sound design and construction and is not defective or damaged. Please see Annex G PPE inspection for more information.

Your employer has certain duties to you regarding PPE. For example, your employer must provide, use, and maintain protective equipment in a "sanitary and reliable condition" where necessary to protect you from workplace hazards. Personal protective equipment includes equipment for eyes, face, head, and extremities, protective clothing, shields or barriers, or respiratory devices necessary to protect you where you could be injured or impaired on the job. (There are some limitations on the employer's duty regarding PPE, for example an employer would not be required to provide you with certain footwear or prescription eyewear. However, where you provide your own equipment, your employer is responsible for insuring it is adequate, it fits and is properly maintained.)

Similarly, you have a duty (at least a moral obligation) to your clients regarding instruction about life safety equipment. Training topics for clients include:

- When PPE is necessary;
- What PPE is necessary;
- How to properly put on, remove, adjust, and wear PPE;
- The limitations of the PPE; and,
- The proper use, care, maintenance, lifetime and disposal of the PPE.

Each client should be able to demonstrate an understanding of the PPE and how to use it before being allowed to climb. If you have reason to believe that a climber who has already been trained does not have an understanding of the PPE or the skill to use it properly, retraining the climber would be appropriate and prudent.

The use of personal climbing equipment is common in climbing facilities. Regardless, all personal equipment used must be manufactured specifically for climbing use and used in accordance with the original equipment manufacturer's instructions. This applies to all equipment, including but not limited to ropes, harnesses, belay devices, carabiners, quick-draws, etc. Personal equipment may or may not be subject to regular and ongoing or close inspection by the owner; therefore, you should at least be aware of the equipment your

clients use. The client must acknowledge, assume, and accept all responsibility for the proper selection, use, care, maintenance, inspection, and storage of personal climbing equipment. Equipment might also be addressed in the participation agreement the climber signs.

Inspection and Maintenance Program

Presumably, your inspection activities are part of a thorough facility and life safety equipment management and inspection system maintained by your employer. The equipment management and inspection system should cover routine ongoing inspection and close, at least annual, inspection of facility-owned life safety equipment. You should have access to the OEM's published material for equipment such as product information and instructions for use. Your employer will also have quality assurance records such as inspection, maintenance, or repair logs deemed appropriate by the manufacturer and or your employer for all facility-owned equipment.

Your employer will also have an inspection and maintenance program appropriate for the artificial climbing structure at your facility. Wall manufacturers provide facility owner/operators instructions for the scheduling, periodic inspection, periodic maintenance, and, if and where appropriate, instructions for repair of structures, structural components, and associated equipment.

The inspection program should only address matters that the owner/operator is reasonably capable and competent to perform. If the owner/operator performs repairs or maintenance on the structure, only replacement parts specified or approved by the manufacturer are used. In some cases, inspections, maintenance, and repair by the manufacturer, or a qualified third party inspector, may be necessary and a written inspection report provided.

The owner/operator should report serious malfunctions or failures of structures, structural components, or equipment promptly to the manufacturer and/or the installing vendor.

VIII. Bouldering and Spotting

Bouldering is increasingly popular in climbing facilities. It is a pure form of climbing where the climber can focus on the essentials of movement without the distractions of equipment, ropes, clipping protection, etc. However, bouldering presents unique risks to the climber. While the objective hazards of roped climbing are generally not present when bouldering in a climbing facility, all that can really be said about bouldering is that it is probably potentially less lethal than other forms of climbing given the heights involved. Every fall in bouldering is a ground fall and presents a risk of injury to the climber and those in the bouldering area. Climbers have been injured stepping, jumping, or falling off of boulder problems, sometimes badly.

A climbing instructor, at the very least, should provide an orientation to bouldering and spotting before novice climbers are allowed to boulder without assistance or direct supervision. The climber should be informed of the inherent risks of bouldering, the intended function and limitations of impact attenuating surfaces or padding, the maximum height of bouldering in the facility, and where in the facility bouldering is allowed. The instructor should review the facility rules for bouldering, which should be prominently posted in an appropriate area.

Training or orientation topics for climbers include:

- The purpose, positioning, and limitations of pads;
- Clearing the landing area of equipment and other hazards;
- The purpose of spotting and spotting demonstration;
- Demonstrating how to attempt to fall without injury;
- Maintaining an awareness of the surrounding activity;
- Personal responsibility for risk taking and safety.

The majority of climbing facilities have an impact attenuating surface (padding) installed in their bouldering area. However, the type of material or materials used in the pads, the thickness of the pads, and the height of bouldering can vary significantly from facility to facility. There is little definitive guidance regarding the use of padding in recreational climbing (at least in North America). Given the wide variety of types of surfacing materials, depth of material, the behavior of the material; the effectiveness of these systems is unpredictable at best. An appropriate landing surface does not guarantee the prevention of injuries from falls.

It is difficult to address the proper use of pads without defining the risks and hazards the pads are intended to minimize in actual use. Pads are generally designed to minimize or mitigate debilitating injuries to the head. Head injuries are simply not common in climbing facilities. Pads are not necessarily designed to mitigate or limit extremity injuries, although they may do so. We are not aware of any specification for padding designed to mitigate or

limit extremity injuries. It is important to be clear with clients that padding is only designed to perform a certain specific function, under certain specific circumstances, and cannot be expected to perform in ways that it was not designed or intended to perform.

Spotting is a technique used in dance, gymnastics, and climbing. In climbing spotting involves being attentive to a climber, standing in a basic athletic stance with arms raised, focusing on the climber's center of gravity and being ready to guide or steady a climber's fall. Spotters attempt to safeguard the climber by helping the climber fall to the ground. It is important to emphasize to a new climber that spotting is not catching a falling climber. The spotter merely directs, redirects or steadies the climber's fall so that he or she lands safely on the ground. The spotter attempts to safeguard the climber's head, neck and spine to the extent possible. The spotter is often taught to keep his or her fingers together to avoid broken or dislocated fingers.

Facilities may have different policies and rules for bouldering, spotting and padding given different or unique sets of circumstances. For example, the bouldering height may be determined by the facility's design (for example, the ability to top out on the bouldering structure, the presence of roofs or ceilings within the bouldering structure, etc.) However, it is usually prudent to limit the height of un-roped climbing in the facility to a level appropriate for the climber, the padding and the facility design.

IX. Emergency Management

Emergency management is the discipline of analyzing and avoiding risks, planning for emergencies, incident response and recovery. It involves the allocation of responsibilities and management of resources for dealing with all aspects of emergencies or disasters. Emergency management can be thought of as part of a comprehensive risk management system with four parts:

- 1) Risk reduction or mitigation;
- 2) Preparation;
- 3) Response; and
- 4) Recovery.

The discipline of emergency management can be approached from a strategic organizational perspective or from a tactical personal perspective, in other words "what does my company do to prepare for and respond to an emergency; and what do I do to prepare for and respond to an emergency."

Viewed from an organizational perspective a senior manager or management team is responsible for identifying potential risks to the organization, its staff and customers; developing strategies to mitigate those risks; designing systems to respond to emergencies when they occur; and planning for rapid recovery from the emergency while preserving or protecting persons, assets, and property. Viewed from a personal perspective a climbing wall instructor is responsible for being aware of and avoiding workplace risks and risks to clients; intervening when appropriate to prevent or minimize the risks; being prepared to handle an emergency situation; responding to the incident effectively and reporting the incident to management and/or authorities.

Organizations adept at managing emergencies focus on prevention, planning and being resilient. Skilled emergency managers are not only good at developing and implementing emergency response systems but are also skilled at understanding how those systems might fail and being flexible or able to adapt easily to unexpected circumstances. Preparedness is a key concept in emergency management and includes:

- An emergency action plan (often written);
- Casualty prediction (what happens, how often, how serious);
- A simple and straightforward communications plan;
- Proper organization and maintenance of emergency supplies and equipment; and
- Training in emergency response skills.

An example of adequate and appropriate emergency equipment for a climbing facility includes a first aid kit with dressings and bandages to stop bleeding, a barrier mask for rescue breathing, and gloves to prevent the spread of infectious disease.

An example of training in emergency response skills is periodic first aid and CPR training. Sufficient first aid training might include a workplace training course covering knowledge and skills necessary to prevent, recognize, and provide basic care for injuries until professional rescuers or advanced medical personnel arrive and take over care or provide transport. Another example is the ability to perform technical rescues on the climbing structure. If you are required to respond as a technical rescuer you should have received rescue training and have adequate and appropriate rescue equipment available.

Climbing instructors should also be trained in the organization's system for collecting and reporting incidents or accidents. Incident data can be reviewed by management periodically to review performance, identify any trends, and make changes in policies, procedures and practices as necessary. You may be required by your insurance carrier to have an incident reporting system with notification deadlines for serious incidents that might result in a claim. Written accident or incident reports, including names, contact information and witness statements, should be limited to reporting factual information and should avoid conjecture, supposition, and other similar types of statements.

Response in a climbing wall setting obviously involves mobilization of emergency services and first responders to the scene. In a wilderness setting, this alone can be an ordeal. In a climbing wall setting it can be very straightforward – simply calling emergency services. See Annex H for a sample emergency action checklist.

Annex A – Informative – Fundamental Legal Issues

By Charles R. Gregg

1. Perspective

- a. While the subject is legal, the real issue is operational – running a quality program.
- b. A quality program is one which:
 - i. does what it says it is going to do regarding operations and outcomes;
 - ii. manages its risks as a reasonable professional would in the same or similar circumstances.

2. The value of risk. The risk of risk.

- a. We are willing to tolerate a sprained ankle to achieve the positive values of the experience. Can we similarly justify a death? Two deaths?
- b. Because folks can get hurt, and make claims, and sue, we need to understand the legal implications of what we do or fail to do.

3. A brief risk management strategy – analyze, manage, inform

- a. If an activity doesn't serve your mission and you can't manage its risks, don't do it! Of the activities that pass these tests: What can go wrong? How do you reduce the chances of its going wrong? What do you do when it does go wrong? Inform your clientele of the risks.

4. Issues in protecting students and clients

- a. Disclosures, understanding the environment, emergency action plans, established policies and practices, good gear, good records, good administrative support, well selected and supervised staff and participants.

5. Issues in protecting the program

- a. A quality program a risk management plan, an understanding of your own policies and the industry's practices and standards, and applicable laws; written contracts, where they are needed; adequate insurance; allocation of possible liabilities (releases and indemnities); wise use of professionals; wise selection of business entity.

6. Contracts

- a. Elements of a binding contract – clarity, no coercion, legal competency, consideration, etc.
- b. How formed - implied and expressed, oral and written
- c. How broken (failure to perform as promised)
- d. Damages (the loss of the benefit of the bargain)
- e. Defenses to a claim of breach – missing element, against public policy, etc.

7. Releases

- a. Elements: requirements of a contract; identify who is released and who is releasing; describe activities and risks and identify risks as inherent; scope of the release (negligence); indemnities; venue, applicable law, other.

8. Negligence

- a. Elements – duty, breach, loss caused by the breach
- b. How duty can be eliminated, reduced or enlarged – special relationships, active sports doctrine, special statutes, etc.

9. Defenses to claims of negligence

- a. Inherency of the loss causing risk, including the assumption of the risk of negligence in active sports (Primary Assumption of Risk), Secondary Assumption of the Risk, release of the claim, etc.

10. Other defenses to claims of negligence

- a. Immunities, special statute, volunteer status

11. Take-aways

- a. Analyze and eliminate from your program the activities, places and people that present risks that you cannot manage with confidence.
- b. Examine the descriptions of your activities and risks in your promotional and other materials. If there is a reasonable possibility of something happening that will surprise your clients, enlarge your descriptions to include that thing (or those things).
- c. Have your Participant Agreement reviewed by competent counsel to determine that you have covered adequately at least the following:
 - i. a description of the activities and risks of your program;
 - ii. an acknowledgement of the risks as inherent;
 - iii. an assumption of the risks;
 - iv. a release of you and your organization from claims, including for negligence;
 - v. an indemnification of you and your organization against claims of third persons arising from the client's participation; and
 - vi. a provision that fixes the place of and the law to be applied to any suit brought against you or your organization.

Annex B – Informative – Inherent Risks

by Charles R. Gregg

1. Inherent risks are those so integral to an activity that, without them, the activity loses its basic character and appeal. These are risks of injury or loss which cannot be reduced or avoided without changing the basic nature of the activity.
2. Some, but not all, falls are an inherent risk of horseback riding, for example. Inherent risks arise from the unpredictable nature of the horse, including a tendency to spook for no apparent reason. Inherent risks may include slipping from a saddle, or falling in the event of sudden starts or stops. Falling is not an inherent risk if it results from errors of the equine provider....unsuitability of the horse for the rider, improper gear, or latent terrain issues, for example. In these latter cases, among others, questions of negligence arise.
3. Inherency is also found in subsets of the more familiar activity: the teaching or coaching of an active sport, for example. The duties of and to persons within the “orbit” of the activity (instructors, co-participants, and spectators) may be relaxed to a degree. Simple carelessness, or negligence, may be regarded as inherent to instruction, co-participation or observation of an activity. The rationale is that to punish one for an apparent careless act in this context would “chill” the nature of the activity and it would lose its appeal and basic character.
4. A service provider has no duty to eliminate or even reduce inherent risks and cannot be liable for failing to do so.
5. As noted above, inherent risks may be enlarged by circumstances or conduct. A provider has a duty not to enlarge the inherent risks of an activity. Doing so creates a duty to control that enlargement, to avoid injury or loss. Examples from recent case law of enlargements of the inherent risks of activities include: placing small children on the floor of a raft; no sequential learning for a horseback ride/ski activity; a wrangler dropping a horse’s lead rope; no liquids provided for a marathon event; a troublesome dog on a trail ride); failure to instruct or supervise staff or participants; and failure of equipment.
6. The breach of a duty to reasonably manage the enlarged risks could lead to a claim of negligence if the breach causes an injury or other loss.
7. A client may, with knowledge of the enlarged risks, expressly (not by mere participation, usually) expressly agree to assume that enlargement of risks and engage in the activity in spite of the enlargement. A client’s express assumption of an enlargement of the inherent risks of an activity relieves the service provider of the duty to protect the client from a loss caused by that enlarged risk. A service

provider has no duty, in most states, to protect a client from an expressly assumed risk.

8. Assumption of inherent risks and express assumption of non-inherent risks are often referred to as Primary Assumption of Risks.
9. A client may choose to engage in the activity and confront known enlarged risks, without expressly agreeing to assume them. This is often referred to as Secondary Assumption of Risk. This Secondary Assumption is often an after--the-fact analysis, whereby the Court initially determines that 1) what caused the loss was not an inherent risk, 2) the provider had a duty to protect the client, and 3) the provider failed that duty. The Court or jury may then compare the client's negligence (unreasonableness) in deciding to participate, in the face of the risks, with the service provider's negligence in failing to reasonably manage the enlarged risks. Any recovery for the client may be adjusted accordingly. ("Comparative fault" in most states.)

Annex C – Informative – Clipping In

It is preferable to tie directly into the climbing rope. However, if the practice is allowed at the facility, this illustration provides two examples of rigging the rope so that the climber may clip into the belay system using a double action, locking, captive eye carabiner.



Annex D – Informative – Sample Top-Rope Belaying and Climbing Test Procedure

The following steps are suggested as a belay test procedure to evaluate a climber fully qualified to climb and provide a top rope belay in a climbing facility. Climbers that cannot pass this test procedure would not be considered to be fully proficient in traditional top rope belaying skills, but may be allowed to climb in the facility depending upon the belay systems in use, the level of supervision, and other factors.

1. Qualified staff administers the test.
2. The climber is informed of the facility's protocols related to belaying and roped climbing.
3. Staff informs the belayer and climber of the purpose and expectations of the belay/climbing test and gives a brief description of the test components.
4. The belayer and climber put on the climbing harnesses in accordance with manufacturer's instructions.
5. The belay device, locking carabiner, and rope are given to the belayer as separate pieces. (This may not be necessary if the test is given on a permanently installed, pre-rigged, fixed-in-place belay system).
6. The belayer demonstrates proper set up of the belay system on the harness.
 - a. The carabiner used to attach the belay device to the harness is attached according to the harness manufacturer's instructions.
 - b. The carabiner is checked to ensure it is locked.
 - c. The rope is threaded through the belay device correctly.
 - d. The threaded belay device is attached to the harness using the locking carabiner and the gate is locked.
7. The climber ties in using an appropriate knot (for example, a retraced or rewoven figure eight knot with a sufficient amount of tail).
 - a. If the climber is permitted to clip into the rope using locking carabiner(s), the climber checks the carabiner ensure it is locked and not cross loaded.
8. The climbing rope is correctly attached to the harness in accordance with manufacturer's instructions.
9. The belayer and climber demonstrate proper use of verbal belay commands (e.g. "on belay", "belay on", "climbing", "climb on", "up rope", "slack", "tension", "take", "that's me", "got you", "lower me", "lowering", "off belay", "belay off", etc.)
10. The climbing partners check their own and one another's equipment, including the belay set up, prior to beginning the climb.
11. The belayer demonstrates proficient belay technique. Criteria for effective belay technique (all criteria **must** be met);
 - a. proper configuration and use of the belay device according to manufacturer's instructions;
 - b. ability to properly feed rope through the device;
 - c. maintaining a brake hand grasped on the rope **at all times**;

- d. ability to brake ***at all times***, in other words the brake strand is always under control;
 - e. ability to demonstrate an appropriate behavioral reaction to a fall (i.e. the belayer must reflexively react to brake a fall -- even if surprised, stressed, fearful, etc.)
12. The belayer demonstrates prompt responses to climber actions or commands.
 13. The belayer demonstrates proper position relative to the climber and the wall, avoiding the climber's fall line.
 14. The belayer demonstrates how to catch a simulated or actual fall in a controlled manner during the demonstration of belay technique. If catching an actual fall, staff is to provide a top-rope back up or a back up brake hand on the rope during the test.
 15. The belayer demonstrates controlled lowering of the climber to the ground.
 16. If there is a pair of climbers being tested, each climber individually demonstrates all the requisite skills.

Annex E – Informative – Sample Lead Belaying and Climbing Test Procedure

The following steps are suggested as a belay test procedure to evaluate a lead climber or lead belayer in a climbing facility. Climbers that cannot pass this test should not be allowed to lead climb or belay a leader in the facility.

1. Qualified staff administers the test.
2. The climber is informed of the facility's protocols related to lead belaying and lead climbing.
3. Staff informs the climber of the purpose and expectations of the lead belay/climbing test and gives a brief description of the test components.
4. The belayer and climber put on climbing harnesses in accordance with manufacturer's instructions.
5. The belay device, locking carabiner, and rope are given to the belayer as separate pieces.
6. The belayer demonstrates proper set up of the belay system on the harness.
 - a. The carabiner used to attach the belay device to the harness is attached according to the harness manufacturer's instructions.
 - b. The carabiner is checked to ensure it is locked.
 - c. The rope is threaded through the belay device correctly.
 - d. The threaded belay device is attached to the harness using the locking carabiner and the gate is locked.
7. The climber ties in using an appropriate knot (for example, a retraced or re woven figure eight knot with a sufficient amount of tail).
8. The climbing rope is correctly attached to the harness in accordance with manufacturer's instructions.
9. The belayer demonstrates proper rope management skills such as stacking the rope properly, avoiding entanglement, avoiding straddling of the rope, avoiding standing on the rope, etc.
10. The belayer and climber demonstrate proper use of verbal belay commands (e.g. "on belay", "belay on", "climbing", "climb on", "up rope", "slack", "tension", "take", "that's me", "got you", "lower me", "lowering", "off belay", "belay off", etc.)
11. The climbing partners check their own and one another's equipment, including the belay set up, prior to beginning the climb.
12. The belayer demonstrates proficient belay technique for lead belaying, both taking in and paying out rope for the leader as needed without introducing excessive slack in the rope. Criteria for effective belay technique (all criteria **must** be met);
 - a. proper configuration and use of the belay device according to manufacturer's instructions;
 - b. ability to properly feed rope through the device;
 - c. maintaining a brake hand grasped on the rope **at all times**;

- d. ability to brake **at all times**, in other words the brake strand is always under control;
 - e. ability to demonstrate an appropriate behavioral reaction to fall (i.e. the belayer must reflexively react to brake a fall -- even if surprised, stressed, fearful, etc.)
13. The belayer demonstrates prompt responses to climber actions or commands.
 14. The belayer demonstrates proper position relative to the climber and the wall, avoiding the climber's fall line.
 15. The belayer demonstrates a proper take of the leader at some point on the route.
 16. The belayer and climber demonstrate the ability to recognize, describe and avoid a back clip or z clip.
 17. The climber demonstrates proper clipping of the rope into each protection anchor without skipping clips.
 18. The climber chooses appropriate holds from which to clip the rope in order to maintain a secure stance while clipping.
 19. The climber demonstrates proper body position in relation to the rope (e.g. does not let the rope run behind the leg).
 20. The belayer demonstrates how to catch a simulated or actual fall in a controlled manner during the demonstration of lead belay technique. If catching an actual fall, staff is to provide a top-rope back up or a back up brake hand on the rope during the test.
 21. The climber demonstrates clipping into the top anchor(s) correctly.
 22. The belayer demonstrates controlled lowering of the climber to the ground.
 23. If there is a pair of climbers being tested, each climber individually demonstrates all the requisite skills.

Annex F – Informative – Sample Auto Belay Device Orientation and Test Procedure

The following steps are suggested as an orientation procedure to an auto belay device for climbers using an auto belay device without assistance or direct supervision.

1. The climber is informed of the inherent risks of using an auto belay device.
2. The climber is instructed in the correct functioning and proper use of the auto belay device.
3. The climber is instructed in the limitations of use of the auto belay device, for example:
 - a. use by one person at a time,
 - b. weight or loading limitations,
 - c. climbing on route,
 - d. not climbing above the auto belay device,
 - e. not climbing in the path of another climber
 - f. avoiding a pendulum or swinging fall;
 - g. not releasing the line from the ground anchor or attachment point;
 - h. avoiding entanglement of the lanyard, rope or cable with the wall or the climber;
 - i. not redirecting the lanyard, rope or cable through protection points on the wall or interfering with the free running of the lanyard, rope or cable;
 - j. keeping the landing area clear of obstructions and climbers;
4. The climber is instructed to properly fit and secure the climbing harness.
5. The climber is instructed to check for the proper operation of the auto belay device prior to clipping in.
6. The climber is instructed to properly attach the carabiner or snap hook to the climbing harness in accordance with the harness manufacturer's instructions.
7. The climber is instructed to double check the attachment of the carabiner or snap hook to the harness by depressing the gate to ensure it is closed and locked.
8. The climber is instructed how to ascend and descend using the auto belay device.
9. The climber is instructed to report any potentially unsafe condition or use of the auto belay device to the staff.

Sample Test Procedure

1. The climber properly fits and secures the climbing harness.
2. The climber checks for the proper operation of the auto belay device prior to clipping in.
3. The climber properly attaches the carabiner or snap hook to the climbing harness in accordance with the harness manufacturer's instructions.
4. The climber double checks the attachment of the carabiner or snap hook to the harness by depressing the gate to ensure it is closed and locked.
5. The climber ascends and descends using the auto belay device.
6. The climber is aware of the limitations of use of the auto belay device as stated above.

Annex G – Informative – PPE Inspection

Periodic visual and close inspection of personal protective equipment should be conducted by a person competent to inspect the equipment. A close inspection is considered to be a “hands on” inspection. Equipment should be retired and replaced at the end of its operational lifetime which is determined after consideration of combination of factors, including but not limited to:

1. the age of the equipment,
2. length of time in storage,
3. length of time in use,
4. amount of use,
5. type of use,
6. deterioration from use, and
7. the overall condition and functioning of the equipment.

Equipment should be, stored, maintained, inspected, repaired (if appropriate), retired and replaced as per the manufacturer’s instructions.

Equipment that is excessively worn or damaged and is not in proper working order must be repaired (if appropriate) or retired. Equipment that is obsolete or recalled must be retired. Retired equipment should be disposed of so it cannot be used inadvertently.

Note: In some cases repair of equipment is not possible or advisable. Consult the manufacturer’s instructions or recommendations regarding equipment repair.

Inspection, maintenance, and repair activities should be recorded in appropriate quality assurance records or logs.

Rope Inspection Criteria

- Conduct a visual inspection of the entire length of the rope.
- Verify there are no burns, glazing, cuts, nicks, tears, excessive wear, fraying, exposed cores, severe discoloration or stains, changes in diameter, changes in texture, etc.
- Conduct a hands-on inspection of the entire length of the rope.
- Verify there are no flat sections, soft sections, stiff sections, breaks, bulges, marked angles or areas where the radius of a bend changes abruptly.
- Check that the length of the rope has not changed significantly.
- Retire any rope that experienced extreme heat damage, chemical damage, exceeded the rated number of lead falls, or has reached the end of its service life.

Quickdraw Inspection Criteria

- Remove the carabiners from the quickdraw.
- Conduct a visual inspection of the quickdraw.
- Check the woven portion, verify there are no burns, glazing, cuts, nicks, tears, excessive wear, fraying, fuzzing, severe discoloration or stains. Also verify there are no flat sections, soft sections, stiff sections, breaks, bulges, runs, or changes in width, changes in texture, etc.
- Verify the condition of the safety stitching, check for cut, loose, worn, frayed, or severely discolored or faded threads, etc.
- Retire any quickdraw that has experienced extreme heat damage, chemical damage or has reached the end of its service life.

Harness Inspection Criteria

Check all of the safety elements of the harness, including:

- Verify the condition of the webbing and bias tapes, check for burns, glazing, cuts, nicks, tears, excessive wear, fraying, fuzzing, excessive softness or stiffness, severe discoloration or stains, etc.
- Verify the webbing in the area of the adjustment buckle or buckles is not excessively worn.
- Verify the condition of the safety stitching, check for cut, loose, worn, frayed, or severely discolored or faded threads, etc.
- Verify the condition of the belay loop (if applicable) check for burns, glazing, cuts, nicks, tears, excessive wear, fraying, fuzzing, excessive softness or stiffness, severe discoloration or stains, etc.
- Verify the condition of the tie-in point check for burns, glazing, cuts, nicks, tears, excessive wear, fraying, fuzzing, excessive softness or stiffness, severe discoloration or stains, etc.
- Verify the condition of the buckles check for cracks, deformation, heavy marks or scoring, excessive wear, corrosion, etc.
- Verify the webbing is or can be properly threaded through the buckles.
- Assess the overall condition of the harness.

Locking Carabiner Inspection Criteria

- Verify that the frame, gate and locking sleeve have no cracks, deformation, heavy marks or scoring, excessive wear, corrosion, etc.
- Verify the condition of the rivet and locking sleeve.

- Verify proper gate alignment with the nose of the carabiner.
- Verify that the open gate closes automatically when released.
- Verify the gate is not sticky, blocked or obstructed by deformation or foreign matter.
- Verify the locking mechanism is working properly.

Passive Belay Device Inspection Criteria (plate, tube, etc.)

- Verify that the device has no cracks, deformation, heavy marks or scoring, excessive wear, corrosion, etc.
- Verify there are no burrs or sharp edges on the frame that might affect the rope.
- Verify the condition of the friction grooves and rope passages.
- Verify that the cable or cord is firmly attached to the tube or plate and that the cable is not frayed.
- Conduct a function test on the ground with the device rigged.

Mechanical Assist Belay Device Inspection Criteria

- Verify that the device has no cracks, deformation, heavy marks or scoring, excessive wear, corrosion, etc.
- Verify that the attachment holes are not damaged.
- Verify that the moving side plate opens and closes freely.
- Verify that the rope path is not damaged.
- Verify that the cam and friction bushing are not excessively worn.
- Verify that the cam and release handle move freely and that the return springs are working properly.
- Check the condition of the rivets, fixing screw, cam and the friction plate.
- Verify there are no foreign objects (sand, etc.) in the mechanism and no lubricant in the rope path.
- Conduct a function test on the ground with the device rigged.

Annex H – Informative – Emergency Action Checklist

1. Stay calm and take control
2. Survey and secure the scene (Check)
3. Contact Emergency Personnel (Call)
4. Assist the injured party and conduct a primary assessment for threats to life, limb, and eyesight (Care)
 - a. Airway
 - b. Breathing
 - c. Circulation
 - d. Disability - head, neck, spine
 - e. Exposure to further injury or environmental hazards
5. Stabilize the injured party
6. Direct emergency personnel or first responders to the scene
7. Keep a factual written record of the incident
 - a. Assistance provided
 - b. Incident report
 - c. Witness statements
8. Collect and preserve any evidence intact.
9. Report to management

Annex I – Informative – Required Equipment

1. Pen.
2. Notebook.
3. UIAA/CE approved climbing harness with belay loop.
4. Climbing shoes.
5. Two or more locking “HMS/Pearbiners.”
6. UIAA/CE approved tube-style belay/rappel device, such as the Petzl Verso, or Black Diamond ATC, etc.
7. UIAA/CE approved mechanical assist belay device, such as the Petzl GriGri or Trango Cinch, etc.
8. Climbing shoes.

Note: Mark your gear.

Annex J – Informative – Suggested Reading

The following texts are resources you can review in advance of the course:

- Industry Practices: A Sourcebook for the Operation of Manufactured Climbing Walls
- Mastering Basic Skills, Craig Luebben
- Climbing: From Gym to Crag, Lewis and Cauthorn
- Rock Climbing for Instructors, Alun Richardson
- The Self Coached Climber, Dan Hague
- Performance Rock Climbing, Dale Goddard

**CLIMBING WALL ASSOCIATION, INC. (CWA)
CONTACT INFORMATION**

The Climbing Wall Association (CWA) has many resources available for climbing equipment and wall, manufacturers, retailers, sales representatives, climbing facilities and climbing instructors.

The CWA has an informative consumer information program titled ClimbSmart!™ which is designed to promote responsible climbing. The ClimbSmart!™ Program is CWA's principle public awareness campaign addressing risk in climbing sports, climbers' safety, and personal responsibility. Contact CWA or visit www.climbingwallindustry.org/climbsmart.php for more information.

The mission of the Climbing Wall Association is to support the growth, health and independence of the climbing wall industry, and to promote the sport of climbing.

“Together we're stronger.”

Address:

Climbing Wall Association, Inc.
1460 Lee Hill Rd., Unit 2
Boulder, CO 80304-0870
Phone: 720-838-8284
FAX: 720-528-8200

Web Site: <http://www.climbingwallindustry.org/>

Email: info@climbingwallindustry.org