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## **Fitness facility operations: a forensic perspective**

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**Abstract:** Fitness facilities provide a number of services to the public. Those services encompass how to train and create an overall healthy being. There are national standards and guidelines that fitness facilities must follow in order to keep their members safe. Some issues that large and small fitness facilities have in common are the lack of knowledge regarding safe practices in the fitness industry. The purpose of this paper is to discuss safe operating procedures and establish an understanding of the industry standards and guidelines in an effort to decrease the incidence of injury or death. The authors will review the standard of care in fitness facility operations from a forensic perspective. This paper will also address frequent contributions to injuries in fitness facilities and provide recommendations regarding implementing safe practices.

**Keywords:** fitness; facility; operations; injury; standards; guidelines; industry standards; cases; procedures.

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**Biographical notes:** Laura Miele-Pascoe, PhD, is an expert in fitness, sport, and recreation with specific expertise in personal training, fitness facilities management, and injury prevention. She is an accomplished athlete as well as an experienced trainer, coach and teacher. She runs her own business 'mind over body athletics' in which she trains and consults athletes in a variety of sports and training methods. She is also an adjunct professor for the Masters in Coaching Education program at Ohio University. She continues to consult fitness facilities, schools, athletic directors, coaches, parents, and student-athletes on the importance of preventive policies and procedures.

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## 1 Introduction

The fitness industry is a thriving business that has exploded in popularity as a core component of healthy living. In response to this trend, modern fitness facilities have grown both in size and complexity. By design, they are built to promote wellness and fitness; however, when these facilities are not run with appropriate attention to safety they can also contribute to injury. Common oversights fitness facilities tend to make that may lead to injuries are (Eickhoff-Shemek et al., 2009):

- failure to properly place equipment
- hire qualified and competent fitness staff members
- train and educate clients
- choose proper flooring
- post signage that is safe and informative for its members.

From an operational standpoint, facility owners and managers should have a proper protocol in place to aid in providing a safe environment for everyone. The owners/managers have a responsibility to hire, train, and supervise staff members. Often, the conduct (actions/inactions) of staff members may lead to members getting hurt. In order to fulfil the duties of a personal trainer, employees should have the proper education, credentials and certifications along with the necessary knowledge and practical skills set.

Furthermore, it is essential for those facilities to properly

- order and layout equipment
- inspect and maintain their equipment
- provide mandatory orientation
- obtain a comprehensive health history questionnaire
- perform a full functional assessment

to determine their physical strengths and weaknesses, prior to utilising the facility. Once a systematic process is established addressing these concerns, the members themselves should be educated and trained accordingly. It is imperative that members participate in orientations and properly follow the rules assigned by the facility. Failure to do so can contribute towards potential injury. After pre-screening, facilities should consider offering free personal training sessions so that members can become familiarised with the equipment and the facility.

Injuries caused by exercise and exercise equipment increased almost 45% between 2007 and 2010 according to the National Electronic Surveillance System (NEISS), a database maintained by the US Consumer Product Safety Commission (CPSC). NEISS (2012) documented 459,978 injuries during exercise and the use of exercise equipment in people ages 25 to 64. These injuries include falling off treadmills or exercise balls, tripping and falling, exercising with free weights and other equipment.

There are many fitness organisations (ACSM – American College of Sports Medicine, NSCA – National Strength and Conditioning Association, MFA – Medical

Fitness Association, IHRSA – International Health, Racquet, and Sports Club Association) who publish guidelines. Therefore, fitness facility managers/staff members have a variety of resources that may assist them in the development of their facility policies and procedures. Fitness facility owners and employees should regularly consult at minimum one of the references above. For the purpose of this paper, when references are made to the use of ACSM, the authors are referring to the ACSM's: *Health and Fitness Facility Standards and Guidelines* (Tharrett et al., 2007). Fitness facilities should also implement proper management programs to successfully minimise the risk of injuries.

The ACSM's *Health and Fitness Facility Standards and Guidelines* reflects the performance criteria established by leaders in the health and fitness facility industry. The guidelines they created are recommendations that ACSM believes that health and fitness operators should follow. These standards and guidelines are suggested best practices in order to create and sustain a safe fitness facility.

The popularity of high intensity fitness routines has made it increasingly trendy for those who are new to fitness to want to jump right into workouts that exceed their skills or physical ability. It is the responsibility of trainers/fitness instructors to evaluate their clients properly and avoid placing them in unsafe situations. All trainers/fitness instructors should receive proper certification and training on how to prescribe a safe program design with the proper progression of exercise intensity in order to decrease the incidence of injury.

More often than not, there are three distinctive types of people who walk into a fitness facility. The first is an individual who knows what they are doing. Typically, this individual has been working out for years or is an athlete. The second is someone who thinks they know what they are doing. In this scenario, the individual generally does not take the offer of free personal training lessons or the orientation that the facility offers. And third is someone who knows nothing about exercise or their limitations. In this scenario, the individual has usually joined a fitness facility at a doctor's request or, after decades, has decided it is time to get into shape. These individuals are the members that require fitness staff with advanced training to design and deliver exercise programs for special populations. Many precautions that should be addressed which a well-trained and educated fitness professional should know include but are not limited to: diabetes, heart issues, pregnancy, etc.

According to ACSM's pre-screening standards, it is highly recommended to have a doctor's note when it has been identified that a specific member discloses or states that they have been referred by a doctor due to a medical condition. A medical clearance form indicating that it is safe for them to participate in an exercise program should be submitted. In a circumstance where a member does not submit a medical clearance form, the facility should have them sign a waiver. If they choose not to do so, the member should be asked to leave the facility and should not receive services.

## **2 Orientation and health screening**

Due to the diversity of clients, fitness facilities should provide orientations to a new guest that provides an overview of the facility and its equipment. The goal of orientation is to communicate instructional or safety information that will protect its members from potential injury (Tharrett and Peterson, 2008). This provides new members with an

opportunity to seek knowledge from a qualified fitness professional, receive demonstrations on the proper use of equipment available in the facility which may also encourage questions about their specific needs.

At a minimum, all participants should have a facility orientation program that demonstrates the facility's safety policies/procedures and safe/effective principles of exercise.

Proper use of the equipment of the facility should include (Eickhoff-Shemek et al., 2009, p.232):

- Instructing participants on the proper position and execution
- Execution of exercises
- Participants must also be educated about the safe and effective principles of exercise.

As mentioned before, fitness testing and health screening may help decrease the chance of injury. Administering health history questionnaires to all new members/guests can identify any pre-existing conditions that may require exercise modification and preclude individuals from certain activities. Personal training services may offer new members the opportunity to complete a brief fitness test to identify issues in workout tactics or physical limitations. This can also assist in highlighting the areas of needed instruction: follow-up, modification, or avoidance.

### **3 Equipment**

Some major causes of injury are not following the manufacturer's recommendations, the poor maintenance of exercise equipment, and the failure of fitness staff to properly instruct/supervise. A responsibility of managing a fitness facilities operation includes the systematic inspection and routine maintenance of not only the facility, but also the equipment. Regular inspection and maintenance can identify equipment damage, normal wear and tear, and missing parts, thereby minimising the incidence of injury or death. Fitness management should implement routine inspections on all equipment, including but limited to: cardio equipment, resistance equipment, physio-balls, and Automated External Defibrillator (AED) units.

The improper use of equipment may result in serious injuries. Injuries commonly occur due to lack of knowledge of the equipment functions. It is imperative that members of the facility are properly instructed on how to exercise or use such equipment. Each piece of equipment comes with the manufacturer's recommendations and safety features including signage that should be reviewed by the owner once the equipment is purchased and received. Then, that information should be accurately conveyed to the fitness facility employees and members. Members do not always know how equipment functions. It should not be left for them to assume or independently determine. Managers/owners should follow the specifications in the owner's manual for each piece of equipment to insure the specifications are being followed properly.

"Manufacturer and/or industry instructional and warning signs need to be prominently posted for participants to see while they are preparing to use as well as using the equipment. For example, warning labels that meet ASTM specification should be posted on each piece of exercise equipment."  
(Eickhoff-Shemek et al., 2009, p.261)

#### 4 Supervision/instruction

A fitness facility should have an effective and functional plan requiring more than one person to supervise an area in order to operate effectively. Proper supervision in a fitness facility is a key factor in minimising occurrences that can lead to injuries. Adequate staff should be circulating the workout areas and monitoring all activities. Having supervisors or trainers moving about the floor can assist in the early recognition of ineffective or unsafe practices, while being readily available to answer questions and assist clients may require prompt intervention. Although each fitness facility will vary, the supervisors and trainers within the organisation should have working knowledge of exercise science, benefits of exercise, and be able to assist their members while exercising in their fitness facility.

#### 5 Emergency preparation

In the fitness industry, it is not uncommon for people to be injured and even collapse during exercise. Injuries are not age discriminate. Facilities should properly train their staff in CPR and the use of the AED. However, training alone does not suffice, therefore should be rehearsed exercises for emergency readiness. Additionally, it is important that proper signage is always visible demonstrating how to administer CPR and the location of the AED. It is equally important that each staff member should be certified in first aid, CPR, and the proper use of AED.

**Figure 1** Key components for safe fitness facility operations (see online version for colours)



Emergency management is providing employees with the essential information on how to respond in the event of injury or emergency. Often, preparedness can make the difference between life and death. An Emergency Action Plan (EAP) provides managers and staff a series of steps to assist an injured person. An EAP defines the standard of care for the management of emergencies in a fitness facility. This allows all who are working in the facility to understand his or her role when an emergency arises.

*Suggestions to assist with decreasing the incidence of injury for fitness facility/members* (Baechle and Earle, 2012):

- The proper scope of practice for trainers includes assessing, motivating, educating, and training clients/athletes.
- Facility and equipment layout, inspection, maintenance, repair, and signage.
- Facility supervision and instruction.
- Pre-participation screening and medical clearance.
- Perform appropriate fitness/functional testing.
- Personnel qualifications/certifications.
- Optimal program design based on needs and goals.
- Maintain records of inspection, maintenance, and repair of the equipment.
- Emergency preparation plans should be rehearsed (announced and unannounced) on a regular basis and followed up with timely critiques and corrective actions.
- Having AEDs available reflects a professional commitment to an emergency response.

## **6 Conclusion**

Safety is universal and does not discriminate from one country to the next. While affording the members of a fitness facility the ability to improve their overall physical health, providing a safe environment should remain a central focus of operating a fitness facility. Further, the use of existing industry standards in relation to exercise strategies and safe practices should be thoroughly communicated to employees and members alike. There are several ways in which fitness facilities can minimise the risk of injuries to their members including hiring well-trained, educated, and certified employees, as well as posting proper signage. As indicated, signage pertains to the written rules and guidelines posted on walls and in specific exercise areas throughout the fitness facility, thereby increasing overall awareness. Although exercise has its risks, there is no need to increase the risk by failing to uphold the proper application of the standards and guidelines that are readily available.

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