



AUTOMATED EXTERNAL DEFIBRILLATORS

It can happen anywhere—at work, at home or at your club. If, today, a member collapses with a sudden cardiac arrest, is your club prepared to save a life?

Part I by BARB GORMLEY

What would you do if you discovered a 65-year-old member collapsed on your doubles squash court with his bewildered friends standing over him? This past October, Matt Sharpe, fitness director of the Royal Canadian Yacht Club in Toronto, found himself in exactly this

position. As Sharpe was leaving at the end of his workday, he popped his head into the squash courts intending to say good bye to the racquets director and members who normally play at that time. But instead of a rousing squash game, he found three male members huddled over a fourth who was lying unconscious on the court.

“I ran back to the fitness centre and hollered for one of my staff to follow me,” recounts Sharpe. “I was on the court within 30 seconds of the member collapsing. His vitals were absent, so I began CPR. I told my staff member to phone 911 and get the defib.”

Once the electrodes of the ‘defib’—the automated external defibrillator or AED—were applied to the member, its

AEDs...

- are small, about the size of a laptop computer.
- analyze the heart’s rhythm and tell the user to deliver a shock if it is needed.
- are simple to use and give the user both audible and visual instructions.
- are designed to prevent a shock from being delivered if it is not needed.

mechanized voice confirmed that no pulse was present. It then advised Sharpe to press the button that would administer a shock and hopefully restart his heart. More CPR and a second shock were required, all prompted by the AED. After the second shock, Sharpe was relieved to see the member’s colour slowly change from pale purple to pink. When the AED advised him to again check for a pulse, to his relief, one was found. The paramedics then arrived, took charge and transported the member to the hospital where he made a full recovery.

THE ROLES OF CPR AND AEDS

This member had suffered a sudden cardiac arrest (SCA), a malfunction of the heart’s electrical system where the heart beats dangerously fast, the ventricles quiver (ventricular fibrillation) and blood stops being delivered to the body. Death follows unless CPR and defibrillation are begun immediately. CPR is necessary to provide oxygen to the brain until the nor-

Heart attack vs. sudden cardiac arrest

▶ A *heart attack* is caused when blood flow to the heart is blocked and the muscle begins to die. It is often preceded by chest, arm, upper abdomen or jaw pain. Nausea and sweating are common. Heart attack patients usually remain conscious.

▶ A *sudden cardiac arrest* is caused by an abnormal heart rhythm. There is rarely a warning before a sudden cardiac arrest. Victims first lose their pulses, then consciousness and finally the ability to breathe. Without the use of an AED to correct the heart’s rhythm, the victim almost always dies.

“WHAT’S THE PRICE OF SAVING ONE LIFE? JUST ASK ONE OF MY KIDS.”

WALTER GRETZKY
CANADIAN HEART & STROKE
FOUNDATION SPOKESPERSON

mal heart rhythm is restored with an electric shock to the chest.

Every day, 100 Canadians die as a result of SCA making it one of the country's leading killers. Only defibrillation can restore the heart's normal rhythm for most victims. The time from collapse to the first defibrillation attempt is the most critical factor in increasing survival. With every minute that passes, a victim's chances of survival diminish by 10%.

As increasing numbers of AED life-saving stories circulate, more and more organizations of all types and sizes are examining their operations to determine whether they should be purchasing AEDs for their companies.

THE PURCHASE PRICE

In terms of dollars, machines have come down in price from about \$5,000 to about \$2,000, says Ron Barranger, president of Innovative Medical Technologies. According to Barranger, the models that are easy to use and in the \$2,000 to

\$3,500 range are most appropriate for fitness centres. The more expensive and complex machines tend to be used in medical settings. They offer options like LED screens, ECG readouts and the ability to do manual overrides, says Barranger whose Innisfil, Ontario, company sells AEDs and provides training and maintenance services.

STAFF TRAINING

"The training is fast and easy", says Alanna Millington, owner of three Ontario Curves franchises each of which is equipped with an AED. Training organizations typically offer CPR and AED training together, says James King, president of Aquatic Development and Emergency Training in Newmarket, Ontario. His company's CPR courses, using the new simplified guidelines, are normally one-hour and CPR/AED courses are 2.5 hours.

King charges \$100 for an organization's first CPR/AED training and half that amount for recertifications; CPR

AED FAQs

What is an automated external defibrillator (AED)?

An AED has built-in computers that assess a victim's heart rhythm, judges whether defibrillation is needed and then administers a controlled electric shock. The shock forces all the heart muscles to contract at once and hopefully jolts it back into a regular rhythm. Audible and/or visual prompts guide the user through the process. A shock is administered only when the AED senses ventricular fibrillation and ventricular tachycardia.

Why are they important?

They strengthen the chain of survival by restoring a normal heart rhythm to victims of sudden cardiac arrest. A person's chance of survival decreases by 7% to 10% for each minute that passes without defibrillation.

Who can use one?

Many AEDs are designed to be used by non-medical personnel who have had CPR and AED training.

What is the Heart and Stroke Foundation of Canada's position?

It recommends that Canadians be trained in CPR and AED skills and have widespread access to AEDs.

Next issue: Part II – Should You Purchase an AED for Your Facility? If you have information, ideas or experience with AEDs that you'd like to share, please contact us at fbc@fitnet.ca.

recertifications cost \$30 to \$40. Prices vary depending on the certifying company and size of the group being trained. The user-friendly equipment coupled with good instruction leaves people feeling confident with their skills after the training, says King. "They finally have the knowledge and the tool to really make a difference and save a life." FBC

Fitness Business Canada supports the availability of AEDs in fitness facilities. We encourage our readers to respond with your stories about lives saved as well as your experiences with training, model features, staff and member response and links to medical professionals. Future stories will also provide input from AED manufacturers who have well-researched data, instruction and application skills to offer. - Editor

See our Special Advertising Feature on AED products p.60

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