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American Association of Cardiovascular
and Pulmonary Rehabilitation

Promoting Health & Preventing Disease

Two Program Models: Cardiac Rehabilitation in the U.S. and Canada

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This is **NOT** Cardiac Rehabilitation



What Is Cardiac Rehabilitation?

- Medically supervised exercise (**small groups**)
- Lifestyle interventions/
secondary prevention
- Patient education
- Multidisciplinary staff
 - Medical Director
 - Program Director
 - Exercise Physiologists
 - Nurses
 - Therapists
 - Dietician
 - Psychologist
 - Pharmacist

Core Program Components

- Patient assessment
- Nutritional counseling
- Weight management
- BP management
- Lipid management
- Diabetes management
- Tobacco cessation
- Psychological management
- Physical activity counseling
- Exercise training

Secondary Prevention

- Identify cardiovascular risk factors
- Develop and implement a risk reduction plan with target goals
- Monitor progress
- Adjust plan, as needed

Patient Education

- Determine type of educational materials
 - Commercially developed
 - Internally developed
 - Printed vs. electronic
- Determine method of delivery
 - One-on-one
 - Small groups
 - Internet

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U.S. Cardiac Rehabilitation Model

Regulations and the Model

- 36 one-hour sessions
- Up to 36 weeks
- May have more than one session per day
- Sessions may be with or without continuous ECG monitoring
- Must measure and report outcomes
- Required Individual Treatment Plan

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Aerobic Exercise



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Resistance Training



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Core Strength & Balance



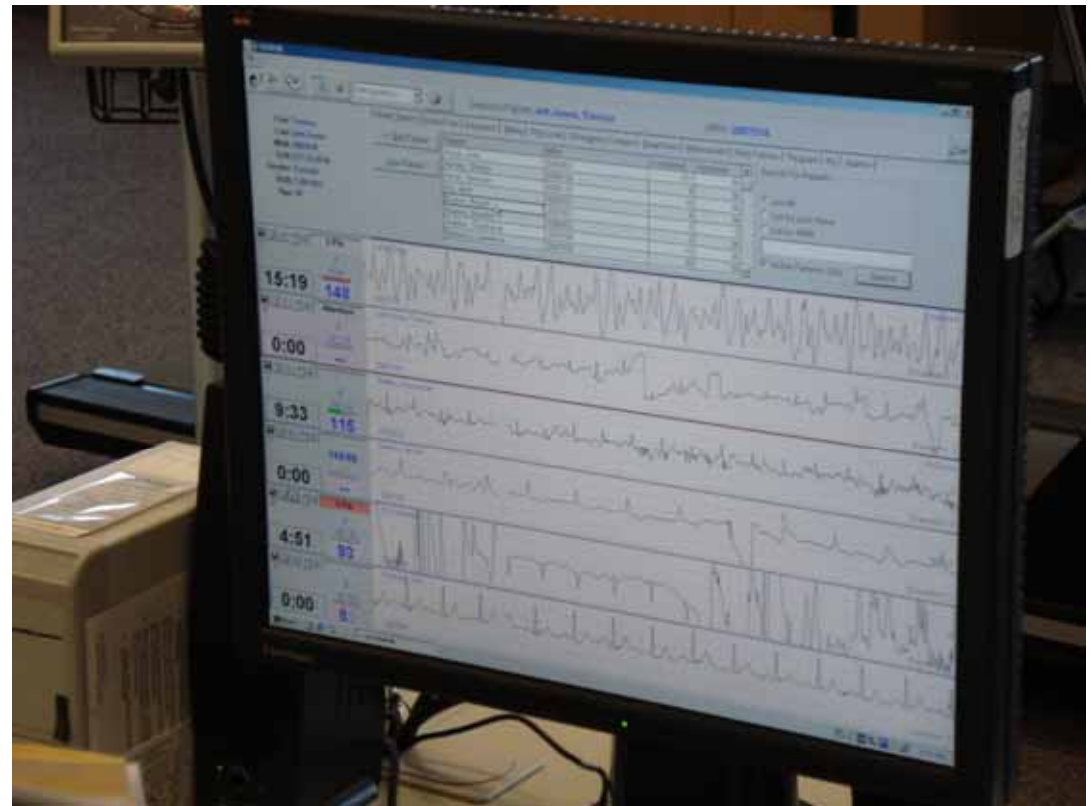
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ECG Telemetry Monitoring



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Canadian Cardiac Rehabilitation Model

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Toronto Rehabilitation Centre



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Terry Kavanagh, MD
Medical Director

Program Facts

- Started in 1968; combination of medical training + track experience
- 1973 – 7 patients completed the Boston Marathon
- 1500 annual referrals; 23,000 patients through 2000
- Intake for 85-100 new patients every 3-4 weeks
- Team = 1 cardiac rehab supervisor + 2 exercise leaders; 45-50 patients per team

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Toronto Program Format

- **Mode**: Walking or walk/jog
- **Intensity & Duration**: Pace (e.g., walk 2 miles in 35 minutes) based on CPX results; translated to minutes per lap; RPE 12-15 on Borg scale (6-20)
- **Frequency**: 5 times per week
 - 1 supervised exercise session per week
 - 4 unsupervised home exercise sessions per week

Toronto Program Format - 2

- Exercise logs used to document each unsupervised exercise session (mode, pace, HR, symptoms)
- Infrequent ECG monitoring
- Resistance training used separate, additional class

Supervised Exercise Session

- Review exercise logs since last supervised session
- Patient education topic
- Warm-up/stretching
- Supervised exercise training

Summary

- These are different program models
- No one model is best for every patient
- Need to match the model that is best for each patient
 - Accommodate patients who: live far away; have returned to work; travel frequently; have varying levels of fitness; have transportation problems, etc.
- Extended contact with the patient increases the level of success for secondary prevention and education