

“Coming from  
Behind! Respiratory  
Therapy Then and  
Now.”

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1. Elisha-Kings 2

4:32 – 35

First Recorded CPR

## 2. 6000 BC – 350 BC

introduction of Aromatherapy

Egypt (3150 – 2925 BC) Tracheostomy

China (2600 BC) Inhalation therapy for asthma

Egypt (2400 BC) TB in mummies. Potts disease

India (2000 BC) Inhalation therapy

Aristotle (350 BC) first recorded experiment in respiratory physiology

### 3. 100 AD – 1800 AD

Maimonides (1119) “A treatise on Asthma”

Lu Lius (1275 AD) ETHER

William Harvey (1600s AD) Heart and Circulatory System

Joseph Priestley (1775 AD) discovers O<sub>2</sub>

Antoine Lavoisier (1775 AD) Principles of breathing- names oxygen

1800s AD- Atomizers and nebulizers developed in France

Thomas Beddoes (1800 AD) Inhalation treatment with O<sub>2</sub> for asthma and heart disease

#### 4. 1800 AD – Present

Alfred F. Jones (1864 AD) earliest enclosing iron lung in Lexington Ky.

Albert Blodgett (1891 AD) 6LO<sub>2</sub> administered

1900s AD- Combustible powders and cigarettes with stramonium in asthma

Rudolf Eisenmenger (1906 AD) portable respirator

Jack Emerson (1906 AD) positive pressure breathing decreases pulmonary edema

1907 AD- Linde Air Products Co. founded – industrial O<sub>2</sub> regulator developed

#### 4. Continued

Stokes (1917 AD) rubber nasal catheter and nasal prongs O<sub>2</sub> for pulmonary edema

J.J. Meltzer (1917 AD) IPPB

John Haldane (1917 AD) O<sub>2</sub> mask

Leonard Hill (1920 AD) first O<sub>2</sub> tent

Alvan Barach (1920 – 1928 AD) studies O<sub>2</sub> therapy with ABG; uses O<sub>2</sub> therapeutically

Max Soroka – heads first O<sub>2</sub> department

Linde (1928 AD) O<sub>2</sub> regulator 1 – 15 LPM

Drinker & Shaw (1927 AD) first iron lung to receive widespread use

Parke Davis (1930 AD) hand bulb nebulizer

## 4. Continued

Jack Emerson (1930 AD) Infant iron lung

Alvan Barach (1931 AD) O<sub>2</sub> in CHF

Linde (1933 AD) Commercial medical-grade O<sub>2</sub> G  
cylinder

Alvan Barach (1934 – 1948 AD) pursed lip breathing  
in COPD; IPPB for pulmonary edema; O<sub>2</sub> flow nebulizer  
therapy; exsufflator to stimulate coughing

Linde (1930s) production and delivery of bulk liquid  
O<sub>2</sub>

British O<sub>2</sub> CO (1935) O<sub>2</sub> piping system to hospitals

## 4. Continued

Luble & Hall (1936) cuirass respirator

Boothby et. Al (1938) mask for 100% O<sub>2</sub>

1940s – Early electric compressor nebulizer

1947 – IPPB machines in hospitals

1948 – Monaghan Ventalung respirator

1952 – Engstrom Volume respirator

Forrest Bird (1955) Bird Mark 7 respirator

1955 – Bennett TV – 2P respirator

1956 – Riker Labs – first pressurized MDI for  
Epinephrine and Isoproterenol



## 4. Continued

Peter Safar & James Elan (1956) mouth – to – mouth resuscitation

\*I begin my journey\*

1960s – Beta – agonist short – acting bronchodilators for asthma

1960 – Dr. Jude et.al – today's CPR

James Hardy ( 1965) research on portable liquid O<sub>2</sub>

Borema et.al (1965) Hyperbaric O<sub>2</sub> in clinical medicine

## 4. Continued

1975 – Infant CPAP; CPAP for OSA

1980 – Nott trial

1980s – High frequency ventilation

1982 – improved selective B2 agonist  
bronchodilator

Kent Christopher (1982) transtracheal O<sub>2</sub>

1985 – Pulmonary Rehab

## 5. My Experience

Medical school: 1961 – 1965

Internship: 1965 – 1966

Residency in Internal Medicine:  
1966 – 1969

Pulmonary Fellowship: 1969 - 1971

# Inhalation Treatments:

- ▶ IPPB
- ▶ Bulb and Compressor handheld nebulizer
- ▶ Pump and Compressor nebulizers
- ▶ MDIS
- ▶ Cough Devices – Vest Incentive Spirometry

# O2 Therapy:


- ▶ Tents
- ▶ Catheter
- ▶ Nasal Prongs
- ▶ O2 Masks
  - ▶ Simple Mask
  - ▶ Non-rebreather
  - ▶ Venti-masks
  - ▶ 100% O2 mask

# Ventilators:

- ▶ Bird – Modified with Puritan Bennett Expiratory Spirometer
- ▶ Moerch Ventilator
- ▶ Air Shields
- ▶ Ohio 560
- ▶ Bennett MA-1, MA-2, and recent generations
- ▶ Emerson
- ▶ Engstrom

# Ventilators Continued:

- ▶ Non-invasive ventilation
- ▶ High Frequency Experience
  - ▶ VDR – Bird – high frequency percussion
  - ▶ IPV – Bird
- ▶ Liquid Ventilation

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- ▶ Polio Experience:
    - ▶ Iron Lung
    - ▶ Cuirass Shield
    - ▶ Exsufflator
  - ▶ Pulmonary Rehab:
    - ▶ Outcomes Study
  - ▶ Hyperbaric O<sub>2</sub>



## 6. Respiratory Therapy: Evolution from Broom Closet to Current Status

changes in title

Training

Scope of practice

Therapist driven protocols