EXTREME ACIDOSIS

IN CARDIAC ARREST

HOW LOW CAN YOU GO?

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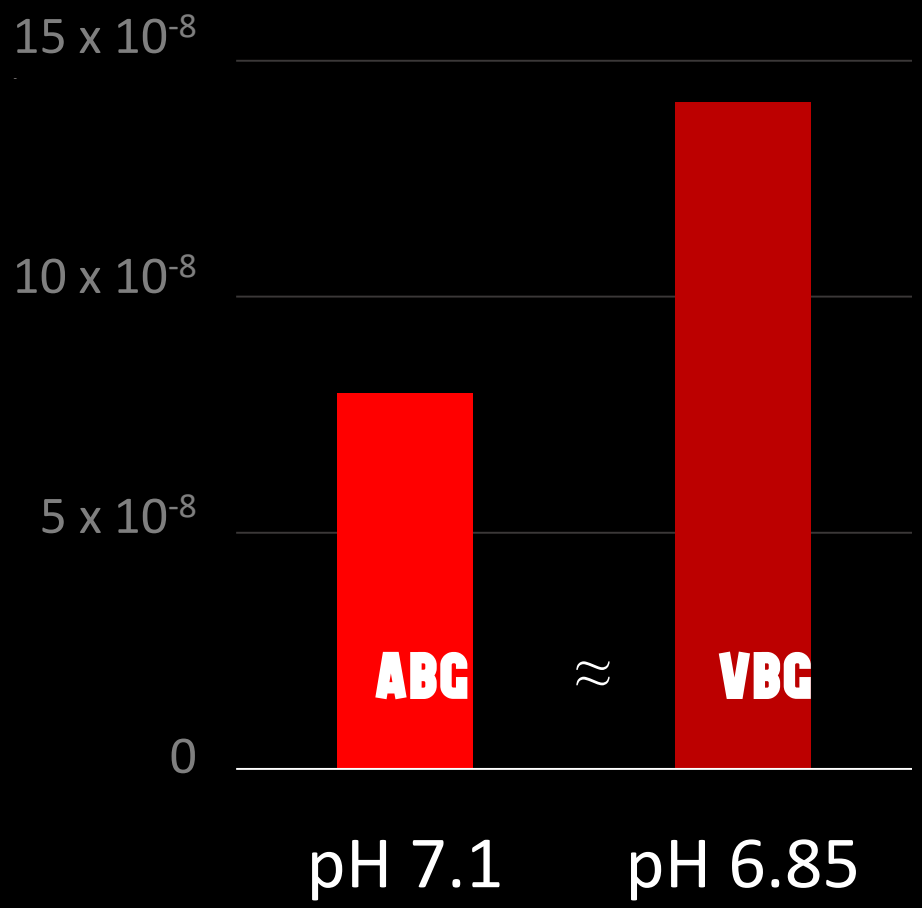
ACIDOSIS

PHYSIOLOGY

PROGNOSIS

LOWER LIMITS

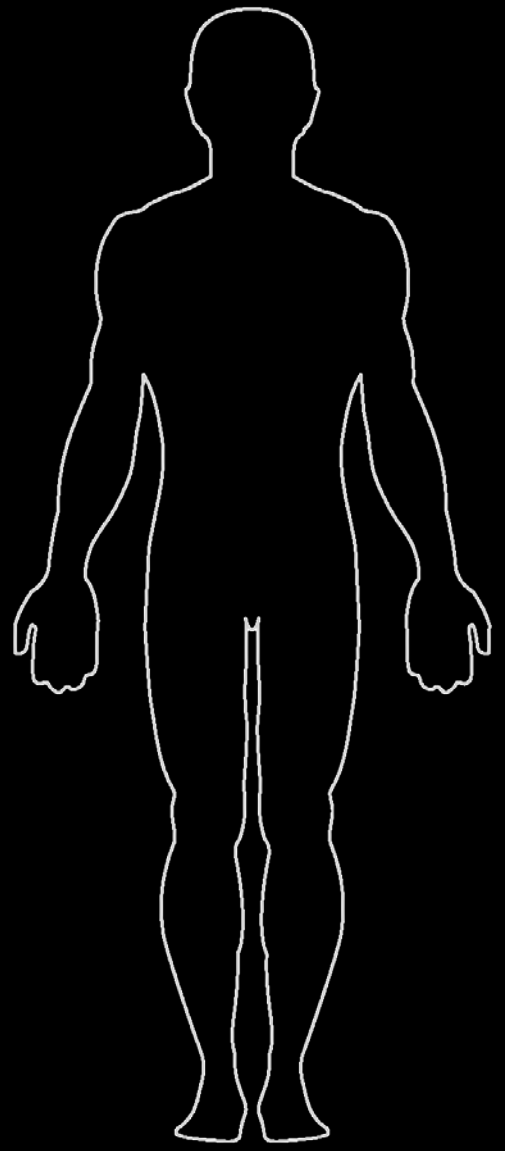
Different H^+ concentrations in cardiac arrest



Park 2015, William 2014, Weil 1986

METABOLIC
(always)

↓ BE 1mmol /min



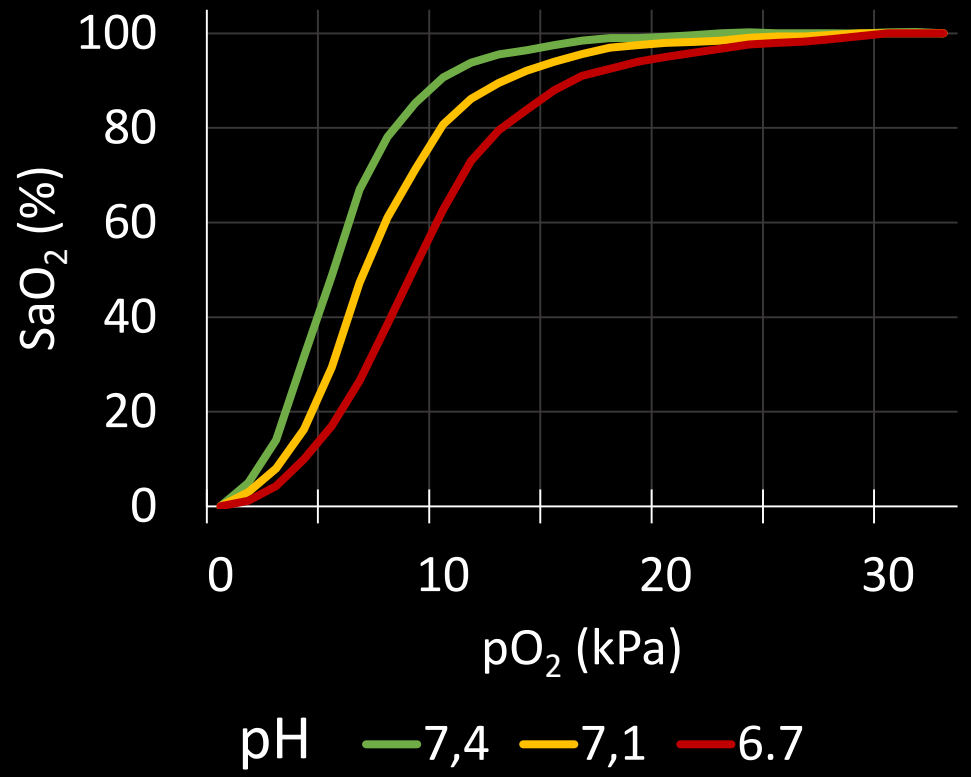
RESPIRATORY
(often)

Dead space?

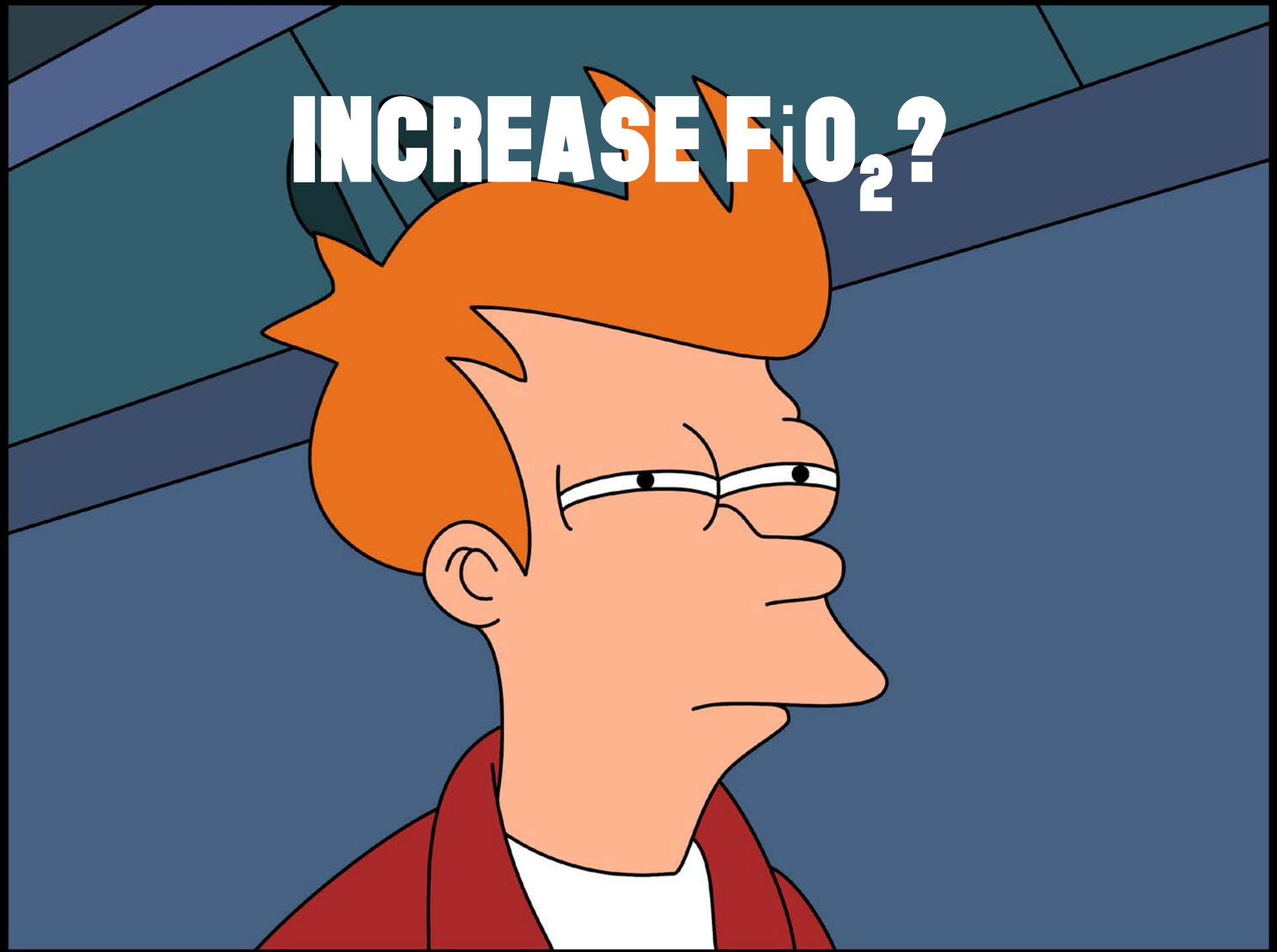
(CPP = Coronar **P**erfusion **P**ressure)

Leadingham 1962, Makino 2005, Spindelboeck 2016, Aufderheide 2004

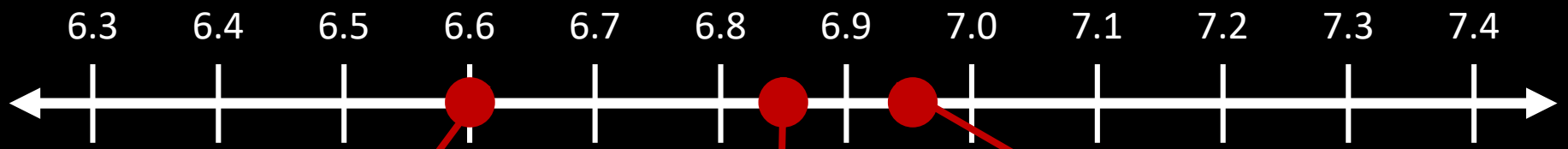
Arrhythmic
Inotropy↓



Orchard 1994, Gaskell 1880, Seguchi 1989, Shapiro 1990, Martin 1989, Refsum 1997, Llijitos 2016


INCREASE FiO_2?

SaO_2 94-98% ✓



ICU

NON-ARREST

GRAND MAL

Bozzutto 1988, Orringer 1977, Paz 2014

✓ PHYSIOLOGY

PROGNOSIS

LOWER LIMITS

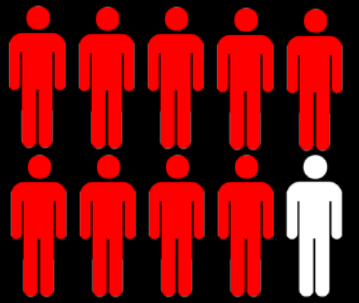
PROGNOSIS

ED

ICU

PH < 7 & WITNESSED

admitted to ICU



10% survived

Edmonds-Seal 1966, Ganga 2013, Funk 2009, Allyn 2016, Spindelboeck 2016, Farzi 2013

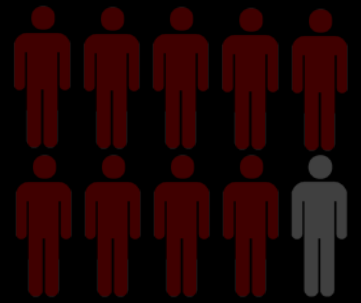
PROGNOSIS

PRE-HOSPITAL ED ICU

EARLY ACIDOSIS did **NOT** predict hospital admission

PH < 7 & WITNESSED

admitted to ICU



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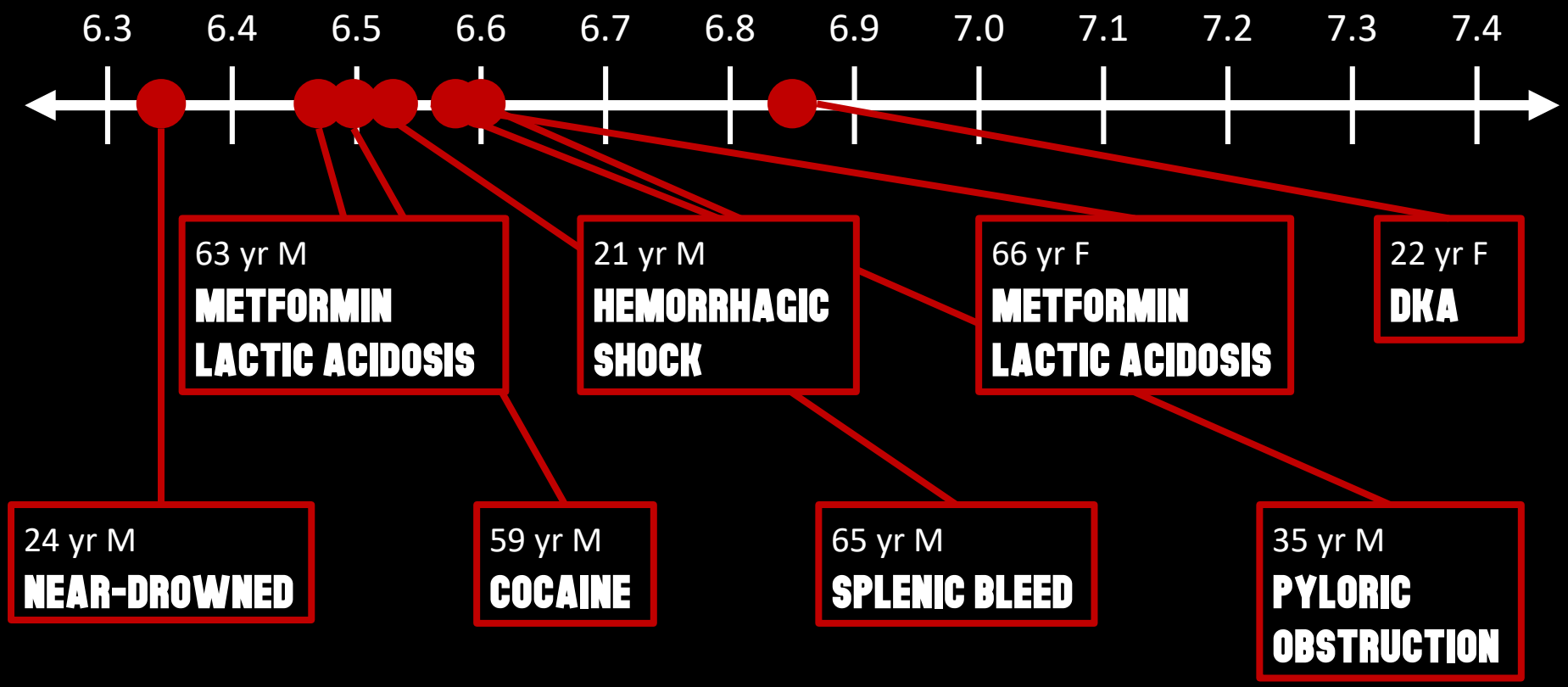
Edmonds-Seal 1966, Ganga 2013, Funk 1998, Allyn 2016, Spindelboeck 2016, Farzi 2013

✓ PHYSIOLOGY

✓ PROGNOSIS

LOWER LIMITS

CARDIAC ARREST + EXTREME ACIDOSIS



Soler 1974, Warner 2001, Ncomanzi 2014, Spencer 2010, Di Rollo 2012, Smith 2015, Spencer 2009, Opdahl 1996

1

PH IN ARREST:

ABG ≠ VBG

2

EXTREME ACIDOSIS:

NEEDS HIGH FIO_2

3

PH ↓ IN ED = PROBABLY WORSE PROGNOSIS

4

PRE-ARREST ACIDOSIS = EXTREME ACIDOSIS SURVIVABLE