

# **C**ardio **P**ulmonary **R**escucitatio

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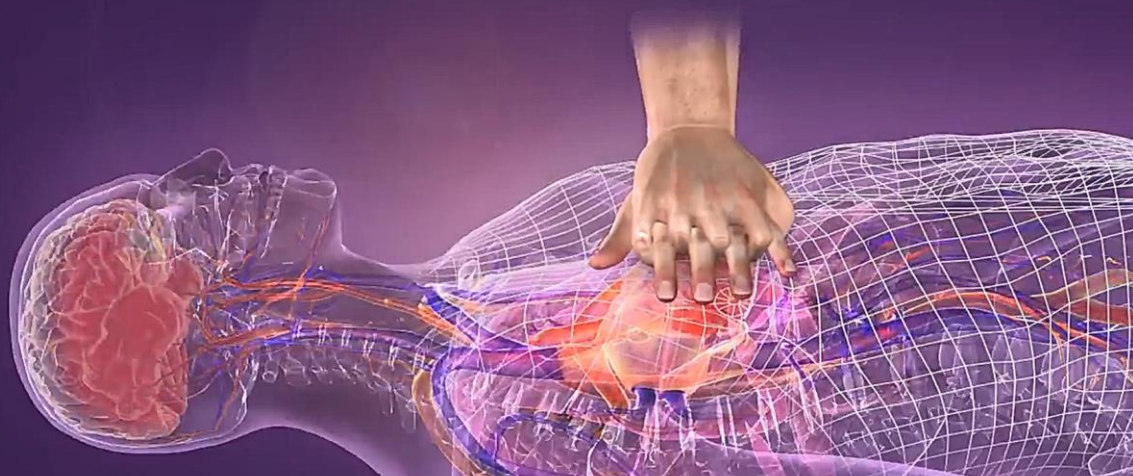
*Evaluasi TOT HPGABI Daring 2020*

# Cardio Pulmonary Resuscitation

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*Evaluasi TOT HPGABI Daring 2020*





Ns. I Kadek Saputra., S.Kep., M.Erg

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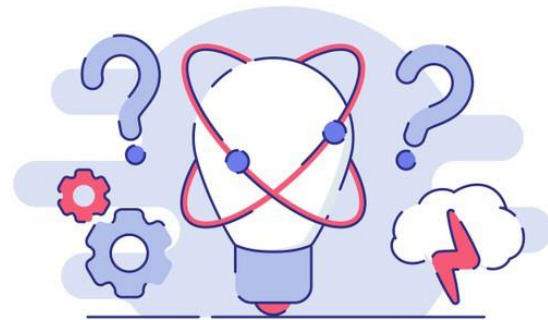
**MARI BELAJAR BERSAMA -  
TETAP SEHAT  
TETAP SEMANGAT  
LUAR BIASA**



# Cardio Pulmonary Resuscitation



**PENDAPAT**  
**Saudara**



PROCESSING IDEA



# Indikator Hasil Belajar



**1. Menjelaskan konsep dasar *CPR***

**2. Melakukan *High-quality CPR* untuk dewasa**

**3. Melakukan *High-quality CPR* untuk anak dan bayi**

# POKOK BAHASAN



1

**Konsep  
dasar *CPR***

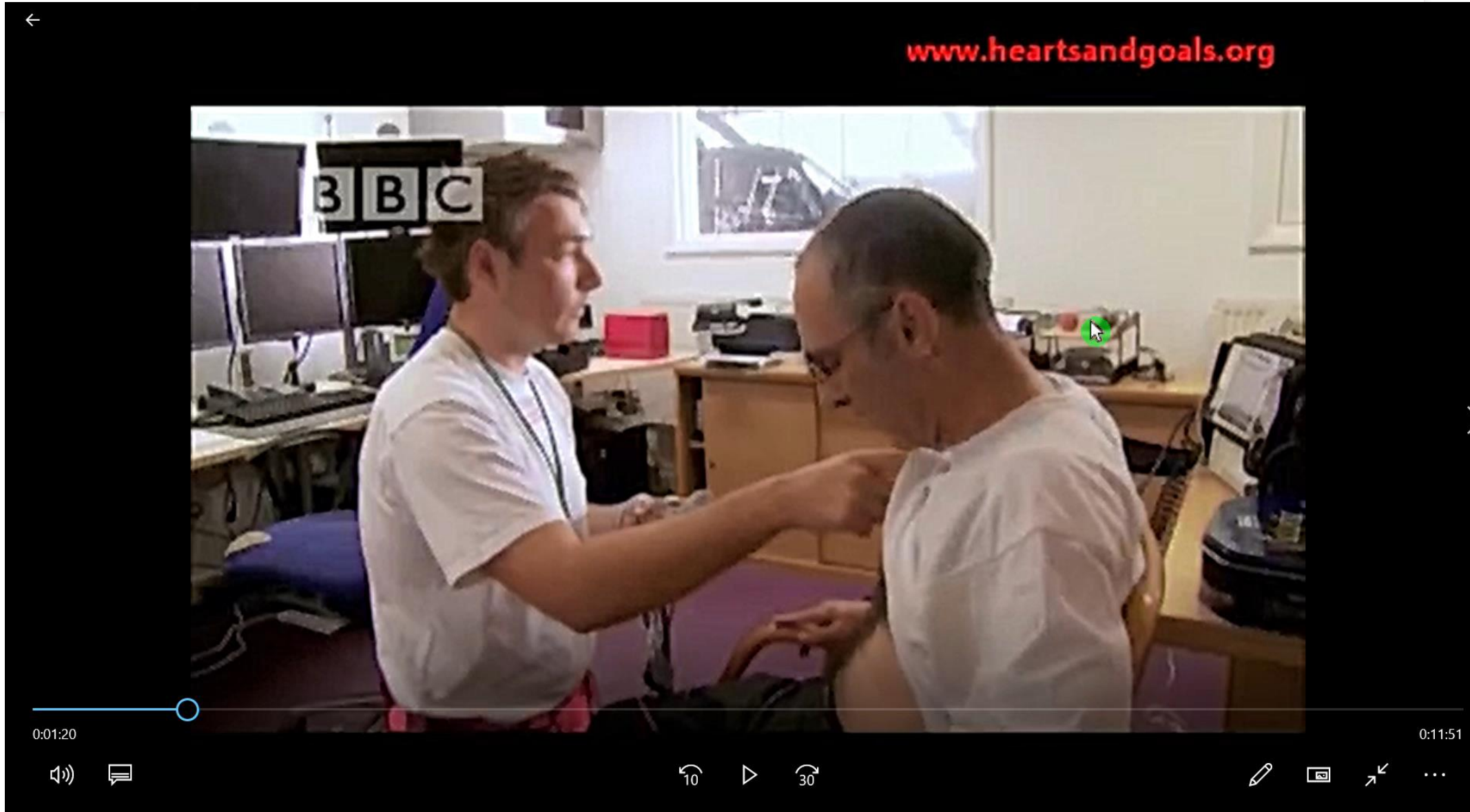
2

***High-quality  
CPR* dewasa**

3

***High-quality  
CPR* anak  
dan Bayi**

# Rii CPR

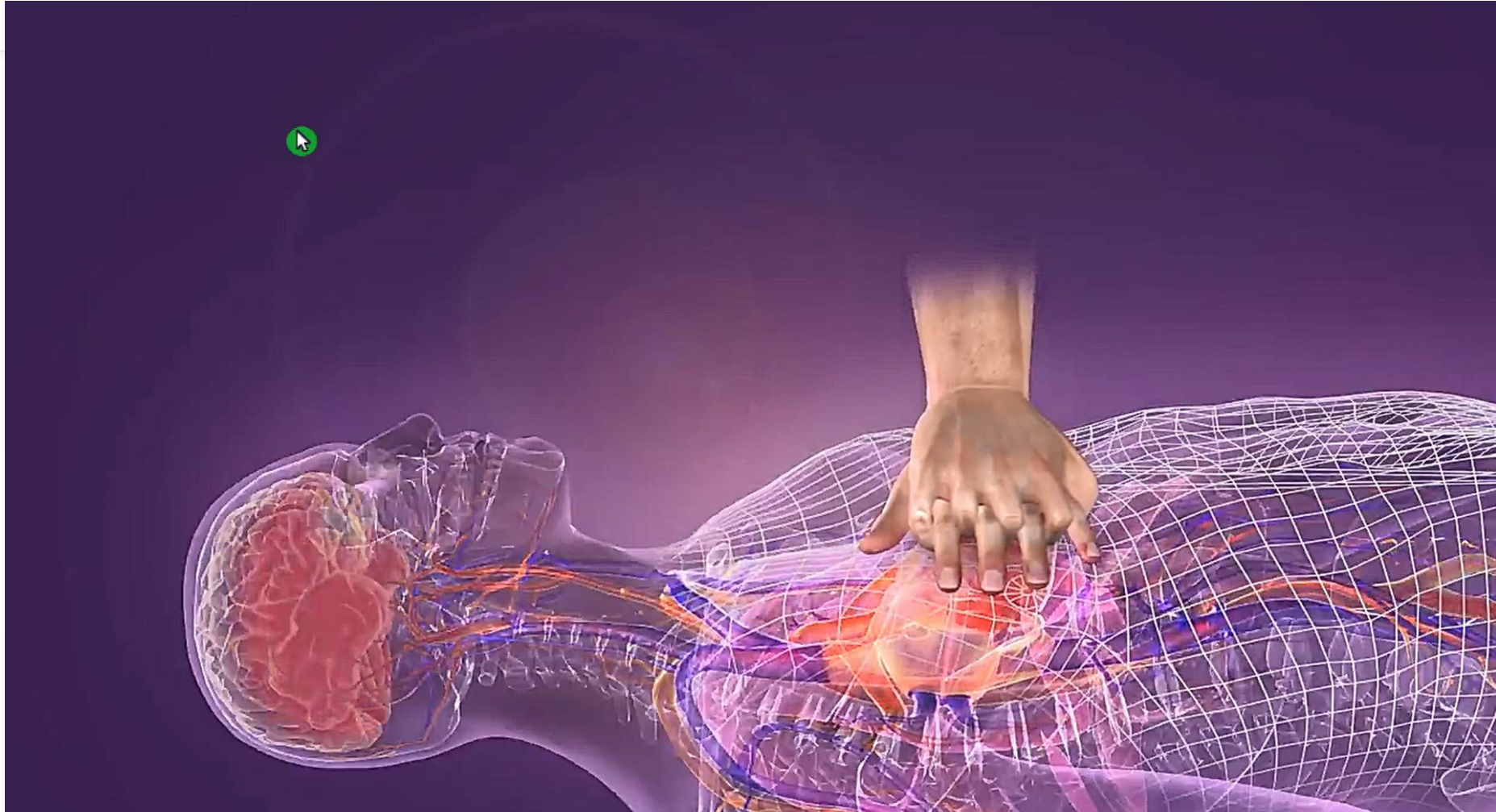




# CPR pada manikin -training



# CPR Knowledge

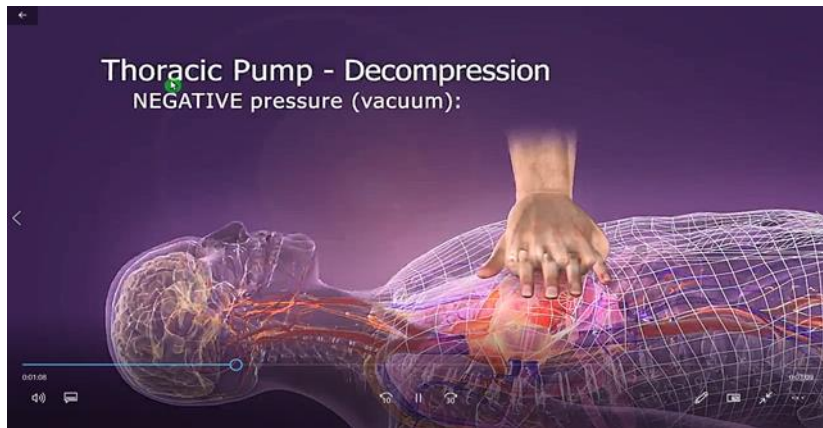
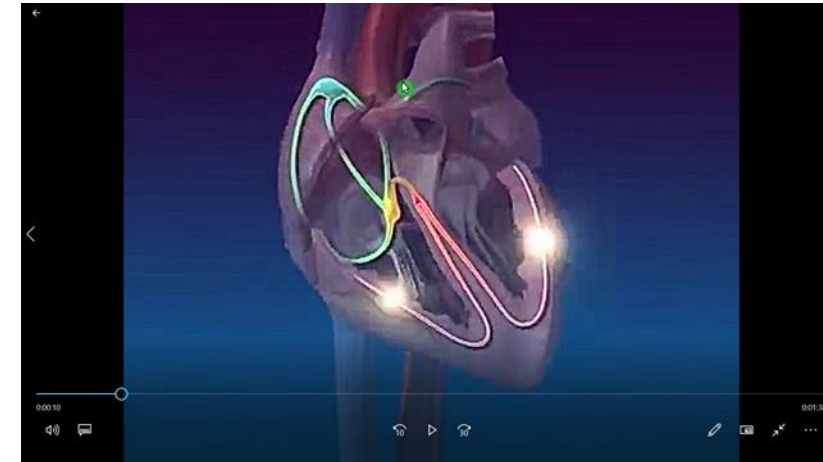
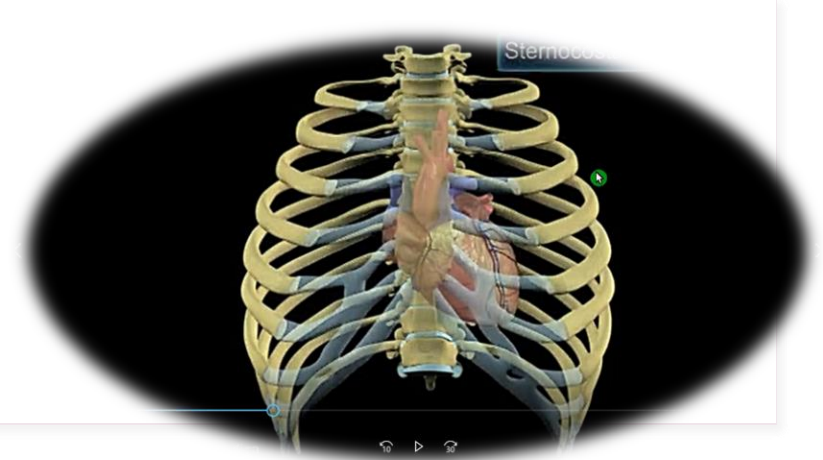


1

# Konsep dasar

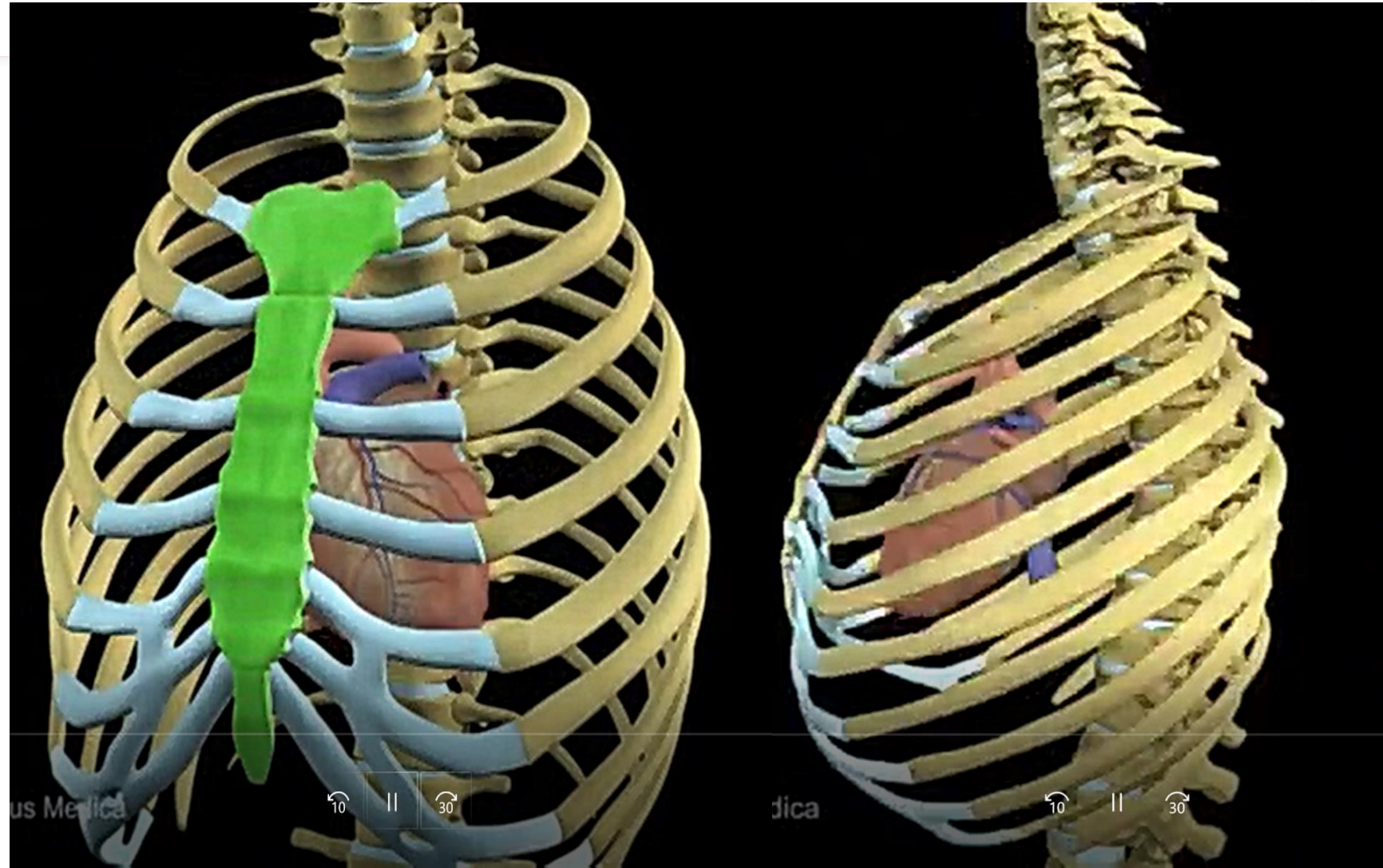
- Anatomi
- Fisiologi
- Biomekanika

# CPR

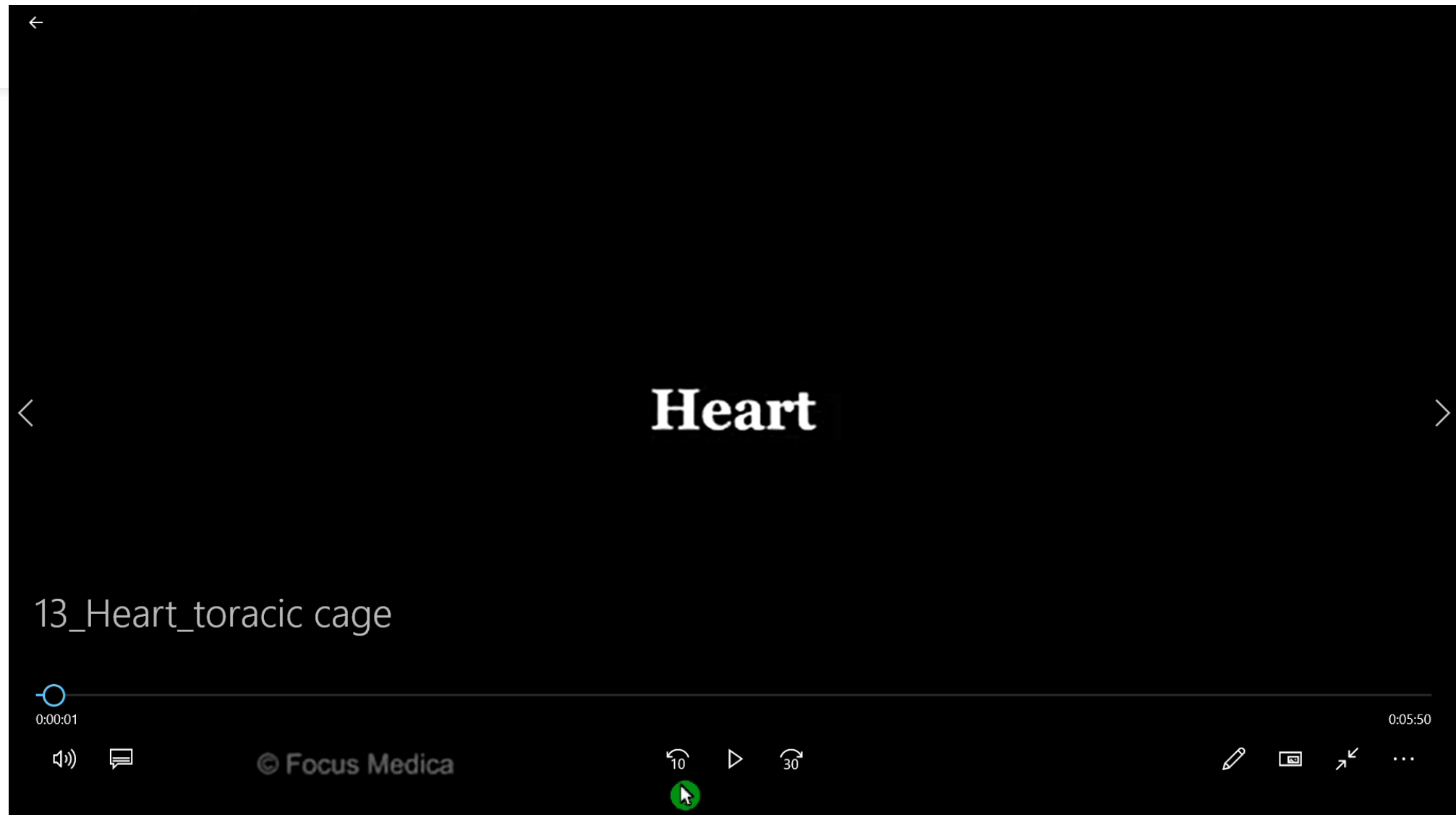


# ANATOMI DINDING DADA - CPR

- Sternum
- Iga
- Sendi
- Rongga dada
- MS Torakal

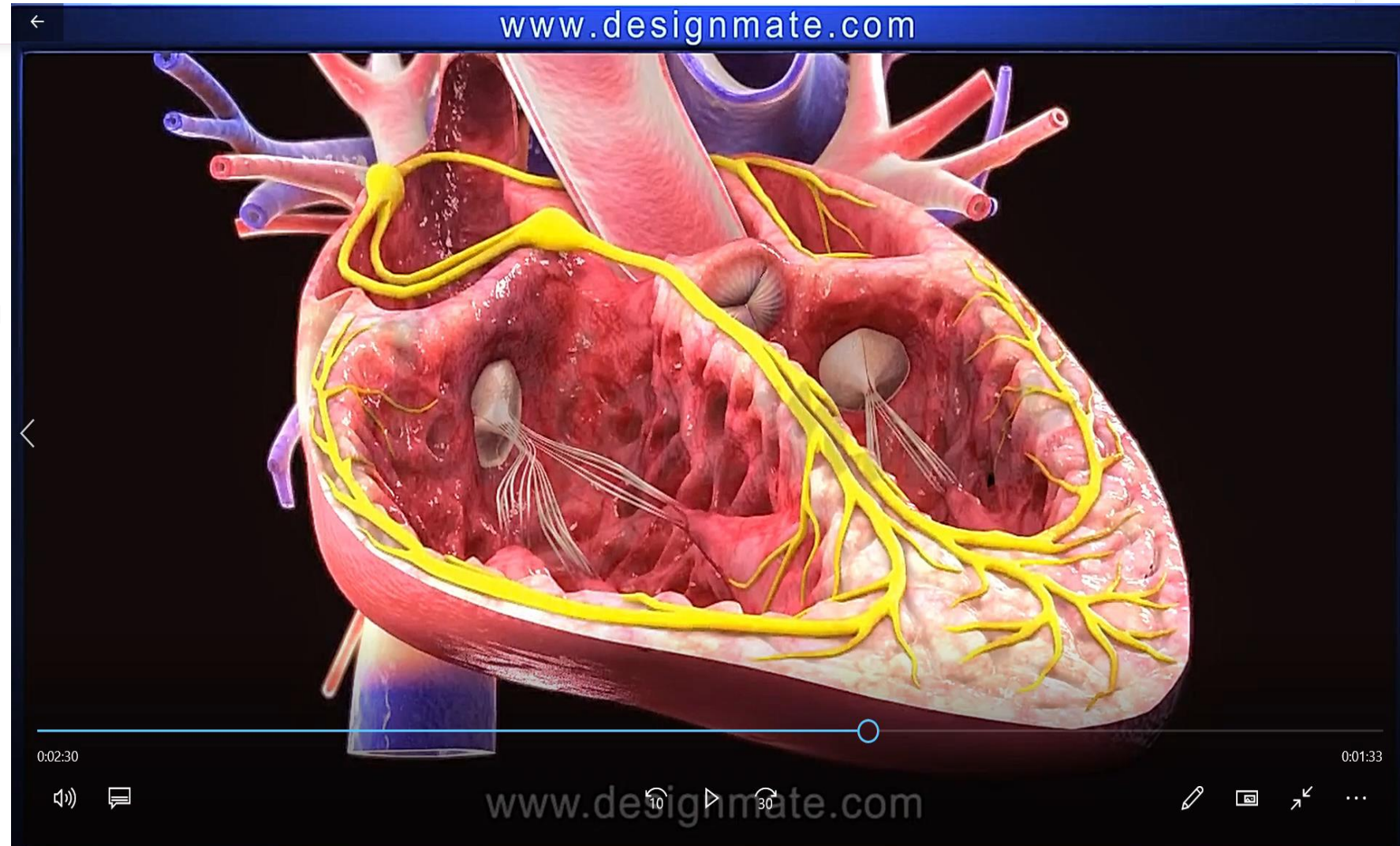


# ANATOMI DINDING DADA - CPR



# FISIOLOGI - Sirkulasi

- **Jantung**
- **Darah**
- **Pembuluh darah**
- **Sirkulasi**
- **Oksigenasi**



# **FISIOLOGI - Sirkulasi**

[www.designmate.com](http://www.designmate.com)

# BIOMEKANIKA CPR - High Quality CPR

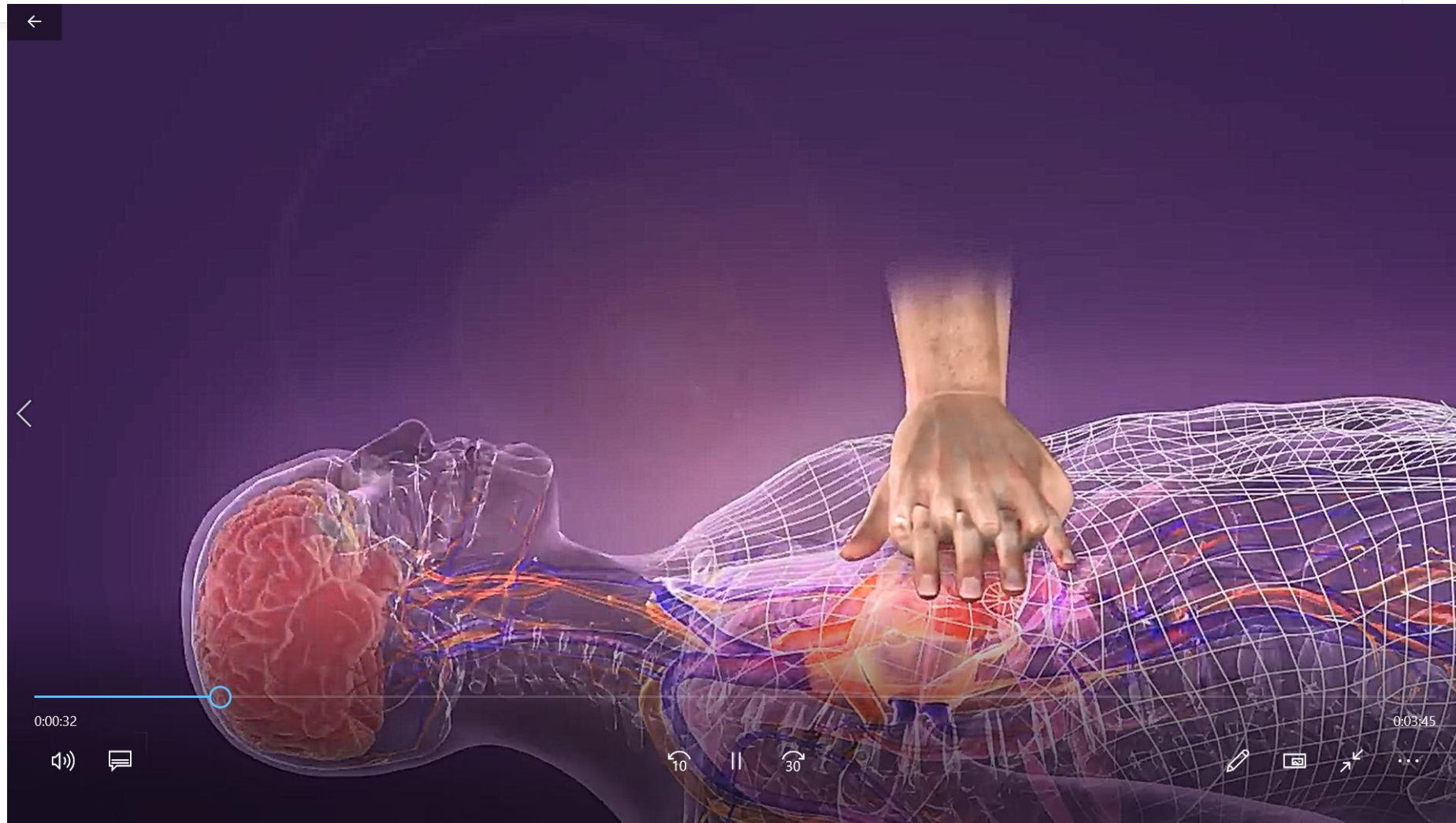
- Kompresi-dekompresi
- **Blood-Air flow**
- Cardiac pump
- **Thoracic pump**
- High Quality CPR





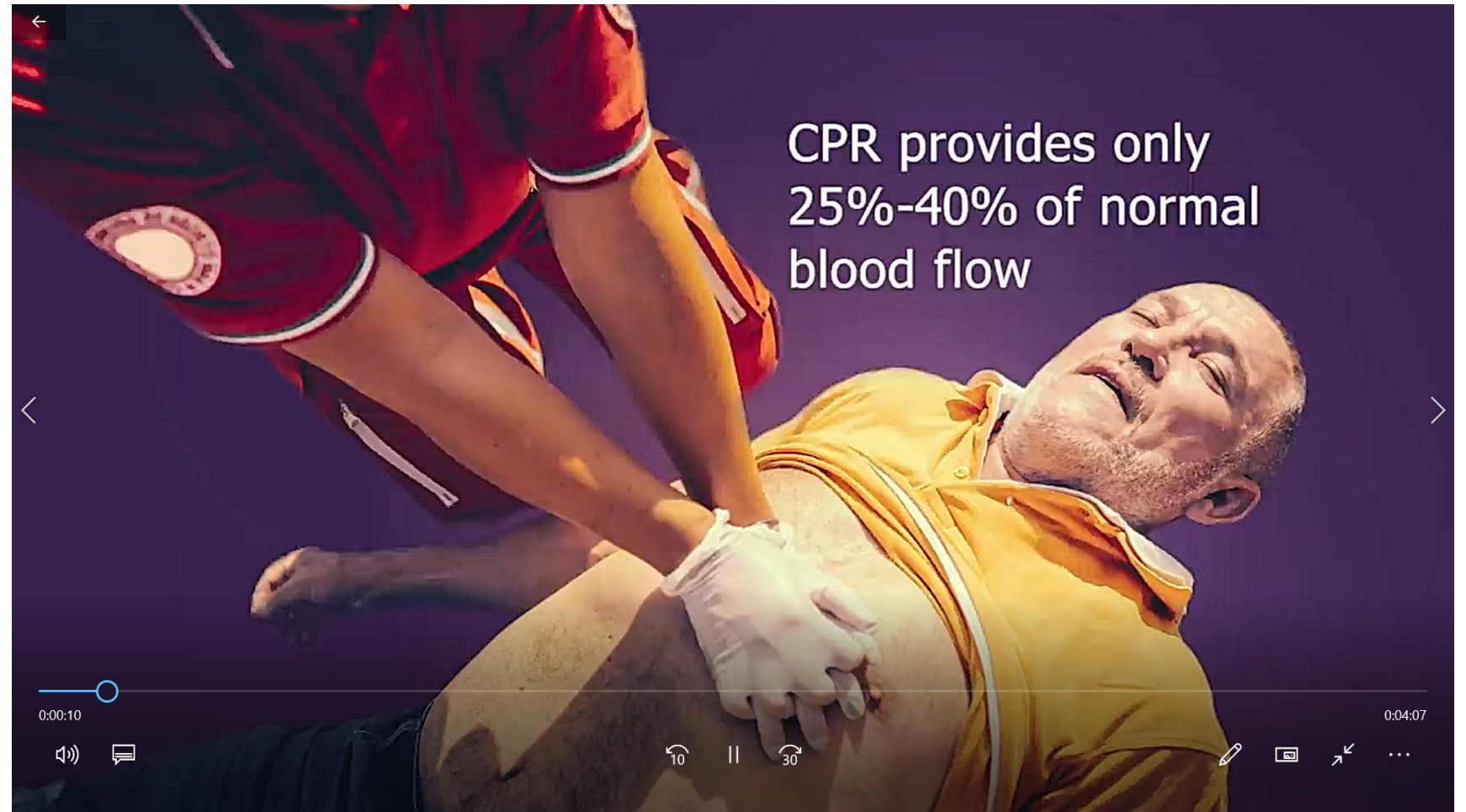
# BIOMEKANIKA CPR - High Quality CPR

- **Kompresi -**  
**Cardiac**  
**output**
- **Dekompresi -**  
**end diastolic**  
**volume**



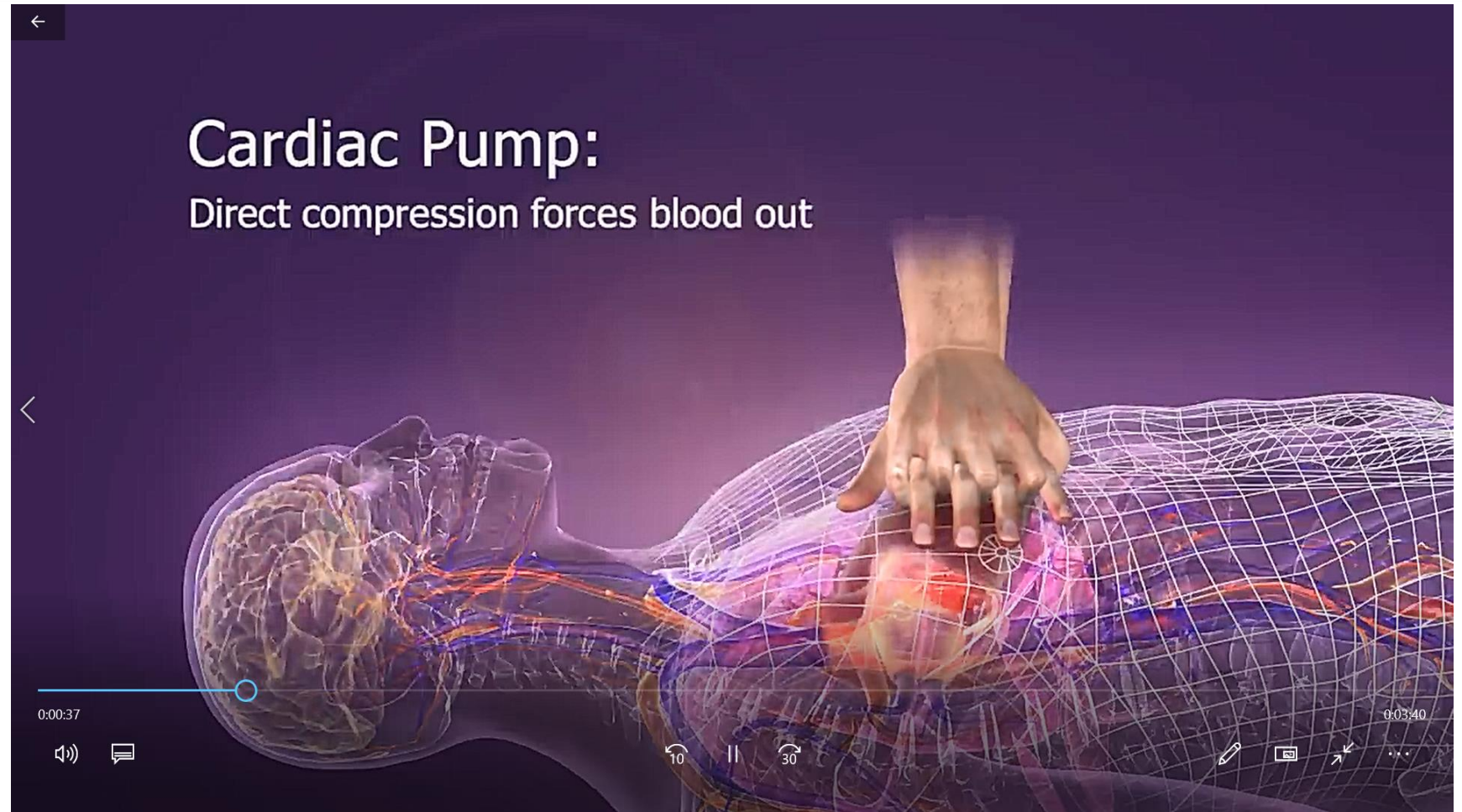
# BIOMEKANIKA CPR - High Quality CPR

- **Kompresi -  
Cardiac  
output**



# BIOMEKANIKA CPR - High Quality CPR

- **Cardiac pump**



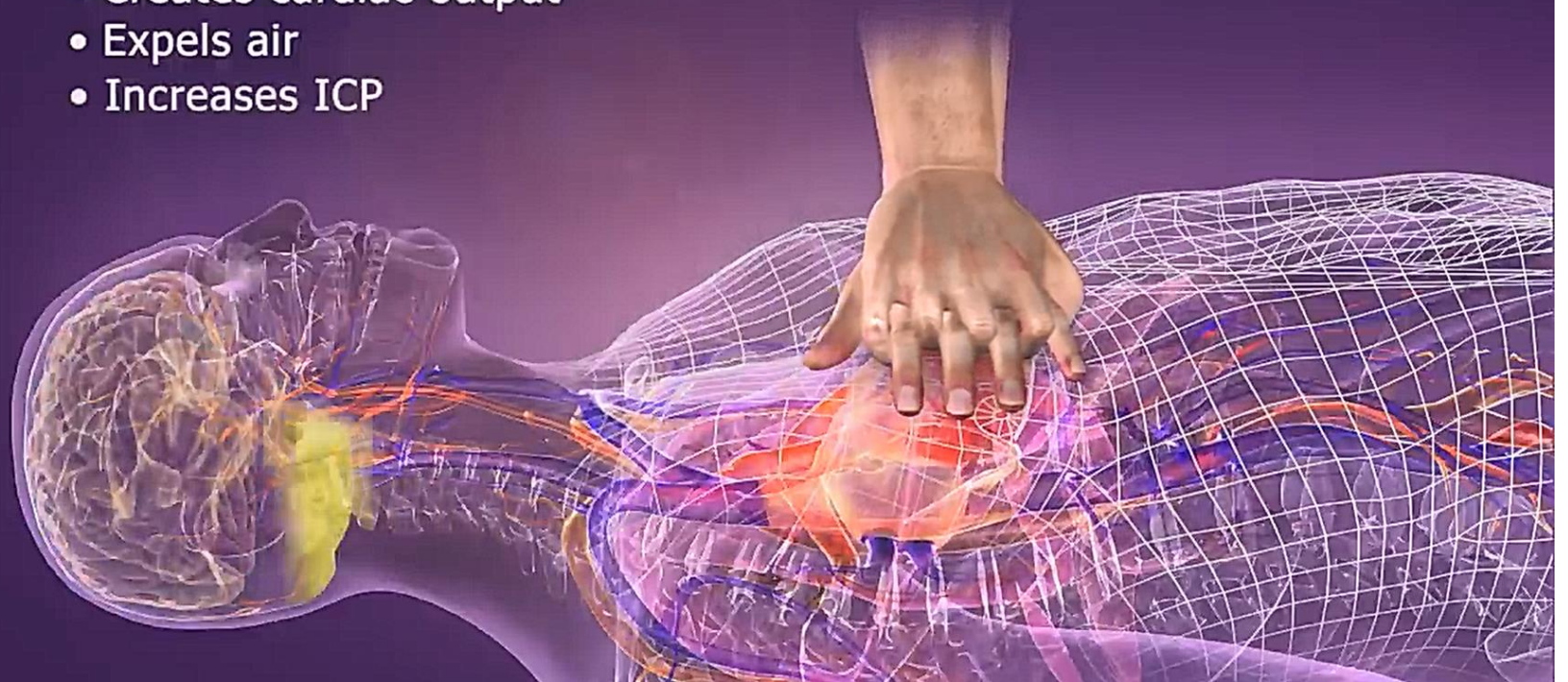
# BIOMEKANIKA CPR - High Quality CPR

- **Thoracic pump**

## Thoracic Pump - Compression

POSITIVE pressure:

- Creates cardiac output
- Expels air
- Increases ICP



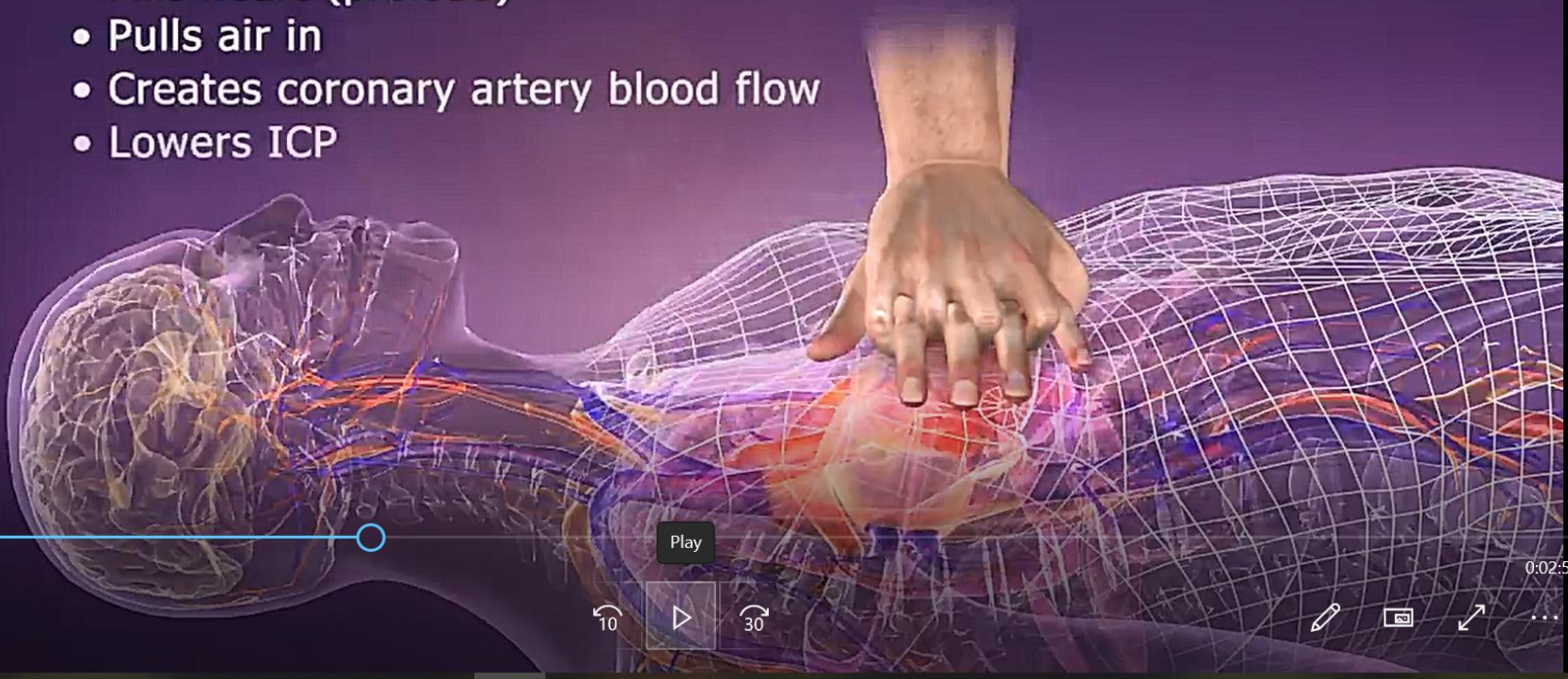
# BIOMEKANIKA CPR - High Quality CPR

- **Thoracic pump**

Thoracic Pump - Decompression

NEGATIVE pressure (vacuum):

- Fills heart (preload)
- Pulls air in
- Creates coronary artery blood flow
- Lowers ICP



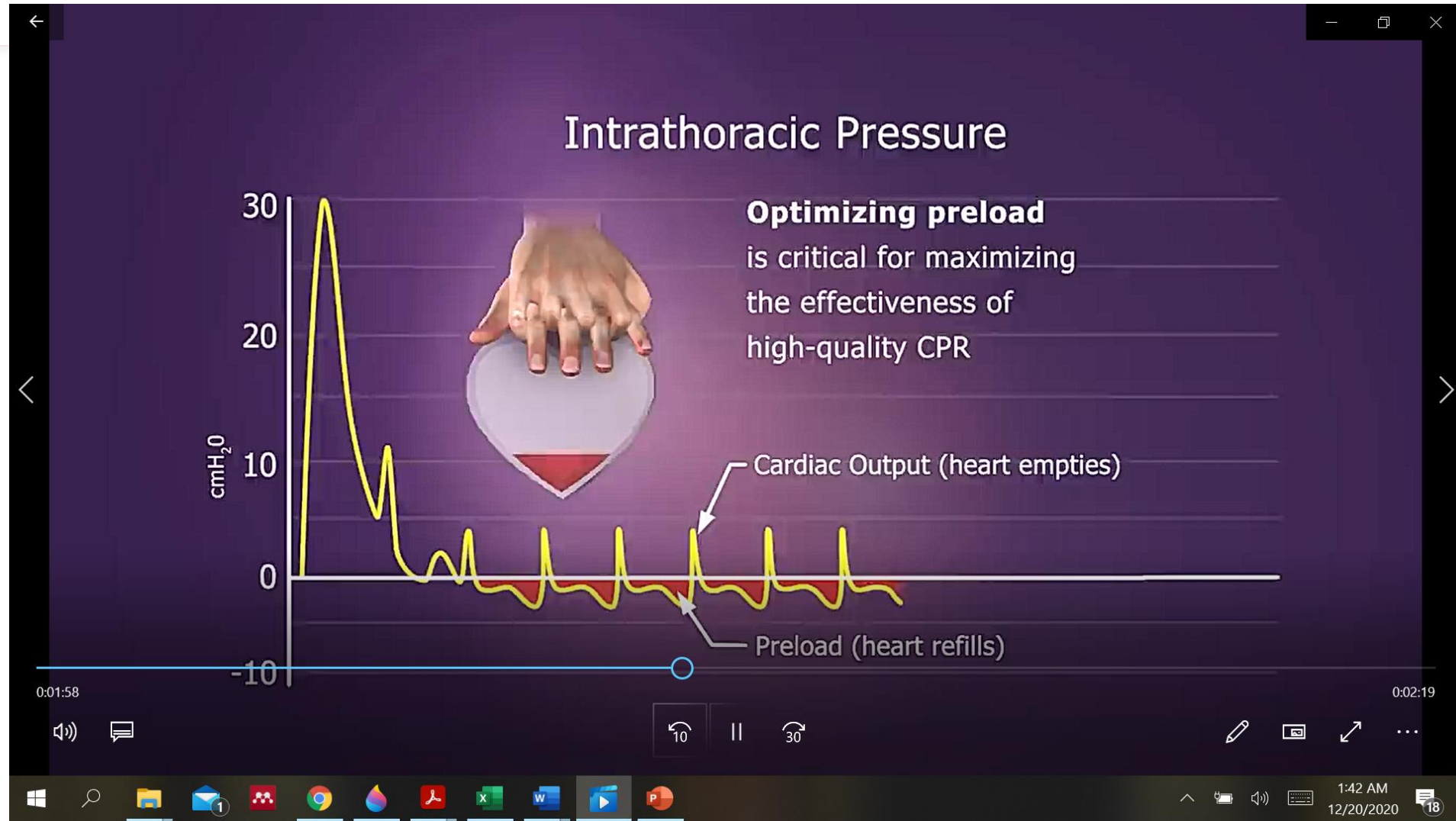
The diagram illustrates a 3D anatomical model of a human torso. A hand is shown performing chest compressions on the sternum. The internal organs, including the heart, lungs, and major blood vessels, are visible through a semi-transparent wireframe body. The heart is highlighted in red, and the lungs are in purple. The diagram is part of a video player interface, with a play button and a progress bar visible at the bottom.

0:01:23

0:02:54

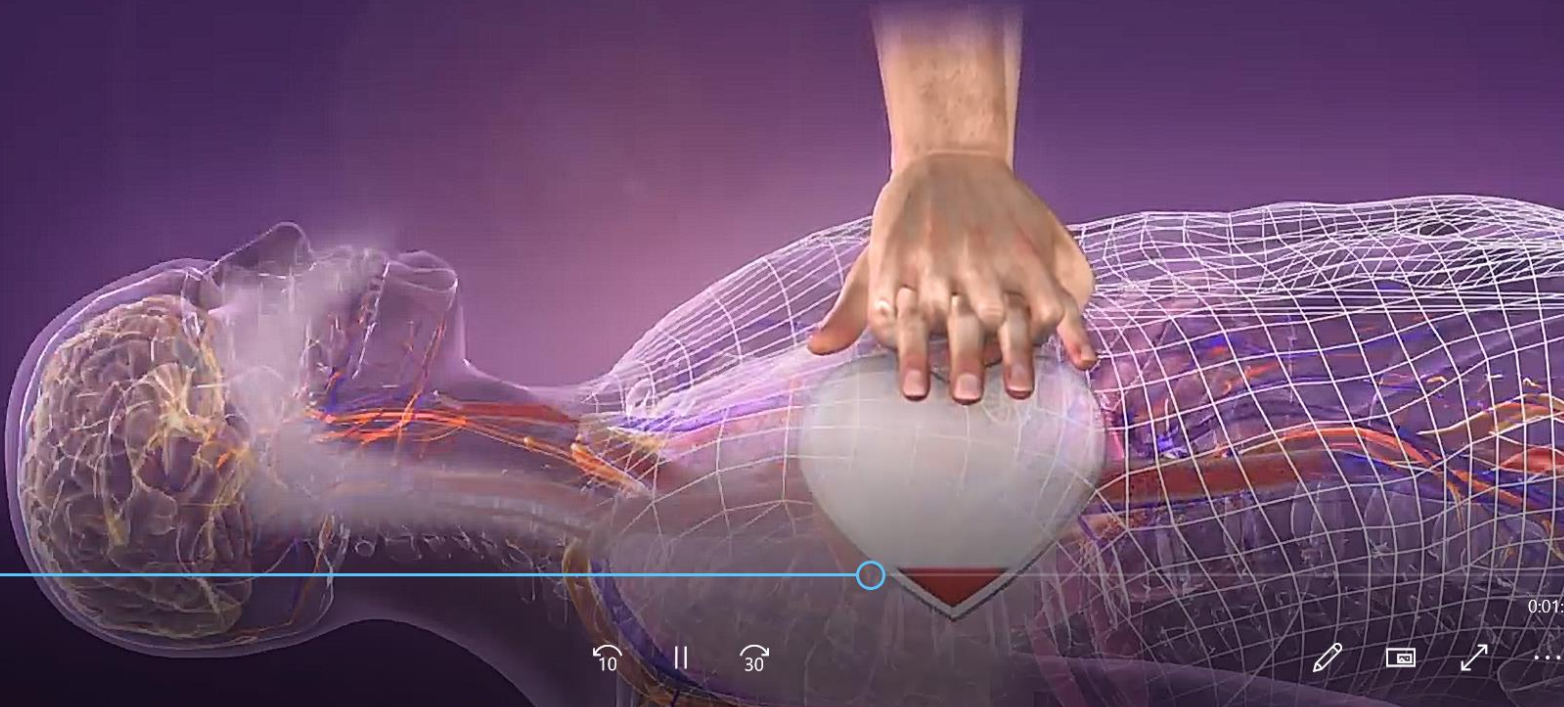
1:41 AM 12/20/2020

# BIOMEKANIKA CPR - High Quality CPR



# BIOMEKANIKA CPR - High Quality CPR

Air is drawn in, eliminating the vacuum required to fill the heart



A 3D anatomical diagram of a human torso, rendered in a wireframe style with a purple and blue color scheme. A hand is shown performing chest compressions on the chest. The heart is highlighted in a light blue color. The diagram illustrates the biomechanical process of CPR, showing how the hand's pressure on the chest compresses the heart, forcing blood out, and then how the chest recoils, drawing air into the lungs to fill the heart.

0:02:36 0:01:41

Windows taskbar: 1:45 AM 12/20/2020

# BIOMEKANIKA CPR - High Quality CPR

## **Compressing TOO SLOW**

(<100/min) generates  
insufficient pressure

## **Compressing TOO FAST**

(>120/min) doesn't allow  
enough time for heart to fill

## **INCOMPLETE Chest Wall Recoil**

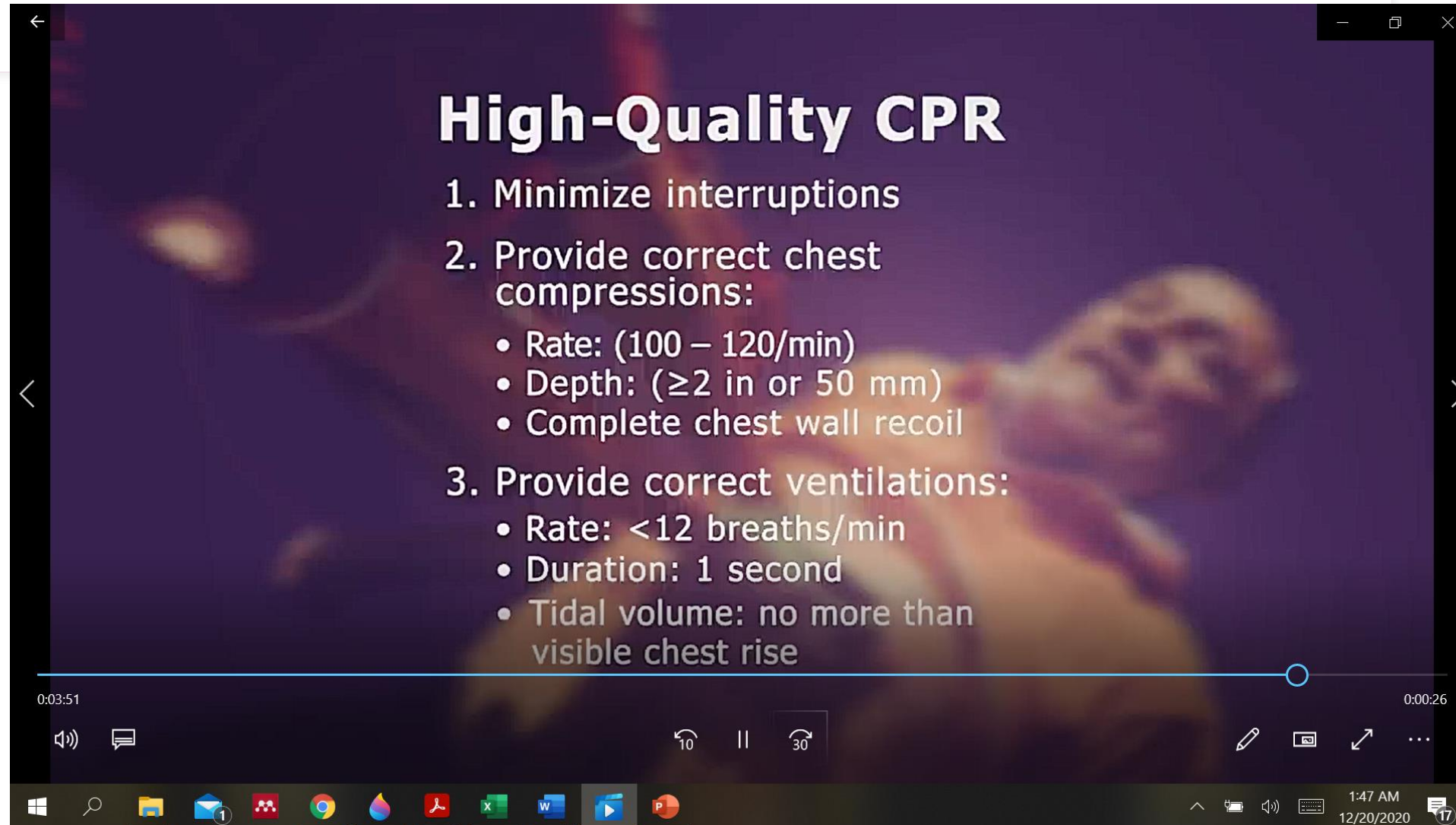
diminishes preload





# BIOMEKANIKA CPR - High Quality CPR

- **High Quality CPR**



## High-Quality CPR

1. Minimize interruptions
2. Provide correct chest compressions:
  - Rate: (100 – 120/min)
  - Depth: ( $\geq 2$  in or 50 mm)
  - Complete chest wall recoil
3. Provide correct ventilations:
  - Rate: <12 breaths/min
  - Duration: 1 second
  - Tidal volume: no more than visible chest rise

0:03:51 0:00:26

Windows taskbar: 1:47 AM 12/20/2020

# BIOMEKANIKA CPR - High Quality CPR

- **Kompresi**
- **Blood-Air flow**
- **Cardiac pump**
- **Thoracic pump**
- **High Quality CPR**

# DISKUSI

- Pertanyaan
- Pendapat
- Pengalaman



# SELF ASSESSMENT

- **Organ** apa saja yang **terlibat** dalam CPR ?
- Mengapa CPR **kedalamannya** 5-6 cm ?
- Mengapa CPR **kecepatannya** **100-120x**/menit ?
- Mengapa perlu **full recoil** saat decompresi ?
- Kenapa **kompresi** menjadi **prioritas** daripada breathing?

# KESIMPULAN

- Key Words ?



# KESIMPULAN

- CPR dilakukan dengan memberikan **penekanan** pada **dinding dada** dengan memperhatikan **kedalaman, frekwensi, recoil** dan minimal **interruption**.
- CPR bertujuan untuk **membantu sirkulasi** dan **oksigenasi** tubuh untuk mencegah **kematian** sel
- **Pemahaman** konsep dasar CPR sangat **penting dikuasai**

- 
- Be a Good Ners
  - Tetap semangat

# TETAP SEHAT DAN BERSEMANGAT

