

Basic Life Support and Airway Management in medical simulation


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Basic Life Support

Basic Life Support

BLS



- What is BLS?
- What are the basic principles?
- Why is it important?

Basic Life Support

Solid foundation...



ERC Guidelines 2010



Basic Life Support

Equipment



Laerdal
helping save lives

Resusc Anne® SkillReporter™

Basic Life Support

Equipment



Basic Life Support

TEST

4-step-approach

1. Real time demo by instructor
2. Demo with explanations
3. Guided by learner
4. Demo by learner + practice

Basic Life Support

Testing

- After at least two sessions on a mannequin
- Criteria:
 - Correct order of procedures
 - Casting head to resistance
 - Proper pulse checking
 - Min. 50% adequate ventilation
 - Min. 50% adequate compressions

Basic Life Support

Testing

- Instructor evaluates the procedure and head casting
- Print-out from the monitor
 - Instructors' judgments alone are not sufficient to determine learners' competence in performing **compressions** [1]

[1] Lynch B, Einspruch EL, Nichol G, Auferheide TP. Assessment of BLS skills: optimizing use of instructor and manikin measures. 2008 Feb

Basic Life Support

Step-by-step

1. Safety!
2. Check response
3. Ask for help
4. Head tilt/chin lift → signs of life?

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    graph TD
      A[Head tilt/chin lift → signs of life?] -- YES --> B[Continue monitoring]
      A -- NO --> C[CPR]
      D[Phone icon] --> C
    
```

Basic Life Support

CPR

Compressions	Ventilations
30	2


Basic Life Support

CPR

Compressions	Ventilations
<ul style="list-style-type: none"> • 5cm deep • 100-120/min • full chest recoil • minimal interruptions! 	<ul style="list-style-type: none"> • give breath for 1s • volume • no forceful breaths! • under 5s both breaths

Basic Life Support

When to stop?



Qualified personnel arrived



Signs of life returned



You are relieved by someone else or cannot continue due to fatigue

Airway Management



Airway Management

Airway Management

In BLS



Head tilt/chin lift



Ventilations



Maneuvers

Airway Management

Maneuvers

When casting head is inadequate



Triple airway maneuver

Same, but neck injury is suspected



Modified triple airway maneuver

Face injury



'Gun' grip

Airway Management

In ALS



Pocket mask




Bag valve mask



Oropharyngeal airway



Nasopharyngeal airway



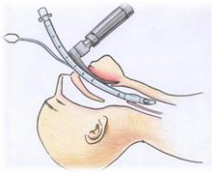
Laryngeal mask



Igel

Airway Management

Endotracheal intubation



- under 30s!
- trained professional
- confirm position of the tube

Questions?

Conclusion

- BLS is important because 40% of deaths in Europe are caused by cardiovascular diseases and 60% of them are caused by sudden cardiac death
- Airway management is important because tongue and improper head tilt/chin lift causes an obstructed airway in 70% cases

Thank you for your
attention!

