

Survey on Exercise-Induced Bronchoconstriction, designed by ERA study group

DEFINITION, CLINICAL FEATURES, EPIDEMIOLOGY

1. Exercise-Induced Bronchoconstriction (EIB) may be the only symptom of asthma.
 - Strongly disagree
 - Quite disagree
 - Neutral
 - Quite agree
 - Strongly agree
2. EIB may be present in people with atopic diseases without asthma.
 - Strongly disagree
 - Quite disagree
 - Neutral
 - Quite agree
 - Strongly agree
3. EIB is not common in people with asthma.
 - Strongly disagree
 - Quite disagree
 - Neutral
 - Quite agree
 - Strongly agree
4. EIB is a contraindication to competitive sports activity.
 - Strongly disagree
 - Quite disagree
 - Neutral
 - Quite agree
 - Strongly agree
5. EIB may occur during or after exercise.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

6. EIB typical symptoms include cough, wheezing, dyspnoea and chest tightness.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

7. EIB may be a cause for which the child avoids physical activity.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

8. EIB is more frequent in patient with poorly controlled asthma.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

9. EIB does not occur if physical activity takes place indoors.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

PATHOGENESIS

10. EIB is caused by the cooling of airways due to increased ventilation.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

11. EIB is caused by dehydration of the airways following increased ventilation.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

12. Cold temperature is one of the factors that contribute to the onset of EIB.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

13. Air pollution is one of the factors that contribute to the onset of EIB.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

14. Exposure to allergens is one of the factors that contributes to the occurrence of EIB.

- Strongly disagree

- Quite disagree
- Neutral
- Quite agree
- Strongly agree

DIAGNOSTIC WORK-UP

15. Spirometry is the gold standard test to diagnose EIB.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

16. Exercise challenge test is the gold standard test to diagnose EIB.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

17. During an exercise challenge test the child must reach at least 50% of its maximum heart rate.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

18. During an exercise challenge test the child must reach at least 80% of its maximum heart rate.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

19. The first spirometry is performed after 3 minutes of running.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

20. The first spirometry is performed 5 minutes after the end of the test.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

21. Forced Expiratory Volume in the first second (FEV₁) is assessed in the exercise challenge test.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

22. The exercise challenge test is considered positive if FEV₁ is reduced by 5%

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

23. The exercise challenge test is considered positive if FEV₁ is reduced by 10%.

- Strongly disagree
- Quite disagree

- Neutral
- Quite agree
- Strongly agree

24. The severity of EIB can be classified based on the reduction of FEV₁.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

25. The exercise challenge test may be negative even if the subject suffers from EIB.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

26. Stridor is a characteristic symptom of EIB.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

27. Exercise-induced laryngeal obstruction (EILO) does not limit physical activity.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

28. A cardiological examination should always be carried out in case of EIB.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

29. Deconditioning enters into differential diagnosis with EIB.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

TREATMENT AND FOLLOW-UP

30. Salbutamol is the first-choice drug for treating EIB.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

31. Salbutamol can be taken within 10-15 minutes before starting physical activity.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

32. Salbutamol cannot be prescribed to the athlete involved in competitive sport because it is a prohibited drug.

- Strongly disagree
- Quite disagree

- Neutral
- Quite agree
- Strongly agree

33. If salbutamol before physical activity does not prevent EIB, daily therapy with inhaled steroids can be considered.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

34. If medication with salbutamol before physical activity does not prevent EIB, daily therapy with a leukotriene receptor antagonist can be considered.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

35. If medication with salbutamol before physical activity does not prevent EIB, administration of leukotriene receptor antagonist before physical activity can be considered.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

36. For the prevention of EIB both antileukotrienes and salmeterol are effective.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree

- Strongly agree

37. In subjects >12 years daily treatment with formoterol/budesonide, an extra inhalation 5-20 minutes before physical activity is recommended.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

38. Preventive measures for EIB include warming up and cooling down before and after exercise, respectively.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

39. For those who suffer from EIB, activity should start with a very intense exercise.

- Strongly disagree
- Quite disagree
- Neutral
- Quite agree
- Strongly agree

40. Warming the breathing air can reduce EIB symptoms.

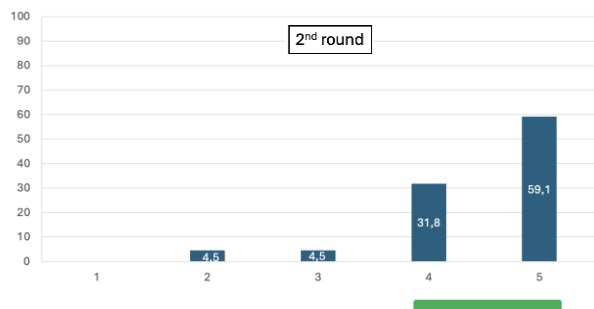
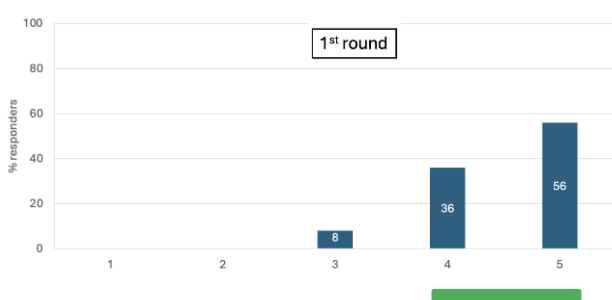
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- Quite disagree
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First and second-round of responses – Results

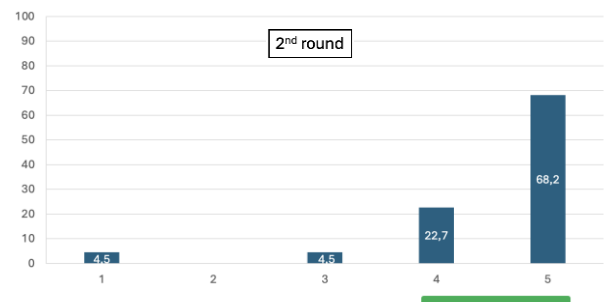
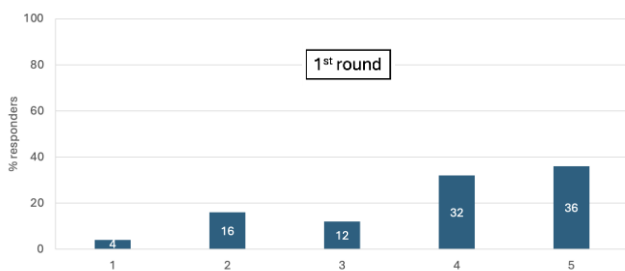
Number of participants during the first round: 25.

Number of participants during the first round: 23.

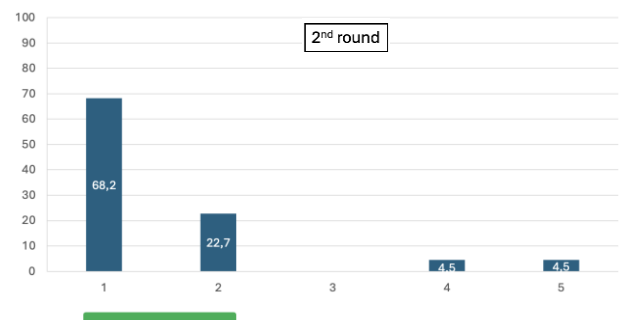
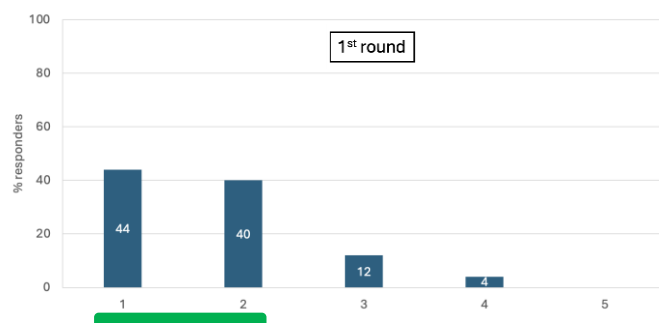
DEFINITION, CLINICAL FEATURES, EPIDEMIOLOGY



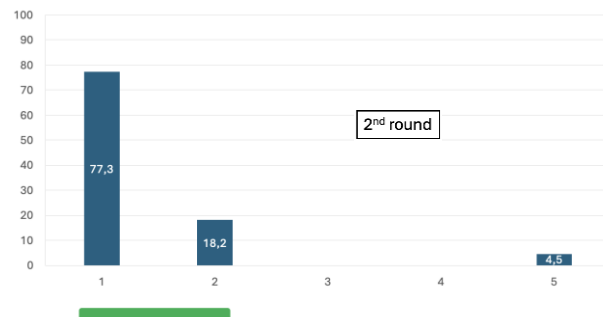
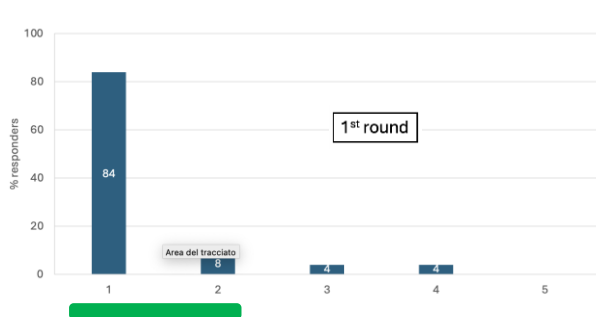
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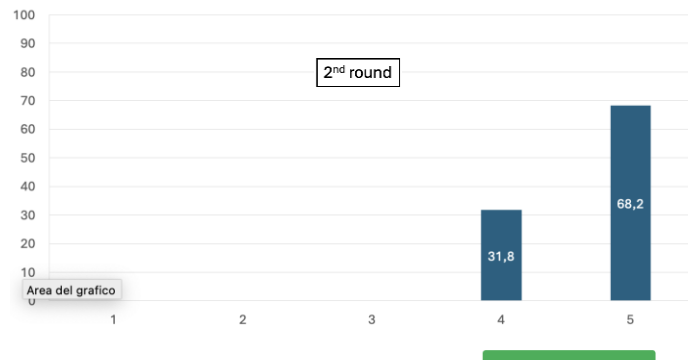
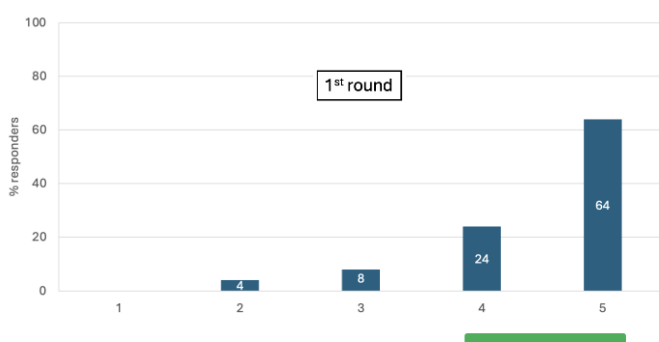
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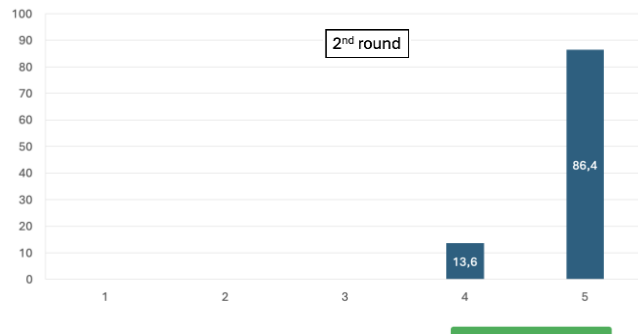
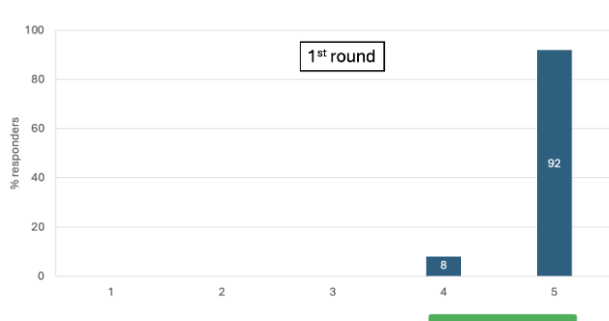
Question 3: EIB is not common in people with asthma.



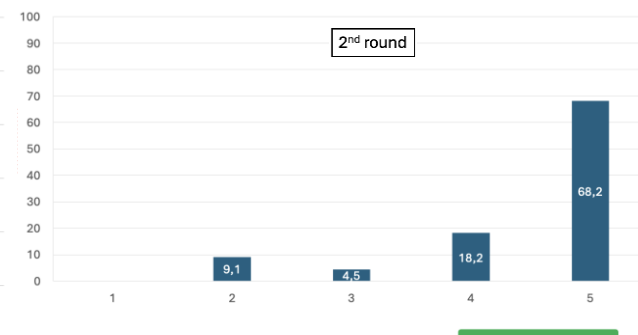
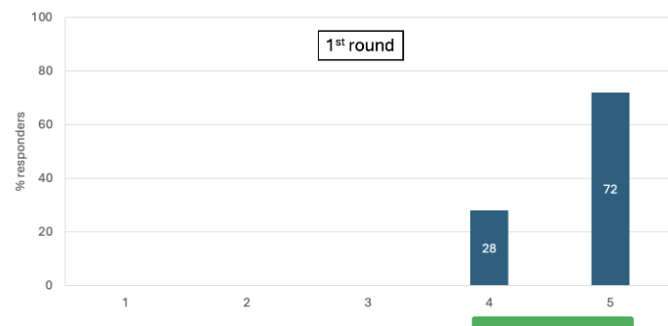
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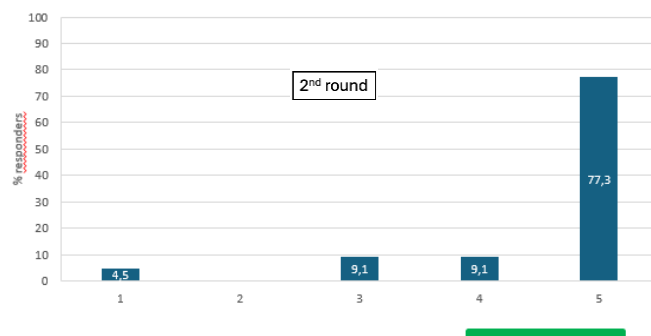
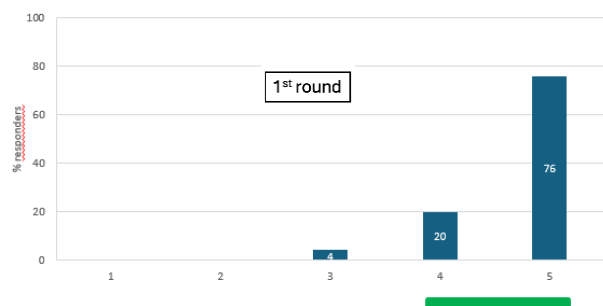
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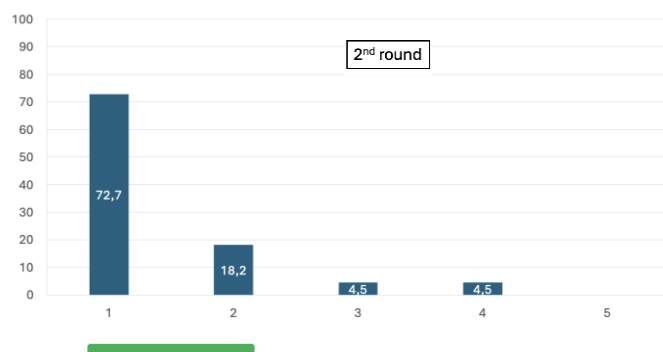
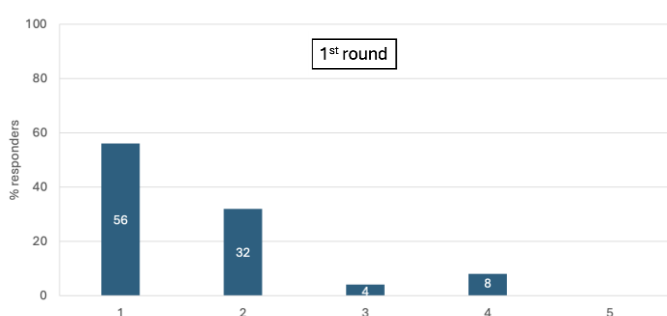
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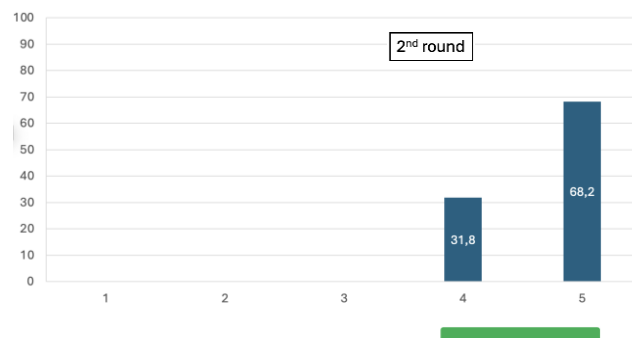
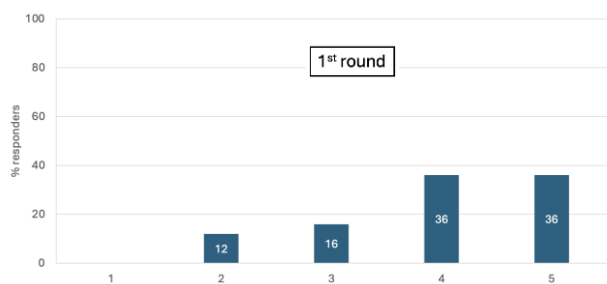


Question 8: EIB is more frequent in patient with poorly controlled asthma.

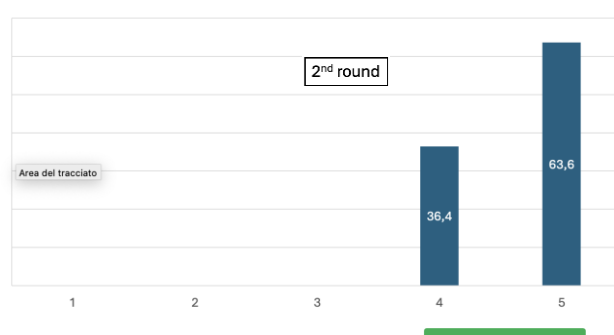
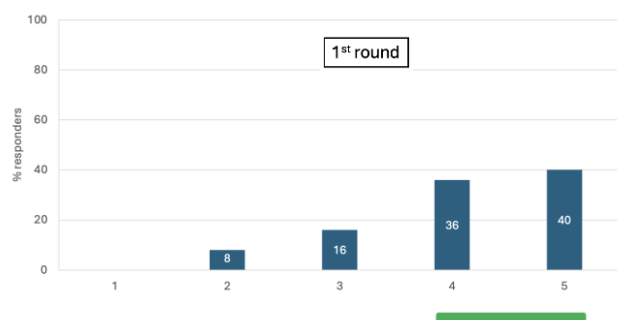


Question 9: EIB does not occur if physical activity takes place indoors.

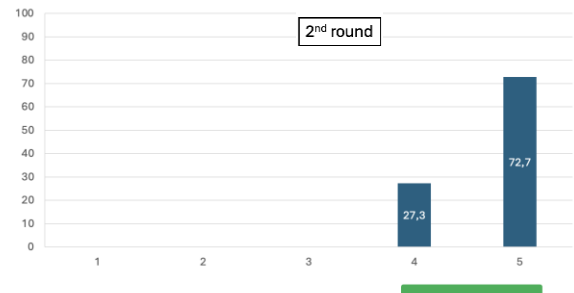
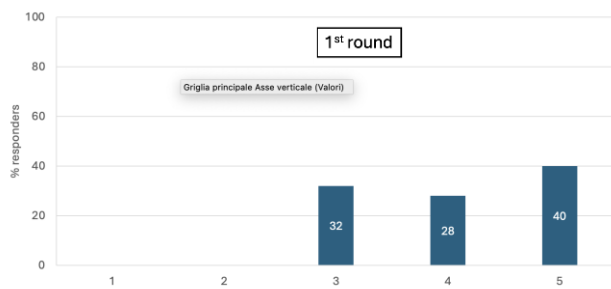
PATHOGENESIS



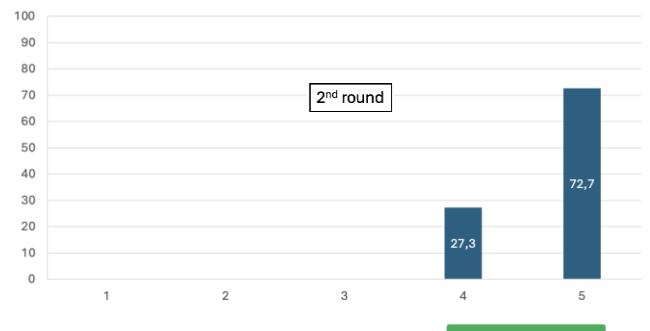
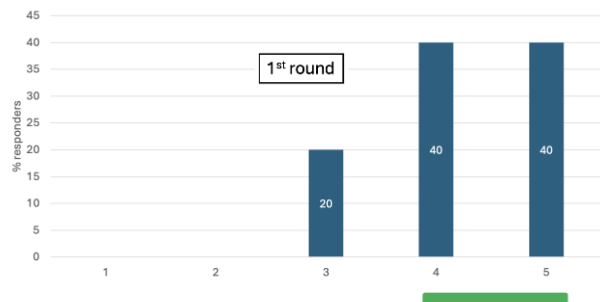
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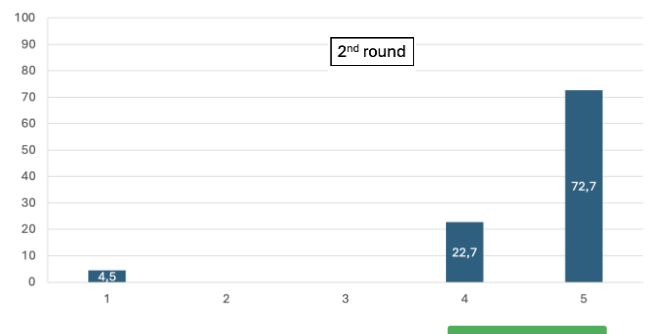
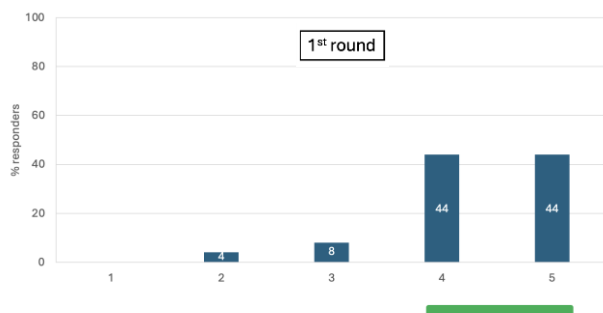
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Question 12: Cold temperature is one of the factors that contributes to the onset of EIB.

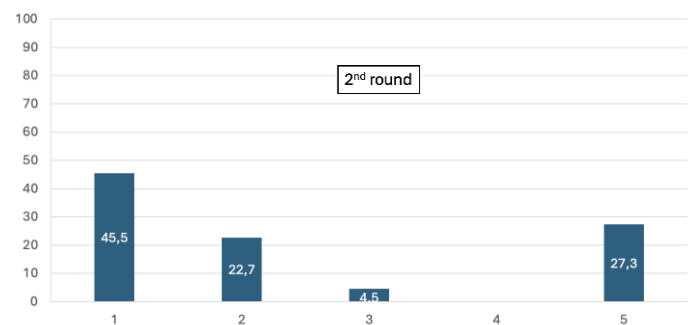
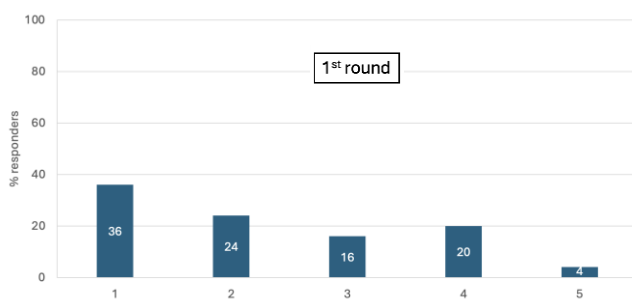


Question 13: Air pollution is one of the factors that contributes to the onset of EIB.

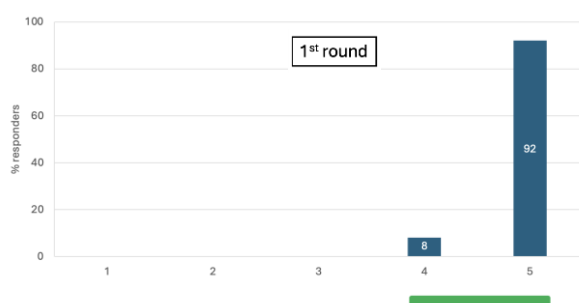


Question 14: Exposure to allergens is one of the factors that contributes to the occurrence of EIB.

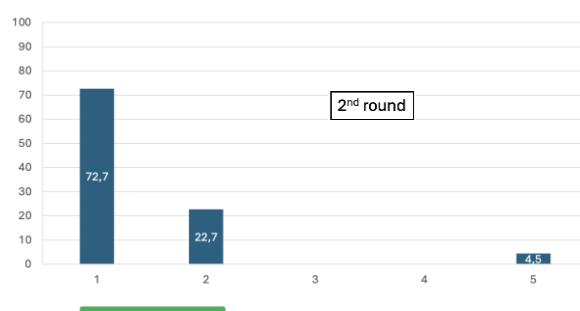
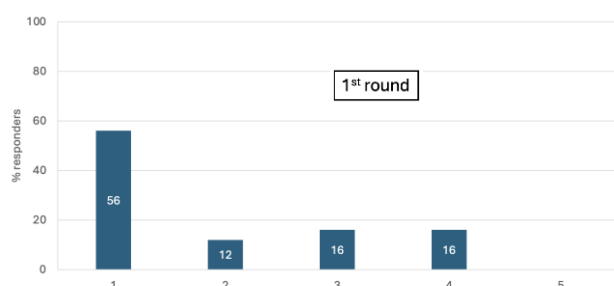
DIAGNOSTIC WORK-UP



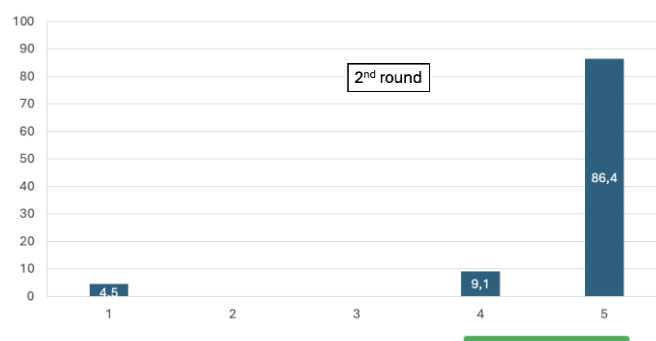
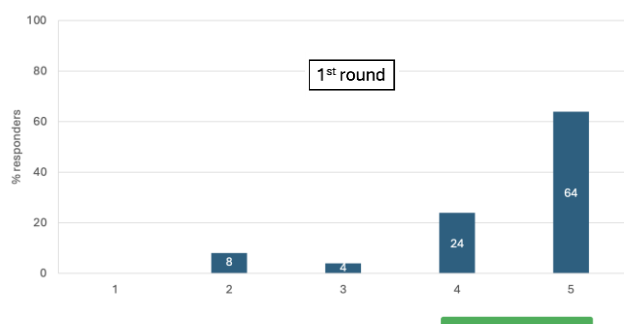
Question 15: Spirometry is the gold standard test to diagnose EIB.



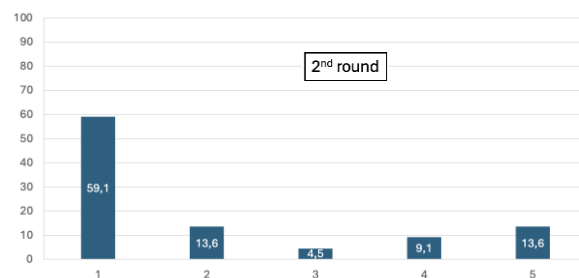
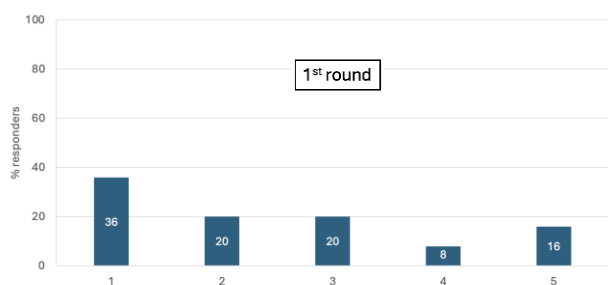
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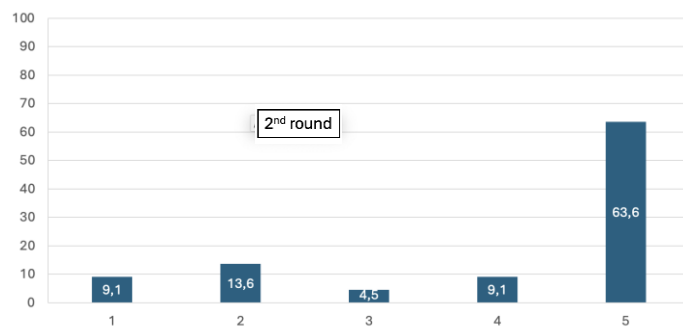
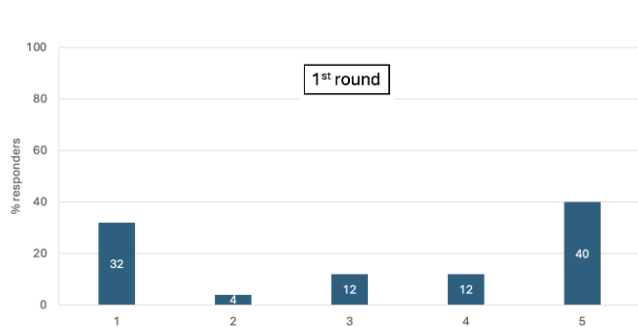
Question 17: During an exercise challenge test the child must reach at least 50% of its maximum heart rate.



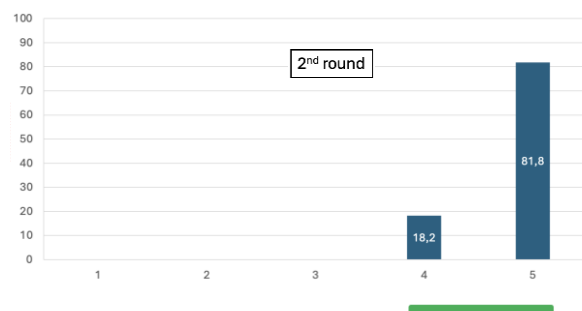
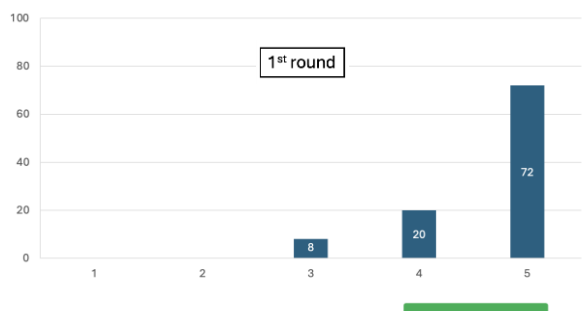
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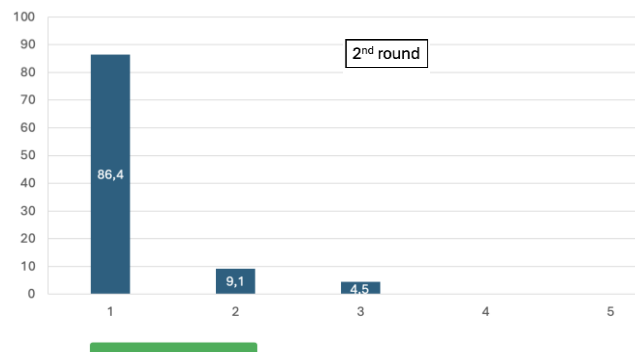
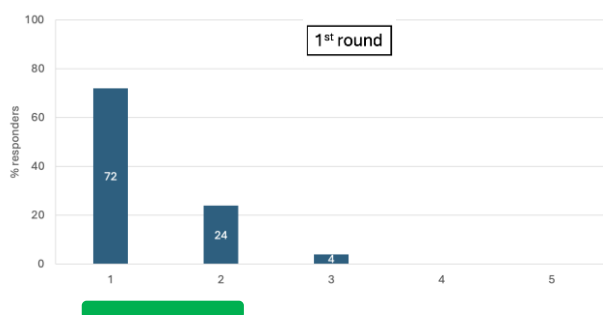
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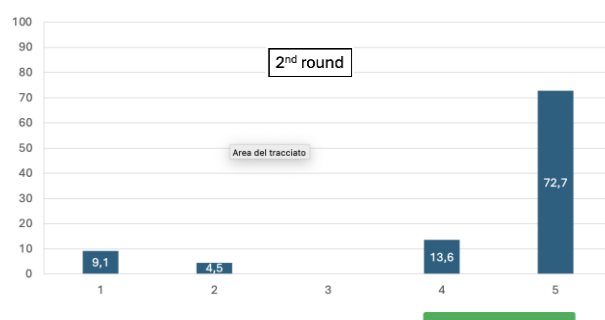
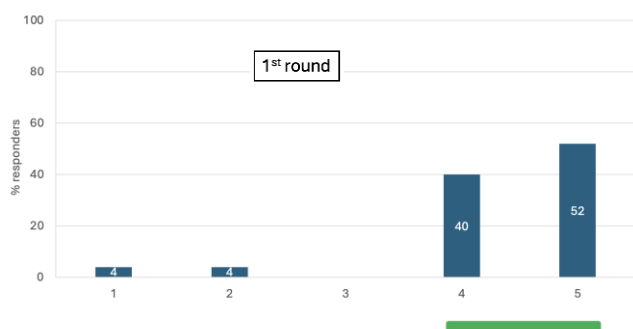
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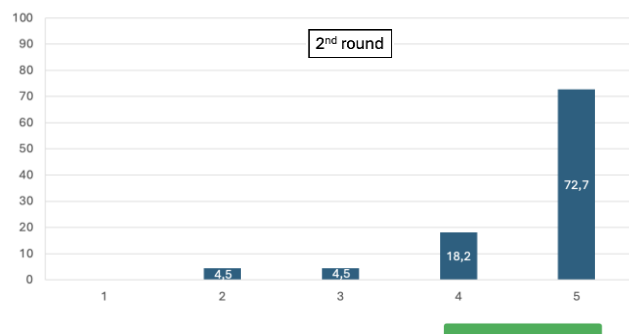
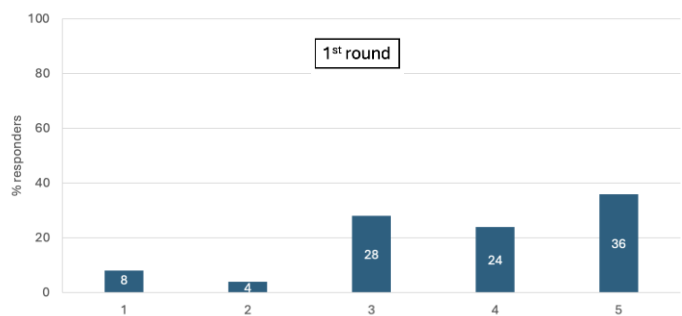
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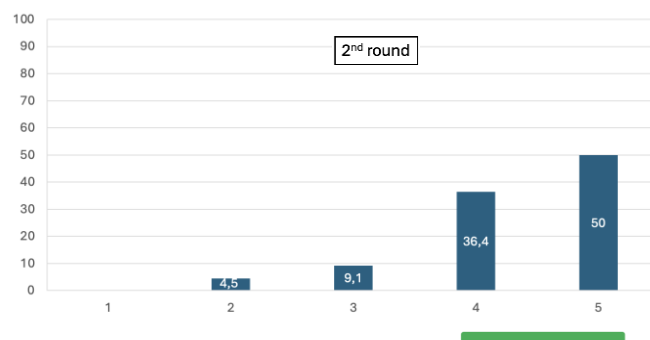
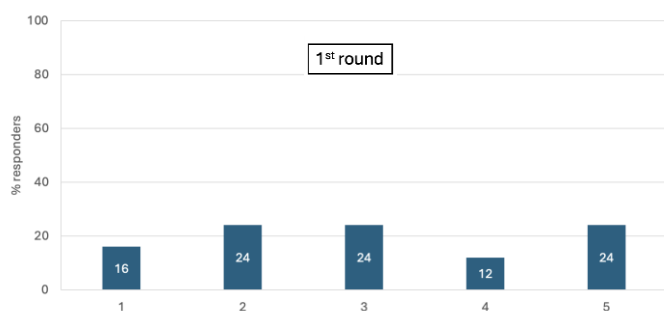
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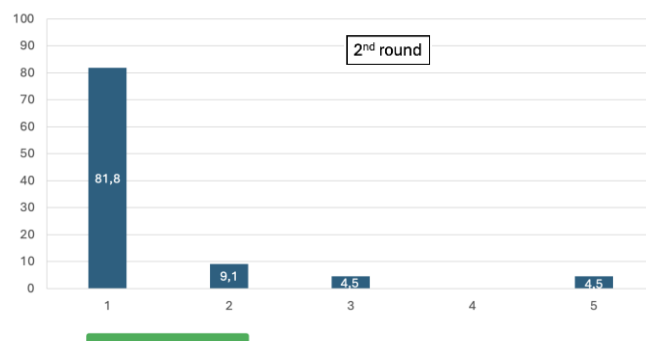
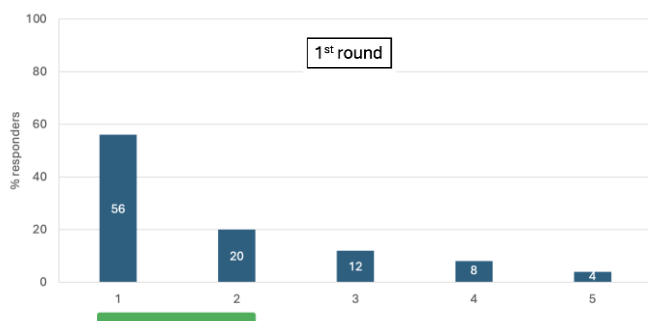
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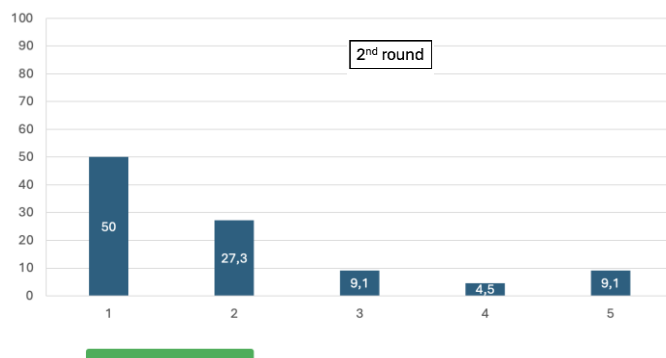
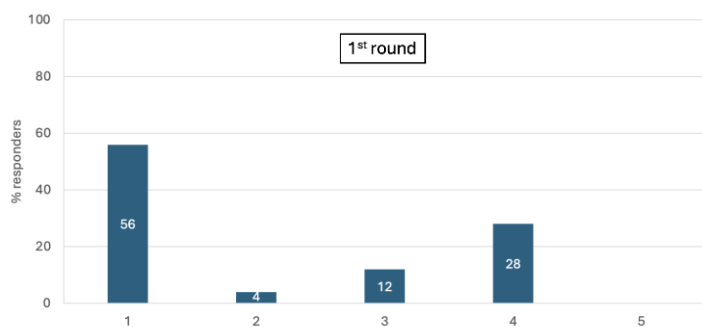
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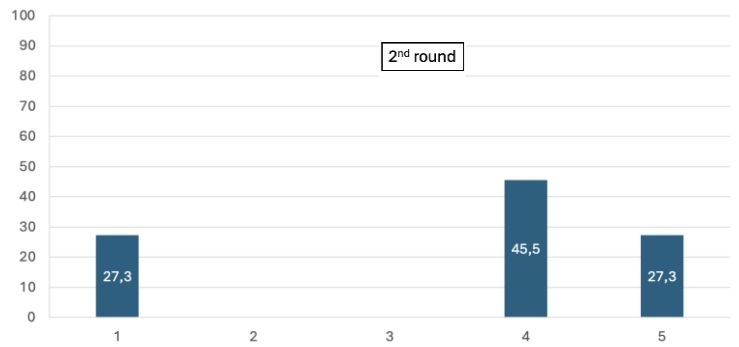
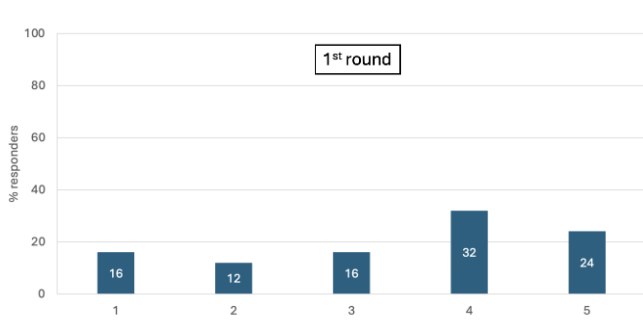
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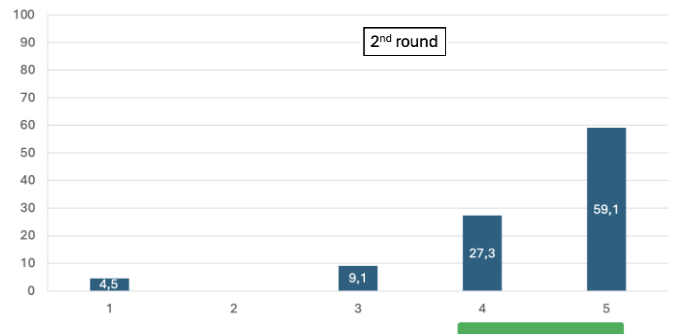
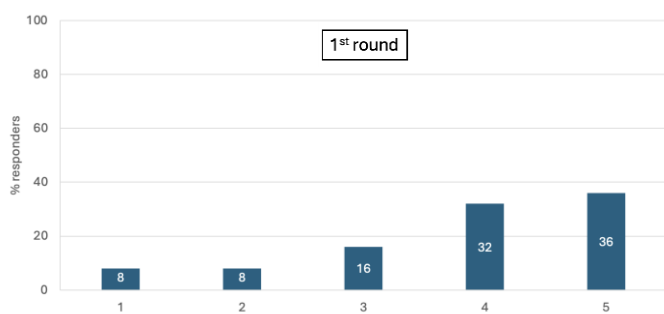
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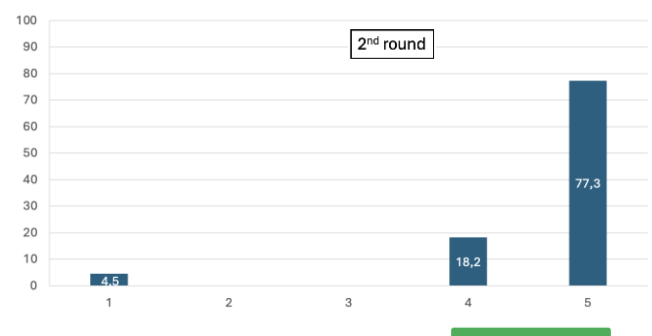
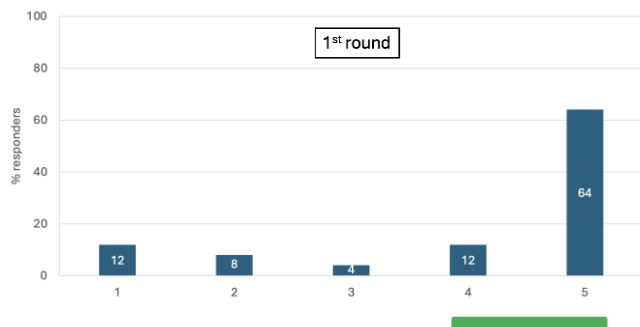


Question 28: A cardiological examination should always be carried out in case of EIB.

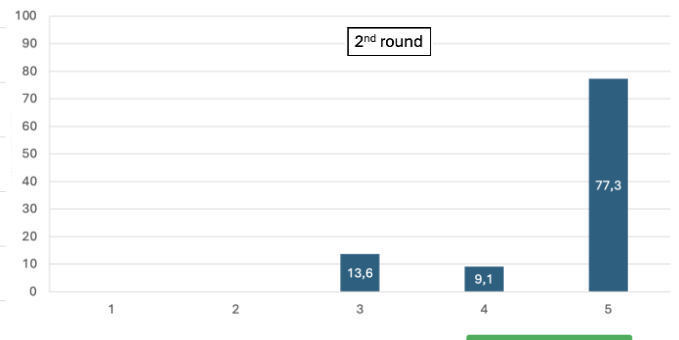
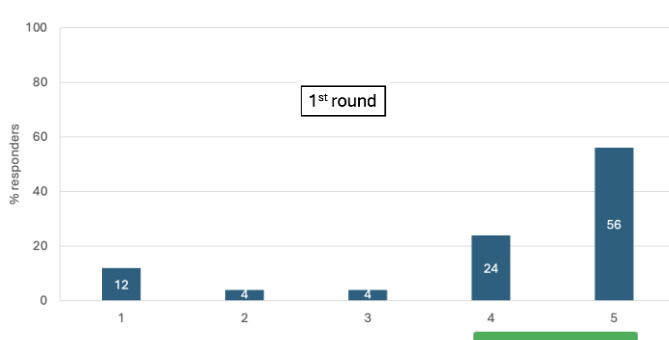


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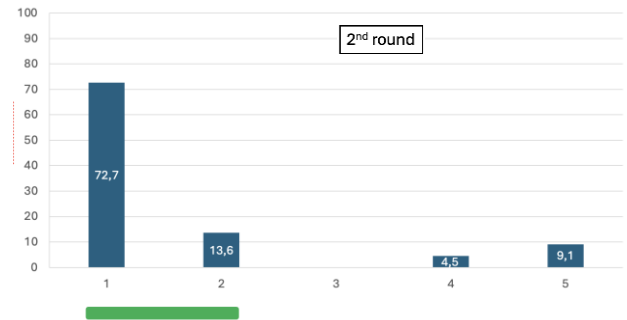
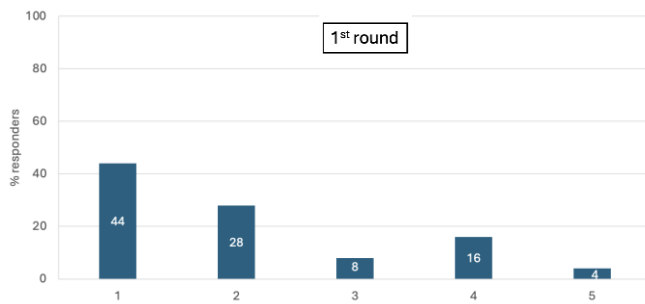
TREATMENT AND FOLLOW-UP



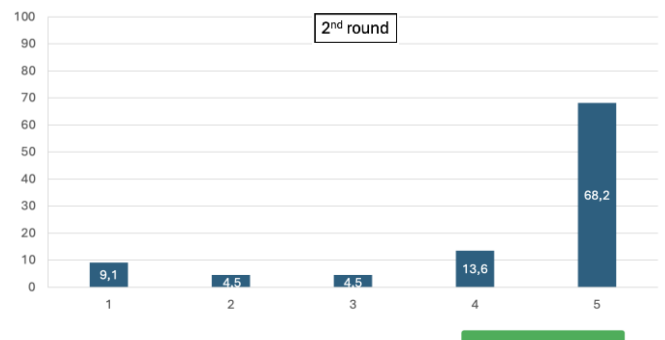
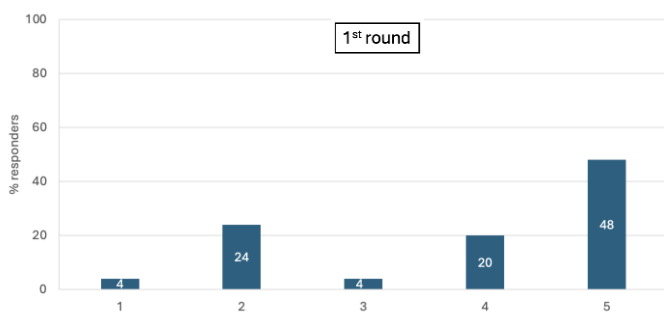
Question 30: Salbutamol is the first-choice medication for treating EIB.



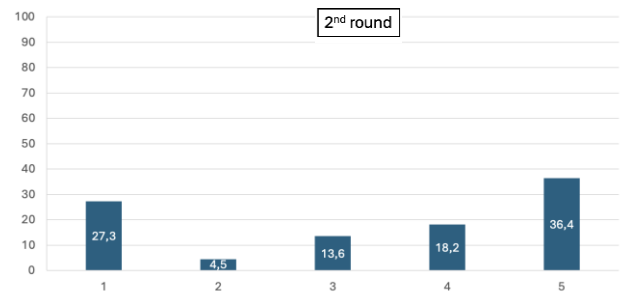
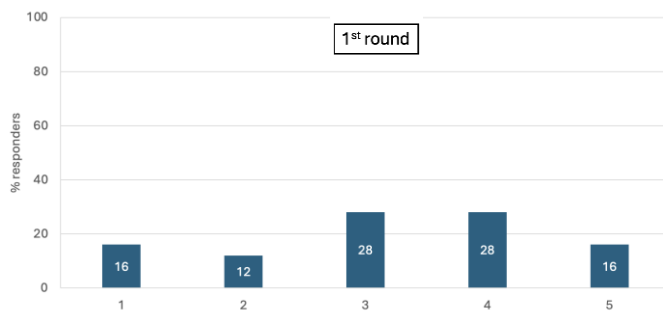
Question 31: Salbutamol can be taken within 10-15 minutes before starting physical activity.



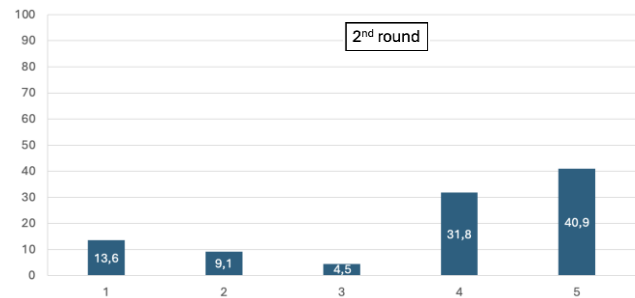
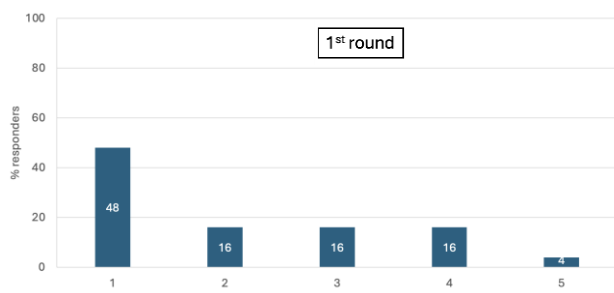
Question 32: Salbutamol cannot be prescribed to the athlete involved in competitive sport because it is a prohibited drug.



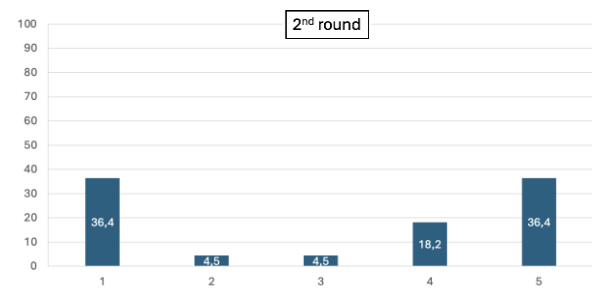
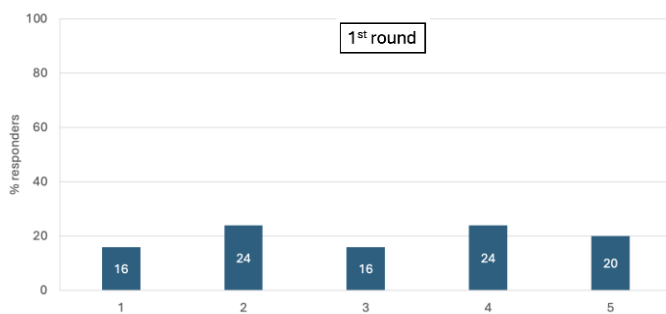
Question 33: If salbutamol before physical activity does not prevent EIB, daily therapy with inhaled steroids can be considered.



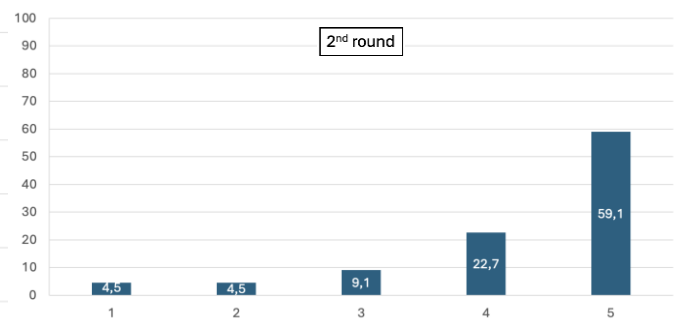
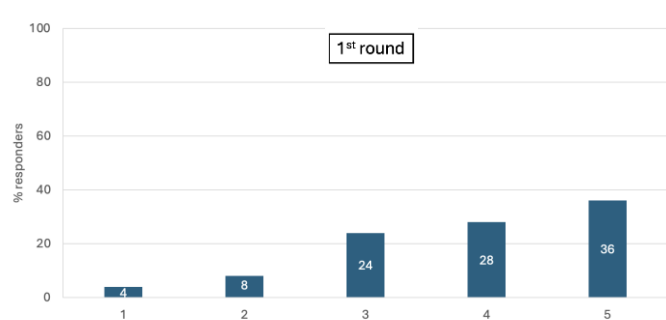
Question 34: If medication with salbutamol before physical activity does not prevent EIB, daily therapy with leukotriene receptor antagonist can be considered.



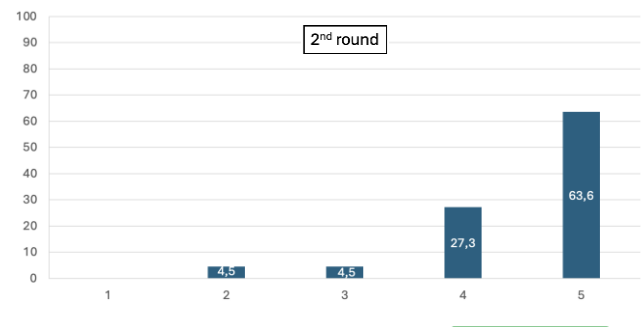
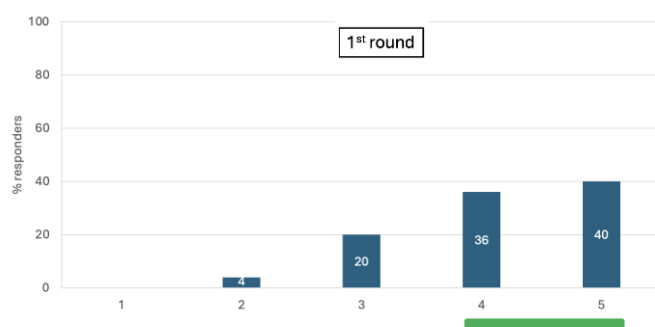
Question 35: If medication with salbutamol before physical activity does not prevent EIB, administration of leukotriene receptor antagonist before physical activity can be considered.



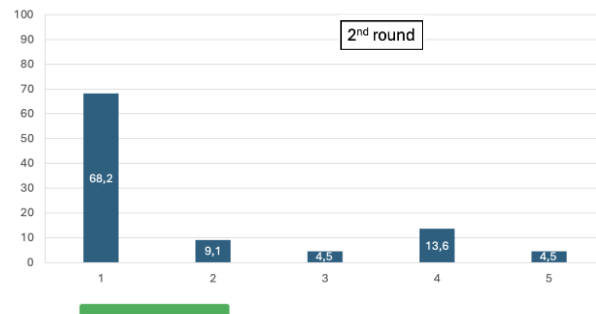
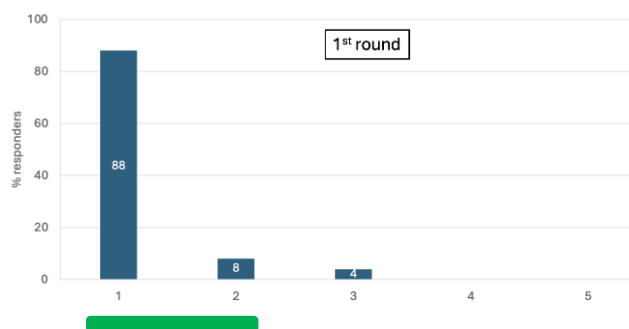
Question 36: For the prevention of EIB both antileukotrienes and salmeterol are effective.



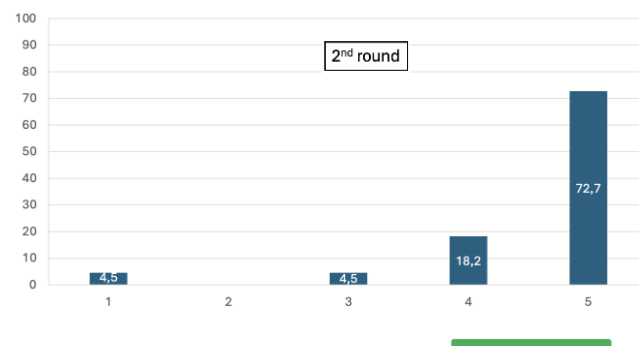
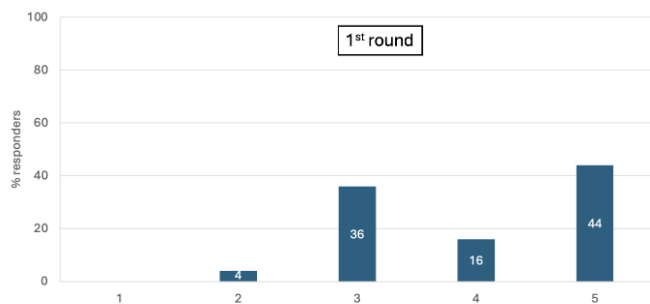
Question 37: In subjects with EIB aged >12 years on daily treatment with formoterol/budesonide, an extra inhalation 5-20 minutes before physical activity is recommended.



Question 38: Preventive measures of EIB include warming up and cooling down before and after exercise, respectively.



Question 39: For those who suffer from EIB, activity should start with a very intense exercise.



Question 40: Warming the breathing air can reduce EIB symptoms.