

# Hubungan antara Durasi Pasien Mengikuti Senam Asma Indonesia di Klub Asma Rumah Sakit Persahabatan dengan Nilai Arus Puncak Ekspirasi Pasca Latihan = The Relationship between Patient's Duration of Indonesian Asthma Gymnastics in Persahabatan Hospital's Asthma Club with The Value of Peak Expiratory Flow Rate Post Exercise

Irsa Gagah Himantoko, author

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## Abstrak

Pengantar: Senam Asma Indonesia (SAI) adalah olahraga termodifikasi yang ditujukan bagi penderita asma untuk memperbaiki pola nafas agar lebih terkontrol dan sehat. Penelitian ini dilakukan untuk menentukan apakah SAI memicu asma karena latihan (AKL), apakah durasi mengikuti senam mempengaruhi nilai arus puncak ekspirasi (APE) pasca-olahraga, dan pengaruh usia, jenis kelamin, riwayat merokok, dan indeks massa tubuh (IMT) terhadap nilai APE pasca-olahraga.

Metode: Sebanyak 24 subjek yang telah melakukan SAI selama setidaknya 1 bulan, diukur nilai APE mereka sebelum dan sesudah melakukan SAI menggunakan peak flow meter. Informasi mengenai usia, jenis kelamin, dan riwayat merokok diperoleh dari wawancara. Sedangkan tinggi dan berat badan, untuk menentukan indeks massa tubuh (IMT), diperoleh melalui pemeriksaan langsung.

Hasil dan Diskusi: Semua subjek terhindar dari AKL mungkin karena mereka telah melakukan SAI selama setidaknya satu bulan. Namun, semakin lama melakukan SAI tidak membuat nilai APE pasca-olahraga menjadi lebih baik ( $p = 0,447$ ) tetapi menjaga fungsi paru tetap optimal. Selanjutnya, usia dan jenis kelamin tidak berpengaruh pada nilai APE pasca-olahraga jika peran masing-masing dinilai secara individual ( $p = 0,698$ ;  $0,721$ ; secara berurutan). Selain itu, mantan perokok yang sudah lama berhenti merokok, riwayat merokok mereka sebelumnya tidak lagi mempengaruhi nilai APE pasca-olahraga ( $p = 0,310$ ). Terakhir, peningkatan BMI tidak terkait dengan penurunan nilai APE pasca-olahraga. ( $p = 0,707$ ).

Kesimpulan: SAI tidak mencetuskan AKL pada penderita asma. Penambahan durasi mengikuti SAI tidak meningkatkan nilai APE pasca-olahraga. Usia dan jenis kelamin saling terkait dalam mempengaruhi APE pasca-olahraga. Riwayat merokok orang yang sudah lama berhenti merokok dan peningkatan BMI tidak mempengaruhi nilai APE pasca-olahraga.

.....Introduction: Indonesian Asthma Gymnastics (IAG) is a modified exercise that is intended for asthmatic people to improve their breath pattern to become more controlled and healthy. This study was conducted to determine whether IAG triggers exercise-induced asthma (EIA), whether the duration of following IAG affect the value of peak expiratory flow rate (PEFR) post-exercise, and the effect of age, gender, smoking history, and BMI on PEFR value post-exercise.

Method: A Total of 24 subjects who had performed IAG for at least 1 month, were measured their PEFR values before and after performing IAG using peak flow meter. Information regarding age, gender, and smoking history was obtained from the interview. While height and weight, to determine body mass index (BMI), were obtained through direct examination. Result and

Discussion: All subjects were spared from EIA may be because they have performed the IAG for at least one month. However, a longer period of IAG does not make peak expiratory flow rate (PEFR) value post-exercise to be better ( $p = 0.447$ ) but keeps lung function optimally. Furthermore, age and gender have no

effect on PEFr value post-exercise if their respective roles are assessed individually ( $p = 0,698$ ;  $0,721$ ; respectively). In addition, former smokers who have long quit smoking, their previous smoking history no longer affect the value of PEFr post- exercise ( $p = 0,310$ ). Lastly, increased BMI is not associated with decreased PEFr value post-exercise ( $p = 0,707$ ).

Conclusion: IAG does not triggers EIA in asthmatic patient. The addition of duration of joining IAG does not improve the value of PEFr post-exercise. Age and gender are interrelated in affecting PEFr post-exercise. Smoking history of people who have long quit smoking and increased BMI does not affect PEFr value post- exercise.