

## Cardiovascular effects of Turkish bath and sauna/The effect of Turkish bath on QT dispersion

*Türk hamamı ve saunanın kardiyovasküler etkileri/Türk hamamının QT dispersiyonuna etkileri*

Dear Editor,

We read with interest and attention an interesting study by Ünübol et al. (1) titled 'The effect of Turkish bath on QT dispersion' published in the latest issue of the journal. Turkish baths have been reported to have no effect on QT dispersion in the healthy subjects. Although the Turkish bath is an ancient Anatolian culture, the popularity is not as much as earlier especially in large cities. However, culture is still continuing in certain areas. Even though many cardiac patients are not in such a demand, a result of increasing awareness of cardiovascular health, many subjects direct to cardiologists some questions related to Turkish bath and sauna.

Bath culture in the world seems to vary by country. Turkish, Finnish, German and Russian are well known. Turkish bath has a worldwide reputation. Sauna is much more common in the countries such as, Sweden and Finland. The difference between the two baths is in terms of humidity and temperature. The temperature is usually 80-100°C and humidity is around 10-15% in the sauna. The sauna includes sudden exposure to cold water just after sauna. Turkish bath temperature is lower (around 40°C) and humidity is significantly higher than the sauna (around 80%) (2).

When looking to the cardiovascular effects of the sauna, skin temperature increases as high as 40°C and sweating starts within 15 min. Mean secretion amount is about 0.5 g/hour. Skin blood flow and heart rate increases. In parallel, cardiac output increases, but cardiac stroke volume does not change. Blood pressure response varies according to the sauna habits of the person. A sudden exposure to cold water just after sauna leads to increased systolic and diastolic blood pressure with decreased heart rate and stroke volume. Patients with stable coronary artery disease and controlled hypertension were shown to well tolerate. However, some ischemic and arrhythmic changes were reported to occur particularly in patients with coronary artery disease though do not result in adverse events (2).

The sauna is contraindicated for patients with aortic stenosis, decompensated heart failure, unstable angina and uncontrolled hypertension. Turkish bath and sauna may be fatal with alcohol. Sauna can cause severe hypotension and syncope in elderly patients. Persons should not take beta blockers and short-acting nitrates before sauna. There is insufficient data regarding angiotensin-converting enzyme inhibitors (3, 4).

If reviewing the general recommendations about the sauna; the sauna is contraindicated immediately after excessive exercise. Sauna temperature is recommended to be kept at around 60-80°C. Subjects should wait for 2-3 minutes on the lower stairs, and then go up; not enter into the cold water pool; give a cooling down period; take plenty of fluids; do ankle pump exercise (flexion-extension) after the sauna. Sauna-rest period may be applied 2-3 times. The duration should be 5-15 min. for a sauna period and 10-15 min. for a resting period. The durations should be increased gradually. Humidity should not be too much due to increase the heat effect (4).

While Turkish bath and sauna may be different from each other as to some features, both can be evaluated in similar activities. In fact, the cardiovascular effects of Turkish bath have not been comprehensively studied. We thank to Ünübol et al. (1) for their study, which revives this issue.

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### Author's Reply

Dear Editor,

We agree with the information that authors of the letter have shared with us. We are thankful for their interest, discussion and appreciation of our study.

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## Aile hekimlerine mezuniyet sonrası eğitim desteği konusunda bir öneri

*A proposal on support of continuous medical education to family physicians*

Sayın Editör,

Anadolu Kardiyoloji Dergisi'ni kuruluşundan itibaren, özellikle hedefleri ve amaçları doğrultusunda gelişimini, takdirle izleyen bir öğretim üyesiyim.

Eskişehir'de 17-19 Eylül 2010 tarihlerinde düzenlenen "Kalp Yetersizliği Toplantısı"nda, oturma başkanı ve panelist olarak, katılımcıları arasında idim. Bu akademik etkinliğin aile hekimlerine yönelik otu-