

原著

# 水又は運動負荷と温罨法の健康女性の腸音に及ぼす影響

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## Effect of Oral Water Intake, Exercise and Hot Compresses on Bowel Sounds in Healthy Women

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### Abstract

The effect of oral water intake, exercise and hot compresses on bowel sounds was investigated in 20 healthy women ( $28.9 \pm 6.9$  yr.). Bowel sounds of the subjects, supine in bed, were picked up by a microphone placed on the abdomen adjacent to the lower part of the distal colon, amplified by phonocardiography, and the number of wave signals per minute was determined using a spike counter. The abdominal skin temperature was also measured. After an oral intake of cold water ( $7^{\circ}\text{C}$ ), the number of bowel sounds increased significantly for at least half an hour. A ten minutes' walk, including going up and down stairs, increased the sounds significantly for at least 45 minutes. Hot compresses using a rubber bottle of hot water or an electric blanket also increased the bowel sounds, with the latter being more effective. The majority of the subjects felt additional intestinal peristalsis when the bowel sounds increased dramatically during the stimuli. These results confirmed that oral water intake, exercise and hot compresses increase bowel sounds, and can enhance intestinal peristalsis.

## 要約

水の経口摂取や運動、温罨法が腸音に及ぼす影響を、健康女性20名(28.9±6.9歳)を被験者に検討した。被験者を仰臥位にし、下行結腸下部付近の皮膚にマイクロフォンを装着して心音計で腸音を増幅し、スパイクカウンターを介して腸音波形の1分間当たりの出現頻度を計測した。また、腹部皮膚温も記録した。7°C、500 mlの冷水を経口摂取させると、摂取後30分間は腸音出現頻度が有意に増加した。階段昇降を含む10分間の歩行をさせた結果、その後45分間は腸音は有意に増加した。温枕貼用、又は電気毛布による腹部温罨法では、後者の腸音増加効果がより著明であった。また、各刺激中、ほとんどの被験者が腸音亢進時に腸蠕動を自覚していた。以上の結果から、水又は運動負荷と腹部温刺激は腸音出現頻度を増加させ、腸蠕動を亢進させることが確認された。

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