

COUGH, SNIFF, AND THE ANAL REFLEX

Research about anatomical connections

compiled by Leslie Muchmore, *Improbable Research* staff

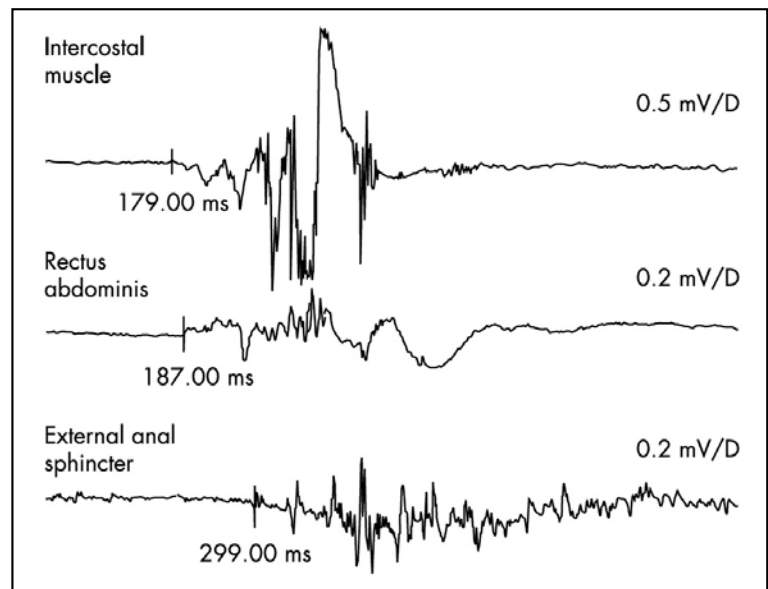
Coughing and sniffing, exhibited by a patient, can be useful to a diagnostic physician. This study aimed to clarify the degree and reliability of some of that usefulness.

“The Anal Reflex Elicited by Cough and Sniff: Validation of a Neglected Clinical Sign,” C.L. Chan, S. Ponsford, and M. Swash, *Journal of Neurology, Neurosurgery and Psychiatry*, vol. 75, no. 10, October 2004, pp. 1449-1451. (Thanks to Jessica Winter for bringing this to our attention.) The authors, at Barts and The London School of Medicine and Dentistry, Queen Mary University of London, and the Royal London Hospital, London, UK, explain that:

It is unclear whether contraction of the external anal sphincter (EAS) following a voluntary cough is an integral component of the cough response itself, or a reflex response to the abdominal and pelvic floor dynamics induced by the cough....

METHODS: A needle electrode inserted into the EAS measured responses.... Direct motor latencies from the cerebral cortex to the intercostal, rectus abdominis and EAS muscles were obtained using transcranial magnetic stimulation. Sniff and cough induced responses were also recorded in these muscles....

CONCLUSIONS: As the cough induced anal reflex response is consistent and easily elicited, its use in clinical neurological examination is appropriate.



Detail from the study.

PUZZLING SOLUTIONS: HANDY

by Emil Filterbag, *Improbable Research* staff

EDITOR'S NOTE: We have a large collection of puzzle solutions for which we have lost the puzzles. Here is another.

SOLUTION:

No, because—like everyone else in the building—Alice has twenty fingers.