Length of time spent in the daily practice of the Transcendental Meditation and TM-Sidhi program influenced the daily rhythms of the serotonin metabolite 5-HIAA and similar substances. Since serotonin is important in physical and mental health, these changes could mediate some of the beneficial effects of the program.—EDITORS

Subjects practicing the Transcendental Meditation (TM) and TM-Sidhi program twice daily (7:30–9:00 AM and 5:30–7:00 PM) exhibited a 24-h cycle of 5-hydroxyindole excretion peaking between 4 and 7 PM. Extending the length of each session by 1.5 h (at the end of the morning session and at the beginning of the afternoon session during a special course) resulted in the disappearance of the 24-h cycle as seen in the averaged data from 10 subjects. However, studies on one subject over a period of many days showed that the 24-h cycle was replaced by a 12-h cycle with peaks at 7–10 AM and PM. These results suggest that manipulation of the time spent in the TM and TM-Sidhi program has marked effects on the pattern of 5-hydroxyindole excretion.

Preliminary studies using a new assay specific for 5-hydroxyindole acetic acid (5-HIAA) indicate that the peaks of 5-hydroxyindoles observed by the assay used above (Hycel modification of the Udenfriend nitrosophthol method) may not be due to 5-HIAA, which is thought to be the major 5-hydroxyindole in urine, but either to a different 5-hydroxyindole or to the periodic excretion of another substance which causes erroneously high values in the old assay. Attempts to identify the compound(s) responsible are presently underway using liquid chromatographic and spectrofluorometric techniques.

Further elucidation of the changes in urinary excretion of 5-hydroxyindoles, or other neurotransmitter metabolites, that appear to be induced by the Transcendental Meditation and TM-Sidhi program may help to explain the neurochemical basis of the beneficial effects on physical and mental health resulting from the regular practice of these simple mental techniques.