Identification of the autoinhibitory substance and the specific metabolic reactions against which it is active may provide a tool for determining more selectively the sequence of biochemical reactions resulting in germination. Effort is being devoted at present to determine more completely the properties of the autoinhibitory substance, including its effects on specific metabolic processes.

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References and Notes

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2. The opinions expressed herein are those of the authors and are not necessarily similar to the views of the U.S. Department of the Navy.
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18 June 1956

Comparison of Suggestibility during "Light Sleep" and Hypnosis

Some recent experiments (*1*) indicate that "hypnosis" may involve a state of "light sleep." Attempting to determine directly the relationship between these "states," I recently completed a study (*2*) of 22 subjects who volunteered "to be given psychological tests at night while they were asleep." I approached the subjects—in the middle of the night while they were sleeping in their own rooms—and whispered to them: "Clasp your hands together."

After a subject clasped his hands together—all subjects did so within 10 seconds—I repeated over and over for 1 minute: "Your hands are hard . . . solid . . . completely interlocked . . . it is impossible to unclasp those hands. Try it." In this way I gave seven standard tests of suggestibility, including the following: "you cannot unclasp your hands," "you cannot open your clenched fist," "your fingers are rising," "your hand is dead and dull and numb and cannot feel anything at all," "you are becoming very thirsty and will wake up in exactly 5 minutes and drink lots of water," and "you cannot remember anything that I said . . . you cannot remember anything at all."

When tested in this way, three of the subjects "woke up" and seven either moved or opened their eyes for a moment and later stated that they were "drowsy" during the experiment. However, the remaining 12 subjects seemed to be in a stage of "light sleep," since they did not move, did not open their eyes, responded reluctantly to requests like "clasp your hands together," continued breathing slowly and easily, and later stated that they either had been in "some stage of sleep" or had complete amnesia for the experiment.

These 12 subjects, who seemed to be "lightly sleeping," responded to the seven tests of suggestibility as if they were in some stage of "hypnosis" as measured by the Davis and Husband scale of hypnotic depth (*3*). Some responded as if they were in the second stage of "hypnosis"—for instance, they were completely unable to unclasp their hands. The majority of the "lightly sleeping" subjects responded as if they were in at least the third stage of "hypnosis," since they had complete amnesia for the experiment or followed the "postsleep" suggestion to wake up in 5 minutes and drink water. (No tests were given that could have differentiated the fourth, or "deepest," stage of "hypnosis.")

In a second experiment, the same seven tests of suggestibility were given in the same way immediately after a standard hypnotic-induction procedure. In a third (control) experiment, the same tests were given in the same way to the subjects when they were normally awake.

As Table 1 indicates, there were no significant differences between the subject's responses on the seven tests of suggestibility when the subjects were "lightly sleeping" and after they had been subjected to hypnotic induction. From Table 1, it can also be seen that the subjects were more suggestible on all seven tests during the first experiment—when they were "lightly sleeping"—than they were during the control experiment when they were normally awake, and that they were significantly more suggestible on five of the seven tests.

The correlations between the subject's scores on the seven tests during the first and second experiment—when "lightly sleeping" and after hypnotic induction—were in all cases above + 0.61 and in nine out of the 12 cases above + 0.92.

I concluded from this study that the subjects of this experiment were as suggestible when they were "lightly sleeping"—that is, when they appeared to be asleep and later stated that they had been in "some stage of sleep"—as they were after hypnotic induction.

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Table 1. Mean scores on the seven tests of suggestibility when the subjects were "lightly sleeping," after hypnotic induction, and when the subjects were normally awake.

Seven tests of suggestibility	Experiment			Critical ratio of difference	
	"Sleep"	Hypnosis	Control	"Sleep" and hypnosis*	"Sleep" and control
Hand-clasp test	44.4	37	7.3	0.75	5.3†
Finger-rigidity test	40.8	35	8.5	0.54	3.7†
Finger-levitation test	4.2	2.8	1.4	0.36	1.0
Anesthesia test	1.7	1.8	0.08	0.2	4.8†
Thirst test	9.0	4.7	1.25	1.8	4.5†
Five-minute-waking test	3.3	3.0	2.0	0.2	0.9
Amnesia test	3.3	2.5	0.0	0.55	5.7†

* Not significant at the 0.05 level. † Significant at the 0.001 level.

References and Notes

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10 July 1956

Strontium Content of Human Bones

The refinements of analytic techniques for trace elements, together with a growing interest in the distribution of trace elements in human tissues, has resulted in a continued addition of information on these elements to the biochemical literature. The present paper (*1*) reports strontium analyses on 277 human bones from a world-wide sampling.

Hodges *et al.* (*2*), investigating the strontium content of human bones by an emission-spectrographic technique, found for a limited sampling an average of 220 ppm for bone ash. Tipton (*3*) has found a lower value for bones (120 ppm), also using an emission-spectrographic technique.

The present paper reports results indicating that there are marked regional differences. It is possible that the aforementioned discrepancy may be explained on this basis. It is also possible that regional effects may be confounded with systematic errors in the analytic data. The investigation reported here is an attempt to