

The Amazing New Painkiller— MUSIC!



Sound—a concert in stereo, a roaring waterfall, a train whistle—is now being used successfully in the dentist's office, and its potential value in surgery and childbirth seems far-reaching

By GAY GAER

Dr. Wallace Gardner drills painlessly on patient listening to music as Dr. Licklider observes.

A FIVE-YEAR-OLD boy in Boston, who usually cried at the dentist's, sat quietly while having two cavities filled recently. He did this without receiving novocain or gas. Instead, he wore earphones.

Hopping out of the chair afterward, he had only one comment, "Gee, Mom, that diesel sure can blow its whistle!" A recording of diesel sounds had helped to kill his pain!

In a Midwest dental clinic this spring, an elderly lady underwent a complicated oral operation without any chemical painkiller. Hypertension precluded the usual anesthetics. While the doctor pulled four teeth, trimmed bone, and sewed tissue, her only relief came from music and a rushing sound through earphones. "Astonishing!" she said later. "It didn't hurt."

Audio-analgesia—"pain-killing by sound"—is one of modern science's newest and most unusual discoveries. The procedure is simple. A patient chooses a recording, puts on earphones, and relaxes by listening. If he feels any discomfort, he adjusts a remote control, and a sound like the rushing of a waterfall alleviates the pain. Incredible as it seems, the combination of music and other sounds has alleviated pain in dentistry, surgery, and childbirth.

The discovery that sound can kill pain resulted from the lucky meeting of two men. Dr. Wallace J. Gardner, a Cambridge, Mass., dentist, had long been experimenting with music as an analgesia when a new patient came to him. The patient was Dr. J. C. R. Licklider, a psychologist whose specialty is the study of sound. Licklider faced extensive and painful dental work. After the first gruel-

ing session, he and Gardner decided that drilling would be less obnoxious if they could drown out the noise of the drill.

For the next appointment, Licklider brought along an electronic noise generator. "I put on earphones," he said, "and when Doctor Gardner began grinding away at one of my molars, I turned up a sound like the roar of Niagara Falls. Believe me, it was wonderful to feel that pain recede."

This experience led to joint research to discover why sound affects pain, and which combination of sounds will mask pain. Using a well-equipped acoustical laboratory and the help of trained specialists, they found the most effective sound combinations, the first "hi-fi system" ever designed expressly as a painkiller.

Since then, more than 5,000 persons—including 500 extraction cases—have found that dentistry can be a relaxed experience when listening to music or noise. Audio-analgesia has been effective on 90 percent of the patients who have tried it. Many were children who usually threw tantrums, or adults who panicked despite gas or novocain.

Dr. Frederick A. Trevor of Melrose, Mass., explains that sound eased the anxiety part of their agony in a way no chemical could. One of Dr. Trevor's most nervous patients used to go to bed for two days to recover from a visit. Last winter he persuaded her to try sound. "For the first time," he says, "she enjoyed a normal day after seeing me."

Because tension and anxiety magnify pain, relaxation and distraction are important factors in diminishing it. "First of all," says one patient, "you

are told it won't hurt. Then that stereo music in the earphones is so terrific the rest of the world seems far away. You couldn't care less about what's going on with the doctor. You feel half asleep, dreaming. The noise just pushes the pain out of the way."

Equally important, audio-analgesia leaves no unpleasant side effects, such as excessive bleeding.

In one of the first surgical tests of the new painkiller, Dr. Licklider had a small tumor removed from his shoulder. "I felt only the bearable prickling of skin cuts," he said. Toenail removals, usually very excruciating, subsequently were performed using sound, and patients felt no pain.

SOON, ACCORDING to Gardner and others, some types of heart operations, now requiring multiple anesthetics, may be performed with only a local anesthetic while the patient listens to music. A compact hi-fi set in ambulances may relieve the pain and shock of accident victims. And for many who cannot take anesthesia without dangerous reactions, audio-analgesia could prove a lifesaver.

Already, a number of children have been born to music. Obstetricians observe that these babies are born extremely alert, as in "natural childbirth," and that the mothers emerge with a sense of well-being and recover rapidly.

Nobody can predict how widely audio-analgesia will be used in the future. But those who have experienced it entertain high hopes—like the new mother who was wheeled from the delivery room exclaiming, "What a wonderful experience! I'll always remember *South Pacific!*"

COVER:

Polly Bergen lends enchantment to an old-fashioned sunbonnet in Richard Heimann's photo. She models others destined to go to your head in "Summer Cover-Ups," p. 18.

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