On the other hand are those who have hailed methadone as being to drug addiction what insulin is to diabetes—an attitude that fails to take into account the psychological aspects of drug addiction.

But most of the comments coming into the FDA have been from professionals who hold the middle ground and who see the drug as a useful tool, the best now available, for helping an addict control his physical addiction to heroin and drawing him into an environment where he can be helped to change the entire pattern of his life.

Even among these professionals there have been widely varying reactions to the proposed regulations. Many believe that the strict requirements for urine inspection and restrictions on take-home dosages reflect more of a political than a medical approach. They, Dole among them, say this indicates a lack of trust in patients, clogs up a program so fewer new patients can be admitted, and is a waste of money (urinalyses cost between $2 and $6 apiece). Robert Newman of the New York City Health Department's Addiction Services testified before a Senate subcommittee last May that tight controls on take-home doses would only boost the black market. "If my wife had to go 7 days a week into a government-run clinic to pick up her birth control pills, I would be out on the street buying them for her," said he.

Several professionals have pointed out to *Science* that law enforcement agencies rather than doctors have had total control over illegal drugs and drug abusers until very recently, and that this, along with the questionable moralistic argument that some drugs are "bad" while legal ones (such as alcohol and barbiturates) are all right, has prevented people from having a realistic attitude toward methadone. One doctor, who asked not to be identified, said flatly: "The FDA guide-

FDA Invents More Tales about DES

The Food and Drug Administration (FDA) last week announced a slow-step, partial ban on the use in meat animals of the synthetic hormone diethylstilbestrol (DES). In doing so, the agency had the courage to reverse its previous all-out defense of the carcinogenic beef ingredient (see *Science*, 28 July) but covered its retreat with a smokescreen of contradictions and untruths.

The explanation given for last week's sudden volte-face was that new data had been received just 5 days earlier from the Department of Agriculture (USDA). The data showed that even if DES is withdrawn from an animal's feed 7 days before slaughter—the statutory time specified by the FDA—residues of the hormone will still remain in the animal's tissues at the time of death. FDA Commissioner Charles C. Edwards announced last week that in light of this finding he had no choice but to ban DES from cattle feed. Because there is no imminent danger to human health, Edwards said, the ban will not become effective until the beginning of next year. DES will continue to be permitted in the form of a pellet implanted in the animal's ear.

A Seven-Day Wonder

The remarkable feature of the FDA's rationale is the extent to which it contradicts the agency's previous position on DES. FDA officials have persistently explained the presence of DES residues in beef samples as the result of cattlemen neglecting to withdraw DES 7 days before slaughter. At hearings last year before the House intergovernmental relations subcommittee chaired by Representative L. H. Fountain (D–N.C.), Edwards categorically rejected the alternative explanation—that it takes longer than 7 days for DES to be cleared from an animal's body. At the time of the hearing, and for 17 years previously, the withdrawal period for DES was, in fact, only 2 days. Edwards assured the subcommittee that even the 2-day period was completely adequate for clearance of DES. His words to the committee were:

> We advised you in March that sound scientific data did substantiate the safety of DES at the 10-milligram level with a 48-hour withdrawal period. . . . Since that time, numerous scientific articles have been published and data submitted with other NDA's [new drug applications] for DES that confirm the fact that the use of 10 milligrams of DES per head per day, combined with a 48-hour withdrawal period, will result in no residues in meat tissues.

Edwards offered this specific assurance despite the fact that several scientists in his agency did not believe that the 2-day withdrawal period was sufficient and, moreover, considered that the available evidence, inadequate as it was, indicated that even a 7-day withdrawal period would probably be insufficient.

The fact that new scientific data, which the FDA now accepts, indicates that a 2-day withdrawal period is, after all, insufficient casts the gravest doubts on the competence of Edwards' senior advisers, since in this case they plainly drew the wrong interpretation from data they failed to recognize as inadequate.

In last week's announcement, Edwards stated that the ban would not apply to DES in the form of implants because the "USDA has never detected a residue when implants were used as the sole source of DES." According to Fountain, this statement is both misleading and untrue. It is misleading because the USDA does not include implants in its regular sampling program for DES residues; it is therefore not surprising that residues are not being detected when the USDA is not looking for them, Fountain says. Edwards' statement is also untrue in that a USDA inspector in June 1970 did detect a DES residue of 60 parts per billion in beef liver, a fact which was reported before Fountain's subcommittee last March.

Another reason for the FDA's belated change of position may be not entirely unconnected with the fact that, on the day following its ban, the Senate health subcommittee passed a bill proposing a complete and immediate ban on DES. Maybe the FDA decided to act against the carcinogen before Congress did it for them.

—NICHOLAS WADE