Chapter 16. Methadone side effects

No medication produces only a single desired effect. Patients on methadone maintenance report a wide range of side effects, especially during the early weeks or months when their daily dose of methadone is being stabilized.

In New Orleans, for example, Dr. William A. Bloom, Jr., of the Tulane University School of Medicine, and an associate, Dr. Brian T. Butcher, gave 209 patients on methadone maintenance a checklist of 33 assorted symptoms ranging from runny nose to loss of appetite, and asked them to check any from which they suffered. As might be expected, this highly suggestive procedure produced a bumper crop of reported symptoms.¹

<table>
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<tr>
<th>Symptom</th>
<th>Percentage of Patients Reporting</th>
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<td>Weight gain</td>
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<tr>
<td>Constipation</td>
<td>70</td>
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<tr>
<td>Increased intake of fluids</td>
<td>63</td>
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<td>Delayed ejaculation</td>
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<tr>
<td>Increased use of alcohol</td>
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<td>Increased frequency of urination</td>
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<td>Numbness of hands and feet</td>
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</table>

Dr. Avram Goldstein of Stanford University carried out a similar study of side effects in 206 methadone maintenance patients. This study ² also revealed numerous side effects—but led to rather reassuring conclusions.
"Almost without exception," Dr. Goldstein reported, "the body symptoms complained of on methadone were present prior to starting on the program, when the patient was using heroin. Most of these improved on methadone, so that despite the natural tendency to blame all troubles on the drug one happens to be taking, it is difficult to classify them as side effects." Examples of symptoms reported before methadone which showed improvement while on methadone were headache, joint pains, hiccups, diarrhea, loss of libido, nervousness, runny nose, difficulty urinating, and unhappiness.

Some other complaints, Dr. Goldstein continued, were actually due to inadequate methadone dosage during the build-up period. They occurred principally in the evening, eight hours or longer after methadone.

"Symptoms that fall into this category comprise the constellation recognized by addicts as 'feeling sick,' including insomnia, nausea and vomiting, muscle pains, and anorexia [lack of appetite]." Those symptoms were relieved as the dose was gradually increased.

Excessive sweating was a common complaint among Dr. Goldstein's California patients. "It was present to some degree in three-fourths of the patients before methadone and in moderate or severe form in ten to fifteen percent. By the third month [on methadone] it had become worse in 43 percent of the patients and better in about 30 percent, remaining unchanged in the remainder. There was no dose relationship. Other methadone side effects, Dr. Goldstein added whimsically, were "dramatic reductions in the frequency of theft and the amounts expended for heroin."

Contrary to Dr. Bloom's findings, Dr. Goldstein found that "excessive use of alcohol remained unchanged as compared with premethadone use (about 20 percent of patients), as did the use of amphetamines (5 to 10 percent), and marijuana (about 45 percent)." Use of barbiturates declined from 20 percent before methadone to 6 percent while on methadone.

The most important point about these and other side effects, however, is that—in New Orleans, in California, in New York, and in other programs as well—they only rarely lead a patient to discontinue methadone. In the Goldstein sample, for example, only five out of 206 patients left the program voluntarily, and several of these dropped out because they were leaving the area. 2

Some opponents of methadone maintenance have alleged that it is part of a genocide conspiracy against the black race—designed to render black males impotent and both males and females sterile. Because these charges are quite widely believed in some black communities, they deserve the most thorough consideration. The relevant data follow.

**Menstrual function.** In New York City's Beth Israel program, 82 out of 83 women addicts of childbearing age menstruated normally after conversion to methadone—"usually within one to two months." 4
Among 15 women on the West Philadelphia methadone maintenance program, 8 did not menstruate at all while on heroin. Seven out of the 8 began to menstruate again when converted from black-market heroin to methadone maintenance.\(^5\) Here and in most of the comparisons that follow, however, it must be remembered that other changes in life-style accompanied the conversion. just as heroin \textit{per se} was probably not responsible for all of the preconversion problems, so methadone \textit{per se} cannot be credited with all the postconversion improvements.

Only 4 of the 15 women in the West Philadelphia study had regular menstrual periods while on heroin; 12 of the 15 had regular menstrual periods on methadone maintenance. Of the 3 exceptions, one had periods longer than normal, one had periods shorter than normal, and one did not menstruate.\(^6\) Such variations are to be expected, of course, in any group of women. The high rate of improvement suggests that while heroin addiction and its accompanying life-style (often including prostitution) may impair menstrual function, permanent damage is rare.

\textit{Female sexual function.} The 15 women in the West Philadelphia study were asked to rate (1) their sex drive, (2) their sex activity, and (3) their enjoyment of sex while on heroin and after conversion to methadone. Only 4 of the 15 women reported normal sex drive on heroin; this increased to 10 after conversion. Eleven women reported below-average sex activity on heroin, as compared with 5 after conversion to methadone. Five reported normal enjoyment of sex on heroin; this rose to 8 after conversion.\(^2\) Sexual complaints, it should here be recalled, are also frequent among nonaddicted women.

\textit{Likelihood of pregnancy.} Increased likelihood of pregnancy is almost universally reported as a side effect among female heroin addicts who convert to methadone—though whether this is a pharmacological result of the switch from heroin to methadone or of the accompanying change in life-style remains in doubt. The pregnancies are sometimes unwanted. Typical is this statement of Dr. Bloom: “The rate of pregnancy in our New Orleans methadone programs has been as high as 20 percent during the past year. Female patients of childbearing age appear to be more fertile once they are stabilized on methadone. They should be informed of this, and where appropriate, be offered birth control information or measures.”\(^8\)

\textit{Outcome of pregnancy.} During the first few years of methadone maintenance, the question of possible damage to the fetus in pregnancy was often raised. The question can now be answered decisively. The rate of congenital malformations among babies born to mothers taking high doses of methadone both before and during pregnancy does not differ significantly from the rate to be expected among nonaddicted mothers of the same age, color, and socioeconomic status.\(^2\)

The course of pregnancy among women on methadone is generally uneventful, with few complications. Birth complications are also what might be expected in a comparable nonaddicted group.
Careful evaluation of the babies at birth, performed at several centers, reveals only two deviations from what would be expected. The Beth Israel findings in 19 babies is typical of the findings generally.

First, while few of the Beth Israel babies born to mothers on methadone maintenance were in fact premature-born too soon—one-third of them had the low birth weight (under 2,500 grams) typical of premature babies. This is, of course, a handicap. The proportion of lowbirth-weight babies is about the same as among babies born to mothers on heroin. How much the heroin and methadone contribute to the problem, however, remains in doubt. Low birth weight is also a characteristic of babies born to mothers who smoke heavily—and almost all of these mothers were heavy smokers. Low birth weight is also frequent among the poor, the black, and those otherwise socially handicapped; almost all of these mothers were in one or more of these categories.

The other condition frequently found in babies born to mothers on methadone was hyperirritability—the pattern often mistakenly called "withdrawal symptoms." In the Beth Israel series, 8 of the 19 methadone babies were born completely free of such symptoms and 6 more had symptoms too mild to require medication. Five babies had moderate symptoms requiring medication. None had severe symptoms. This was a better record than for Beth Israel babies whose mothers were heroin addicts not on methadone. As noted earlier, this hyperirritability may be related to low birth weight—or to factors wholly unrelated to opiates.

**Development following birth.** Dr. Saul Blatman, the Beth Israel pediatrician in charge of infant care for babies born to addicted mothers and to mothers on methadone maintenance, presented at the Third National Conference on Methadone Treatment the first follow-up report on the postnatal development of methadone babies. The report covered 14 children from four and a half to forty-two months of age.

Each child seen by us has been found to be developing physically within normal limits without exception. Psychometrics performed during these visits using the Knobloch-Modified Gesell Test or the Bayley Scales of Infant Development showed the following overall range: A normal or average test for 11 of the 14 babies; a below average test, as far as development of intelligence is concerned, in one baby; and a high normal or high average intelligence in one baby. One normal baby, who is average in all other respects, showed poor language development at ages 23 and 33 months. Overall, the impression is that this group compares favorably with other children of similar age.

**Male sexual function.** The evidence to date suggests (though it does not yet prove) that methadone, like heroin, has a modestly depressant effect on male sexual function in some cases. The evidence is much more convincing that many males converted from street heroin to methadone maintenance enjoy a significant improvement in sexual function.

The best data so far were presented at the Third National Conference on Methadone Treatment by Dr. Paul Cushman, Jr., of St. Luke's Hospital in New York City, who studied thoroughly 20 male patients aged twenty-four to fifty-two, maintained on
methadone for from ten months to five years. Only 7 of these 20 men reported that they were consistently potent while on street heroin. After conversion to methadone, in contrast, 16 of the 20 reported normal potency. The number reporting normal libido rose from 7 on street heroin to 17 on methadone maintenance. Delayed ejaculation was frequent both while on heroin and after conversion to methadone maintenance-though some patients reported normal ejaculation time on heroin, some on methadone, and some on both. The cause of depressed sexual function was apparently not hormonal. Testosterone levels and luteinizing hormone (LH) levels were both within normal limits in all 20 cases. Dr. Cushman summed up:

... Some patients on methadone had some sexual difficulties remaining [but] 50 percent reverted [to normal] within the first month and an additional 25 percent within the first year; another ten percent within 18 months. Nevertheless, there were 10 percent with continuing sexual problems apparently not present during heroin use. In addition, there were another 10 percent who experienced transient disturbance in sexual function during initiation of methadone treatment not present during heroin addiction.

The data here reviewed clearly demonstrate that methadone is a drug poorly suited to serve the purposes of a "genocide conspiracy" against black heroin users. Conversion from street heroin to methadone maintenance actually improves sexual function, both male and female, in a large proportion of cases and notably increases the likelihood of normal pregnancy and normal birth.

**Pain and methadone maintenance.** Astonishing findings concerning pain were reported at the Third National Conference on Methadone Treatment by Dr. Morton 1. Davidson of Beth Israel Medical Center, findings based on experience with several thousand methadone patients.

These patients are able to be managed in a relatively routine fashion. Perception of pain has been no problem. There never has been a problem of masking symptomatology. They have experienced dental problems and perceive pain normally....

When it comes to relieving pain, we have had experience with the use of superimposed narcotics such as morphine or Demerol. These have been successful. Patients have been relieved of their pain. The explanation for this has not been worked out....

We have had patients who have undergone surgery varying from abdominal to orthopedic surgery to chest surgery. The patients have been managed with no particular difficulty regarding anesthesia.

**Overdose.** Like aspirin and other drugs, methadone should not be left lying around within reach of small children. The usual maintenance dose, if taken by a child, may be fatal unless proper treatment is instituted.

A few cases have been reported of children attracted to the "orange juice" in the family refrigerator who have died of the methadone it contained. Some methadone maintenance
programs therefore require that patients who take home methadone mixed with a soft
drink must carry and store it in a locked box. Dr. Dole has developed, and a
pharmaceutical company is marketing, a methadone tablet that is not readily injectable,
need not be mixed with a soft drink, and need not be refrigerated. The new tablets are
now in use in many programs, and are expected to reduce the risk of methadone overdose
in children.

Fortunately, the antidote for methadone overdose is simple and readily available in
hospital emergency rooms---a series of injections of the same narcotic antagonist,
nalorphine (Nalline), used for treating overdose of other opiates. Nalorphine produces
almost immediate relief. A few methadone overdose deaths have been reported, however,
in children given only one injection of nalorphine. The antagonist works like magic-but
its effect lasts only for a few hours, while the methadone effect may persist for a day or
more. After the first nalorphine dose wears off, the child may again fall into a life-
threatening methadone coma. Hence, the hospital staff must keep the child under
continuous observation, and repeat the nalorphine injection whenever signs of lethargy
occur.

In 1970 and 1971, some deaths among addicts on methadone were attributed to
"methadone overdose." As in the case of so-called "heroin overdose" deaths, however,
these fatalities followed moderate rather than excessive doses of the narcotic. Hopefully,
solution of the Syndrome X mystery will solve these methadone "overdose" deaths too
(see Chapter 12).

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Footnotes
Chapter 16

1. William A. Bloom, Jr., and Brian T. Butcher, in Proceedings, Third Methadone
Conference, pp. 44-46.


3. Ibid., p. 33.

Function in Narcotics Addicts Treated wig Methadone," American Journal of Obstetrics

5. William F. Wieland and Michael Yunger, in Proceedings, Third Methadone
Conference, p. 51.

6. Ibid.
7. Ibid., p. 52.


10. Ibid., p. 85.

11. Ibid., pp. 84-85.

12. Ibid., p. 84.


14. Ibid.

15. Ibid., p. 148.