

Transparency No. 1 - C-8 In Blood

After 3M informed us in 1979 of the persistent nature of C-8 in the body, notably in the blood, a blood sampling program was initiated at Washington Works. The program has greatly accelerated as a result of a preliminary 3M study suggesting that C-8 is teratogenic. A total of 86 samples were collected in 1979, 27 in 1980, and about 300 samples so far in 1981. With the tremendous increase in C-8 in blood data, there is an obvious need to manage the data to help us interpret it quickly and effectively.

Transparency No. 2

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This lead to the development of a computer program code named FLAIR which stands for Fluoropolymers Laboratory Analysis Information Retrieval. This system has already been implemented and data is being entered into the files. Through the efforts of Kim Sawyer of Data Processing, Paul Thistleton, and John Doughty, the FLAIR system is now operational. Work and medical history reports are available for various employee groups.

The work history file contains a listing of jobs performed by each individual along with the total time the employee spent in each job.

The medical history file contains all the C-8 blood results for each individual.

In summary, the FLAIR program is being used to edit and organize C-8 in blood data into two files: Work history file and medical history file. The data in this form can be more quickly analyzed and interpreted.

I'd like to discuss the Washington Works blood sampling schedule. A sampling schedule routine has been established and the program is progressing very well.

Transparency No. 3

All permanently assigned TEFLON[®] employees are resampled once a year. Incoming TEFLON[®] employees are sampled immediately before beginning work in TEFLON[®], 3 months later, another 3 months later, and annually thereafter.

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Females transferred out of the TEFLON[®] Division around April 1st were sampled at the time they left TEFLON[®], 3 months later, and will be sampled once a year. Male retirees, who are willing, will be sampled on an annual basis. Also, any Washington Works employee who requests a blood C-8 analysis will be sampled.

Transparency No. 4

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I'd like to take a moment to explain why we need a blood sampling program. First, since C-8 accumulates in the blood, we need to know and document what C-8 levels our employees are experiencing. By following carefully our employee's C-8 blood levels, we can closely follow any trends in C-8 blood levels which may develop. Blood sample results will help us determine the rate at which C-8 is eliminated from the body as well as the rate at which C-8 accumulates. This data along with other medical history data will prove very useful in human epidemiology studies.

Now, I'd like to discuss the results of recent blood sampling done on Washington Works employees.

Transparency No. 5

This chart contains data on 18 females transferred out of TEFLON® around the 1st of April. Results of their last 2 blood tests are listed in the 2nd and 3rd columns. The column on the far right lists the percent change in blood C-8 levels between the 2 tests. As you can see, there's a large amount of individual variability. Some females experienced blood C-8 level decreases over 30% while others experienced essentially no change. However, there is an obvious overall downward trend and this trend is statistically significant. To summarize this table, C-8 in blood dropped an average 15.3% over an average 129 day period.

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There appears to be no correlation between C-8 blood levels and the rate at which it's eliminated.

It is our intention to obtain more data on males who have been transferred out of TEFLON® to other Washington Works Divisions or who have retired in order to determine C-8 elimination rate in males.

On the basis of very limited data, the male and female elimination rates appear equivalent.

Transparency No. 6

As you can see in the right-hand column of this chart, FEP Operators are beginning to show a downward trend. This trend is not yet statistically significant. However, more C-8 in blood data should bear out this trend.

Transparency No. 7

This is a summary of C-8 blood levels for Fine Powder/Dispersion, Granular, and FEP Zone 4 and Zone 6 Operators. The higher C-8 blood levels are found in Zone 6 Operators. As you can see, these Operators have spent a great deal more time in TEFLON® areas. Since C-8 does accumulate in the blood over time, these results are not unexpected.

In summary, The C-8 blood sampling program is a continuing effort. As more data becomes available, it will be analyzed and any further observations will be reported.

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