

**mi set** — Declare multiple-imputation data

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## Description

`mi set` is used to set a regular Stata dataset to be an `mi` dataset. `mi set` is also used to modify the attributes of an already set dataset. An `mi set` dataset has the following attributes:

- The data are recorded in a *style*: `wide`, `mlong`, `flong`, or `flongsep`; see [\[MI\] Styles](#).
- Variables are registered as `imputed`, `passive`, or `regular`, or they are left unregistered.
- In addition to  $m = 0$ , the data with missing values, the data include  $M \geq 0$  imputations of the imputed variables.

`mi set style` begins the setting process by setting the desired style. `mi set style` sets all variables as unregistered and sets  $M = 0$ .

`mi register` registers variables as `imputed`, `passive`, or `regular`. Variables can be registered one at a time or in groups and can be registered and reregistered.

`mi unregister` unregisters registered variables, which is useful if you make a mistake. Exercise caution. Unregistering an imputed or passive variable can cause loss of the filled-in missing values in  $m > 0$  if your data are recorded in the `wide` or `mlong` styles. In such cases, just `mi register` the variable correctly without `mi unregistering` it first.

`mi set M` modifies  $M$ , the total number of imputations.  $M$  may be increased or decreased.  $M$  may be set before or after imputed variables are registered.

`mi set m` drops selected imputations from the data.

`mi unset` is a rarely used command to unset the data. Better alternatives include `mi extract` and `mi export` (see [\[MI\] mi extract](#) and [\[MI\] mi export](#), respectively).

## Menu

Statistics > Multiple imputation

## Syntax

```
mi set style
```

```
where style is wide  
                  long  
                  flong  
                  flongsep name
```

```
mi register { imputed | passive | regular } varlist
```

```
mi unregister varlist
```

```
mi set M { = | += | -= } #
```

```
mi set m -= (numlist)
```

```
mi unset [ , asis ]
```

The `mi` suite of commands does not allow alias variables; see [D] [frunalias](#) for advice on how to get around this restriction.

## Option for mi unset

`asis` is rarely used and is intended for programmers. `mi unset, asis` unsets the `mi` data as is. This means that it will not rename the `_mi_*` system variables and the `_#_*` variables (wide `mi` style). By default, `mi unset` renames the `_mi_*` variables as `mi_*` and the `_#_*` variables as `*#_`. Most `mi` commands, including `mi unset` without option `asis`, will not work without the `_mi_*` system variables. `mi unset, asis`, however, will work even without those variables (in case they are accidentally dropped); it will simply unset the data as is. The resulting dataset may not always be usable; for instance, without the `_mi_m` variable, you may not be able to identify imputations, and without the `_mi_id` variable, you may not be able to identify the imputed observations. You should exercise caution when using this option.

## Remarks and examples

[stata.com](http://www.stata.com)

Data must be `mi set` before they can be used with the other `mi` commands. There are two ways data can become `mi set`: direct use of `mi set style` or use of `mi import` (see [MI] [mi import](#)).

The `mi register`, `mi set M`, and `mi set m` commands are for use with already set data and are useful even with imported data.

Remarks are presented under the following headings:

```
mi set style  
mi register and mi unregister  
mi set M and mi set m  
mi unset
```

## mi set style

`mi set style` begins the setting process. `mi set style` has the following forms:

```
mi set wide
mi set mlong
mi set flong
mi set flongsep name
```

It does not matter which style you choose because you can always use `mi convert` (see [MI] [mi convert](#)) to change the style later. We typically choose `wide` to begin.

If your data are large, you may have to use `flongsep`. `mi set flongsep` requires you to specify a name for the `flongsep` dataset collection. See [Advice for using flongsep](#) in [MI] [Styles](#).

If you intend to have [super-varying](#) variables, you need to choose either `flong` or `flongsep`, or you will need to `mi convert` to `flong` or `flongsep` style later.

The current style of the data is shown by the `mi query` and `mi describe` commands; see [MI] [mi describe](#).

## mi register and mi unregister

`mi register` has three forms:

```
mi register imputed varlist
mi register passive varlist
mi register regular varlist
```

See [MI] [Glossary](#) for a definition of [imputed](#), [passive](#), and [regular variables](#).

You are required to register imputed variables. If you intend to use `mi impute` (see [MI] [mi impute](#)) to impute missing values, you must still register the variables first.

Concerning passive variables, we recommend that you register them, and if your data are style `wide`, you are required to register them. If you create passive variables by using `mi passive` (see [MI] [mi passive](#)), that command automatically registers them for you.

Whether you register regular variables is up to you. Registering them is safer in all styles except `wide`, where it does not matter. We say registering is safer because regular variables should not vary across  $m$ , and in the long styles, you can unintentionally create variables that vary. If variables are registered, `mi` will detect and fix mistakes for you.

The names of imputation and passive variables may not exceed 29 characters. In the `wide` style, the names of these variables may be restricted to less than 29 characters depending on the number of imputations. In the `flongsep` style, the names of regular variables in addition to the names of imputation and passive variables also may not exceed 29 characters.

[Super-varying variables](#)—see [MI] [Glossary](#)—rarely occur, but if you have them, be aware that they can be stored only in `flong` and `flongsep` data and that they never should be registered.

The registration status of variables is listed by `mi describe` (see [MI] [mi describe](#)).

Use `mi unregister` if you accidentally register a variable incorrectly, with one exception: if you mistakenly register a variable as `imputed` but intended to register it as `passive`, or vice versa, use `mi register` directly to reregister the variable. The mere act of unregistering a passive or imputed variable can cause values in  $m > 0$  to be replaced with those from  $m = 0$  if the data are `wide` or `mlong`.

That exception aside, you first `mi unregister` variables before reregistering them.

## mi set M and mi set m

`mi set M` is seldom used, and `mi set m` is sometimes used.

`mi set M` sets  $M$ , the total number of imputations. The syntax is

```
mi set M = #
mi set M += #
mi set M -= #
```

`mi set M = #` sets  $M = \#$ . Imputations are added or deleted as necessary. If imputations are added, the new imputations obtain their values of imputed and passive variables from  $m = 0$ , which means that the missing values are not yet replaced in the new imputations. It is not necessary to increase  $M$  if you intend to use `mi impute` to impute values; see [\[MI\] mi impute](#).

`mi set M += #` increments  $M$  by  $\#$ .

`mi set M -= #` decrements  $M$  by  $\#$ .

`mi set m -= (numlist)` deletes the specified imputations. For instance, if you had  $M = 5$  imputations and wanted to delete imputation 2, leaving you with  $M = 4$ , you would type `mi set m -= (2)`.

## mi unset

If you wish to unset your data, your best choices are `mi extract` and `mi export`; see [\[MI\] mi extract](#) and [\[MI\] mi export](#). The `mi extract 0` command replaces the data in memory with the data from  $m = 0$ , unset. The `mi export` command replaces the data in memory with unset data in a form that can be sent to a non-Stata user.

`mi unset` is included for completeness, and if it has any use at all, it would be by programmers.

## Also see

[\[MI\] Intro](#) — Introduction to mi

[\[MI\] mi convert](#) — Change style of mi data

[\[MI\] mi describe](#) — Describe mi data

[\[MI\] mi export](#) — Export mi data

[\[MI\] mi extract](#) — Extract original or imputed data from mi data

[\[MI\] mi import](#) — Import data into mi

[\[MI\] mi XXXset](#) — Declare mi data to be svy, st, ts, xt, etc.

[\[MI\] Styles](#) — Dataset styles

[\[D\] frunalias](#) — Change storage type of alias variables

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