

# Can the SAS procedure PROC FREQ be used to analyze data and display frequency counts without percentages?

Authored by  
**stats writer**

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## RECOMMENDED CITATION

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The SAS procedure PROC FREQ is a statistical tool that can be utilized to analyze data and display frequency counts. It is capable of providing a detailed breakdown of the number of occurrences for each distinct value within a dataset. This procedure is particularly useful when working with categorical data. It should be noted, however, that PROC FREQ does not automatically display percentages alongside the frequency counts. Instead, the user must specify the appropriate options to include percentage calculations in the output. Therefore, while PROC FREQ can be utilized for frequency analysis, it requires additional steps to display percentages.

## **SAS: Use PROC FREQ & Show No Percentages**

**You can use the following methods with PROC FREQ in SAS to create frequency tables and suppress any percentage values in the resulting tables:**

### **Method 1: Suppress Percentages in One-Way Frequency Table**

```
proc freq data=my_data order=freq;  
tables my_variable / nopercntnocum;  
run;
```

### **Method 2: Suppress Percentages in Two-Way Frequency Table**

```
proc freq data=my_data order=freq;  
tables my_variable1*my_variable2 / norow nocol  
nopercnt nocum;
```

**run;**

The following examples shows how to use each method in practice with the SAS built-in dataset called `sashelp.birthwgt`, which contains various characteristics for 100,000 mothers that recently gave birth.

We can use PROC PRINT to view the first 10 observations from this dataset:

```
/*view first 10 observations from BirthWgt dataset*/  
proc printdata=sashelp.BirthWgt (obs=10);
```

**run;**

| Obs | LowBirthWgt | Married | AgeGroup | Race   | Drinking | Death | Smoking | SomeCollege |
|-----|-------------|---------|----------|--------|----------|-------|---------|-------------|
| 1   | No          | No      | 3        | Asian  | No       | No    | No      | Yes         |
| 2   | No          | No      | 2        | White  | No       | No    | No      | No          |
| 3   | Yes         | Yes     | 2        | Native | No       | Yes   | No      | No          |
| 4   | No          | No      | 2        | White  | No       | No    | No      | No          |
| 5   | No          | No      | 2        | White  | No       | No    | No      | Yes         |
| 6   | No          | No      | 2        | White  | No       | No    | No      |             |
| 7   | No          | No      | 2        | Asian  | No       | No    | No      | Yes         |
| 8   | No          | No      | 3        | White  | No       | No    | No      | Yes         |
| 9   | No          | Yes     | 1        | Black  | No       | No    | No      | No          |
| 10  | No          | No      | 2        | Native | No       | No    | No      | Yes         |

### Example 1: Suppress Percentages in One-Way Frequency Table

**We can use the following code to create a frequency table for the Race variable:**

```
/*create frequency table for Race variable*/  
proc freqdata=sashelp.BirthWgt;  
tables Race;  
run;
```

The FREQ Procedure

| Race     | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|----------|-----------|---------|----------------------|--------------------|
| Asian    | 5224      | 5.22    | 5224                 | 5.22               |
| Black    | 14133     | 14.13   | 19357                | 19.36              |
| Hispanic | 22139     | 22.14   | 41496                | 41.50              |
| Native   | 942       | 0.94    | 42438                | 42.44              |
| White    | 57562     | 57.56   | 100000               | 100.00             |

**By default, SAS displays percentages in the frequency table.**

**To suppress the percentages, we can use the nopercnt and nocum statements:**

```
/*create frequency table for Race variable and suppress  
percentages*/  
proc freq data=sashelp.BirthWgt;
```

```
tables Race / nopercntnocum;  
run;
```

The FREQ Procedure

| Race     | Frequency |
|----------|-----------|
| Asian    | 5224      |
| Black    | 14133     |
| Hispanic | 22139     |
| Native   | 942       |
| White    | 57562     |

### Example 2: Suppress Percentages in Two-Way Frequency Table

We can use the following code to create a two-way frequency table for the Race and Married variables:

```
/*create frequency table for Race and Married  
variables*/  
proc freqdata=sashelp.BirthWgt;  
tables Race*Married;  
run;
```

The FREQ Procedure

| Frequency<br>Percent<br>Row Pct<br>Col Pct | Table of Race by Married |         |        |
|--|--------------------------|---------|--------|
|  | Race                     | Married |        |
|  |                          | No      | Yes    |
| Asian                                      | 4440                     | 784     | 5224   |
|  | 4.44                     | 0.78    | 5.22   |
|  | 84.99                    | 15.01   |        |
|  | 6.74                     | 2.29    |        |
| Black                                      | 4480                     | 9653    | 14133  |
|  | 4.48                     | 9.65    | 14.13  |
|  | 31.70                    | 68.30   |        |
|  | 6.81                     | 28.25   |        |
| Hispanic                                   | 12252                    | 9887    | 22139  |
|  | 12.25                    | 9.89    | 22.14  |
|  | 55.34                    | 44.66   |        |
|  | 18.61                    | 28.93   |        |
| Native                                     | 379                      | 563     | 942    |
|  | 0.38                     | 0.56    | 0.94   |
|  | 40.23                    | 59.77   |        |
|  | 0.58                     | 1.65    |        |
| White                                      | 44279                    | 13283   | 57562  |
|  | 44.28                    | 13.28   | 57.56  |
|  | 76.92                    | 23.08   |        |
|  | 67.26                    | 38.87   |        |
| Total                                      | 65830                    | 34170   | 100000 |
|  | 65.83                    | 34.17   | 100.00 |

By default, SAS displays percentages for overall percent, row percent, and column percent for each cell in the frequency table.

To suppress the percentages, we can use the norow, nocol and nopercnt statements:

```
/*create frequency table for Race and Married variables  
and suppress percentages*/  
proc freq data=sashelp.BirthWgt;
```

```
tables Race*Married / norow nocol nopercnt;  
run;
```

The FREQ Procedure

| Frequency | Table of Race by Married |       |        |
|-----------|--------------------------|-------|--------|
|           | Married                  |       |        |
| Race      | No                       | Yes   | Total  |
| Asian     | 4440                     | 784   | 5224   |
| Black     | 4480                     | 9653  | 14133  |
| Hispanic  | 12252                    | 9887  | 22139  |
| Native    | 379                      | 563   | 942    |
| White     | 44279                    | 13283 | 57562  |
| Total     | 65830                    | 34170 | 100000 |

Notice that the frequency table only shows frequency values and no percentage values for each cell in the table.

The following tutorials explain how to perform other common tasks in SAS: