How can I run a logistic regression with only a constant in the model using SPSS?

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To run a logistic regression with only a constant in SPSS, follow these steps:
1. Open SPSS and click on "Analyze" in the menu bar.
2. Select "Regression" and then "Binary Logistic" from the drop-down menu.
3. In the "Dependent" field, enter the variable that represents the outcome of interest.
4. In the "Covariates" field, enter the constant by typing "1" or selecting it from the list of variables.
5. Click on "Options" and make sure the "Constant" option is selected under "Model Selection."
6. Click "Run" to execute the logistic regression with only a constant in the model.
This will provide information on the intercept and the overall model fit, which can be used for further analysis and interpretation.

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There may be times when you would like to run a logistic regression with no predictor variables; in other words, just the constant (a.k.a. the intercept). For example, one may do this when calculating deviance scores between various models. If you try to run the logistic regression command in SPSS without a method subcommand or a method = enter subcommand with no variables after it, SPSS will give you an error message and not run the logistic regression. There is a way to "trick" SPSS

into running this type of logistic regression model. First, you will need
to create a new variable that is a constant in the dataset. Next, when you
run the logistic regression, use this new (constant) variable as the independent
variable with the noconst subcommand. In effect, you are simply
substituting the constant that you create for the one that would normally be
included in the model. (Please note that this trick does not work with the
regression command. According to SPSS technical support, the
regression command cannot be run without predictors; in other words, you
cannot get an intercept only model. If you want an intercept only model,
you will need to use the glm command.)

For example, let's use the /spss/faq/hsb2.sav
dataset. First, we will create the constant
variable. Next, we will run the logistic regression using female as the dependent

variable (we understand that this is an unusual choice for a dependent
variable, but we just needed a dichotomous variable for the example).

```
compute constant = 1.
execute.

logistic regression var = female
/method = enter constant
/noconst.
```

Unweighted Cases(a)	N	Percent	
Selected Cases	Included in Analysis	200	100.0
Missing Cases	0	.0	
Total	200	100.0	
Unselected Cases	0	.0	
Total	200	100.0	
a If weight is in effect, see classification table for the total number of cases.			

Original Value	Internal Value
male	0
female	1

	Predicted				
FEMALE	Percentage Correct				
	Observed	male	female		
Step 0	FEMALE	male	0	91	.0

female	0	109	100.0		
Overall Percentage			54.5		
a No terms in the model.					
b Initial Log-likelihood Function: -2 Log Likelihood = 277.259					
c The cut value is .500					

	Score	**df**	**Sig.**		
Step 0	**Variables**	**CONSTANT**	1.620	1	.203
Overall Statistics	1.620	1	.203		

	Chi-square	**df**	**Sig.**	
Step 1	**Step**	1.622	1	.203
Block	1.622	1	.203	
Model	1.622	1	.203	

Step	**-2 Log likelihood**	**Cox & Snell R Square**	**Nagelkerke R Square**
1	275.637	.008	.011

	Predicted				
FEMALE	**Percentage Correct**				
	Observed	**male**	**female**		
Step 1	**FEMALE**	**male**	0	91	.0
female	0	109	100.0		
Overall Percentage			54.5		
a The cut value is .500					

	B	**S.E.**	**Wald**	**df**	**Sig.**	**Exp(B)**	
Step 1(a)	**CONSTANT**	.180	.142	1.616	1	.204	1.198
a Variable(s) entered on step 1: CONSTANT.							