



HealthyR QuickStart Sheet

Please use this information throughout the course as a quick guide to R shortcuts symbols

RStudio keyboard shortcuts

Shortcut	Result
Control+Shift+Enter	Runs the whole Script
Control + Enter	Runs the current line or section
F1 (fn+F1)	Open Help window with function description
Control+Shift+M (Cmd+Shift+M)	%>% (sends data into a function)
Control+Shift+K (Cmd+Shift+K)	Knits your script/notebook to Word/PDF/HTML document.

Import/Export Spreadsheets

```
mydata = read_csv("my_data_file.csv")
write_csv(mydata, "my_output_file.csv")
```

Click on Import Dataset in the Environment tab for other formats.

Project with multiple folders? Add `here::here("my_data_file.csv")` into the `read_csv()`, e.g.:

```
read_csv(here::here("data-raw",
"my_data_file.csv"))
```

Symbols and Operators

Symbol	What does	Example	Example result
= or <-	assigns	x = 2	the value of x is now 2
==	Equal?	x == 2	TRUE
!=	Not equal?	x != 1	TRUE
<	Less than	x < 2	FALSE
>	Greater than	x > 1	TRUE
<=	Less than or equal to	x <= 2	TRUE
>=	Greater than or equal to	x >= 1	TRUE
%>%	sends data into a function	x %>% print()	2
::	indicates package	dplyr::count()	count() fn. from the dplyr package
->	assigns	2 -> x	the value of x is now 2
&	AND	x > 1 & x < 3	TRUE
	OR	x > 3 x == 3	FALSE
%in%	is value in list	x %in% c(1,2,3)	TRUE
\$	select a column	mydata\$year	1990,1996,...
c()	combines values	c(1, 2)	1, 2
#	comment	# Riinu changed this	ignored by R

`filter(sex %in% c("F", "M"))`
is equivalent to
`filter(sex == "F" | sex == "M")`

Is it a variable, a function, or text?

mean = 5.0 #setting a variable's value

Code	Type	Result	Explanation
mean	Variable	5.0	Value of the variable called <i>mean</i>
mean ()	Function	Calculate	Calculates the average of the numbers in brackets
"mean"	TEXT/ NAME	"mean"	Text, can be used as label, axis

Functions are **always** followed by brackets (usually with arguments inside the brackets).

Character strings (i.e. words, names, labels, sentences) are always quoted ("text" or 'text').

Paste Examples

Code	Result
<code>paste("Number", 5)</code>	"Number 5"
<code>paste("Number", 5, sep="-")</code>	"Number-5"
<code>paste("Number", 5, sep="")</code>	"Number5"
<code>paste0("Number", 5)</code>	"Number5"
NB the last 2 entries are equivalent	

Factors

Full reference of library(forcats):

<http://forcats.tidyverse.org/reference>

Most useful:

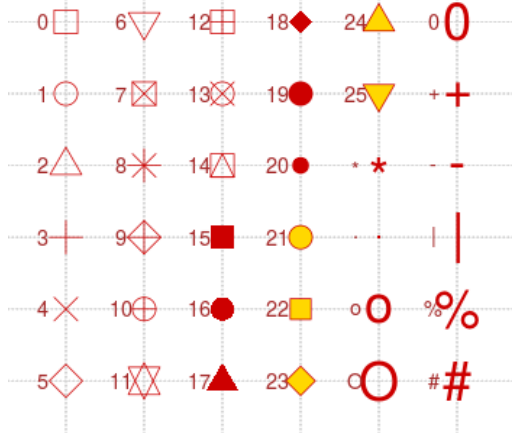
- `fct_collapse()` - groups some levels together
- `fct_relevel()` - move level(s) to front
- `fct_rev()` - reverses current level order
- `fct_recode()` - rename factor level(s)



Point & line types

shape =

plot symbols : points (... pch = *, cex = 3)

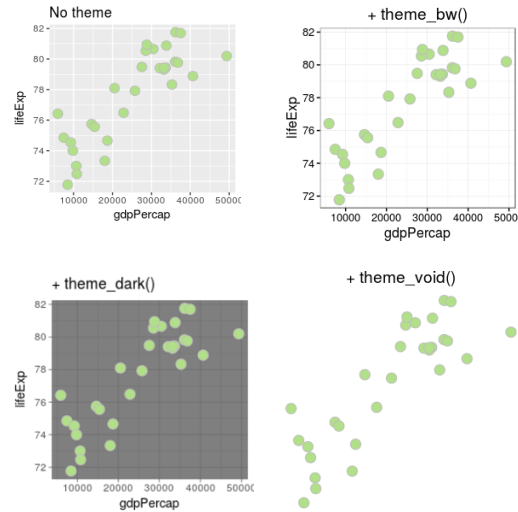


Note that for shapes 21 - 25 you can define a fill and a colour, for all others you can define a colour.

linetype =

0. 'blank'	
1. 'solid'	—————
2. 'dashed'	- - - - -
3. 'dotted'
4. 'dotdash'	- . - . -
5. 'longdash'	- - - - -
6. 'twodash'	- - - - -

Themes



Search for "ggtheme" or press F1 on any theme, e.g. `theme_bw()`, for more.

Common errors

Error in library (tidyverse): there is no package called 'tidyverse'

Solution: install the package.

`install.packages("tidyverse")` #note that this time the name has to be between quotes

Error: could not find function "spread"

Solution: load the package that includes this function.

`library(tidyverse)`

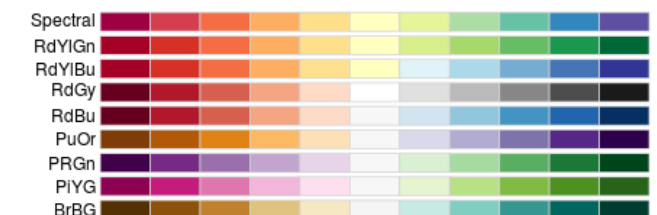
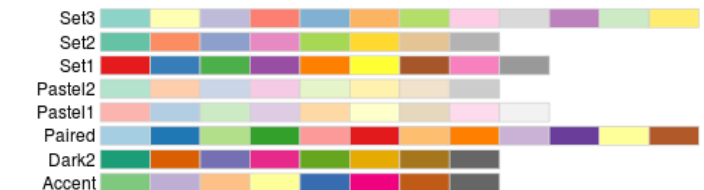
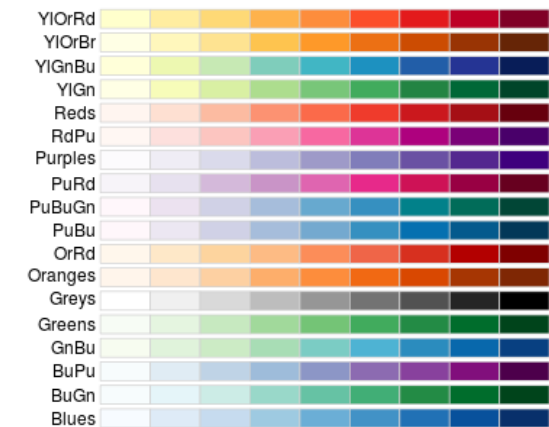
Error: argument is not numeric/date/factor

Solution: use `as.numeric()`, `ymd()`, `factor()`, `tibble()`, or other appropriate function to convert your column into the expected format.

Colours (or fills)

+ `scale_colour_brewer(palette = "Set1")` or

+ `scale_fill_brewer(palette = "Set1")`



Or get individual colour codes from:

<http://colorbrewer2.org/>