

# Lab 9 Solutions

STAT 630, Fall 2021

```
library(dplyr)
cdc <- readRDS(url("https://ericwfox.github.io/data/cdc.rds"))
```

**Exercise (in-class):** Use `filter()` to subset the rows of the `cdc` data frame corresponding to individuals that

1. are over 6 feet tall

```
cdc %>% filter(height > 72) %>% head()
```

##	genhlth	exerany	hlthplan	smoke100	height	weight	wtdesired	age	gender
## 1	good	1	1	1	73	185	175	79	m
## 2	good	1	1	1	75	200	190	43	m
## 3	very good	0	1	1	73	160	160	43	m
## 4	excellent	1	1	1	74	185	175	63	m
## 5	very good	1	1	1	73	210	170	36	f
## 6	excellent	1	1	0	73	250	200	36	m

2. are men that have smoked over 100 cigarettes

```
cdc %>% filter(smoke100 == 1 & gender == "m") %>% head()
```

##	genhlth	exerany	hlthplan	smoke100	height	weight	wtdesired	age	gender
## 1	excellent	1	1	1	69	186	175	46	m
## 2	fair	1	1	1	69	168	148	62	m
## 3	excellent	1	0	1	66	185	220	21	m
## 4	excellent	1	1	1	70	170	170	69	m
## 5	good	1	1	1	73	185	175	79	m
## 6	good	0	0	1	67	156	150	47	m

3. are in good or very good health

```
cdc %>% filter(genhlth == "good" | genhlth == "very good") %>% head()
```

##	genhlth	exerany	hlthplan	smoke100	height	weight	wtdesired	age	gender
## 1	good	0	1	0	70	175	175	77	m
## 2	good	0	1	1	64	125	115	33	f
## 3	good	1	1	1	60	105	105	49	f
## 4	good	1	1	0	66	132	124	42	f
## 5	very good	0	1	0	61	150	130	55	f
## 6	very good	1	1	0	64	114	114	55	f

**Exercises (in-class):** For each category of `genhlth` compute the mean age, weight, and desired weight.

```
hlth_levels <- c("poor", "fair", "good", "very good", "excellent")

cdc %>%
  group_by(genhlth) %>%
  mutate(genhlth = factor(genhlth, levels = hlth_levels)) %>% # change ordering of categories
  summarise(
    count = n(),
    age_mean = mean(age),
    weight_mean = mean(weight),
    wt desire_mean = mean(wt desire)
  )
```

```
## # A tibble: 5 x 5
##   genhlth   count age_mean weight_mean wt desire_mean
##   <fct>     <int>   <dbl>     <dbl>         <dbl>
## 1 poor         677    57.9       177.          153.
## 2 fair        2019    52.1       176.          155.
## 3 good         5675    46.6       173.          156.
## 4 very good   6972    43.0       169.          156.
## 5 excellent   4657    41.4       162.          153.
```