In [49]:

```
print("Name : ")
print("This is a CSV of more than 1300 rows which has bmi data.")
print("The task is to find out what is the percentage of people who are underweight and
print("Another task is to find out what is the percentage of male and female who are und
```

```
Name :
This is a CSV of more than 1300 rows which has bmi data.
The task is to find out what is the percentage of people who are underwei
ght and healthy. And plot a pie chart around it
Another task is to find out what is the percentage of male and female who
are underweight and healthy. And plot a pie chart around it
```

In [50]:

```
#BMI Data

#predefine code
import pandas as pd
import matplotlib.pyplot as plt

dataframe = pd.read_csv("bmi.csv")
df = dataframe.dropna()
bmi = df['bmi']
df
```

Out[50]:

	age	gender	bmi	children	smoker	region	charges
0	19	female	27.900	0	yes	southwest	16884.92400
1	18	male	33.770	1	no	southeast	1725.55230
2	28	male	33.000	3	no	southeast	4449.46200
3	33	male	22.705	0	no	northwest	21984.47061
4	32	male	28.880	0	no	northwest	3866.85520
...	...	...	...	...	...	...	...
1333	50	male	30.970	3	no	northwest	10600.54830
1334	18	female	31.920	0	no	northeast	2205.98080
1335	18	female	36.850	0	no	southeast	1629.83350
1336	21	female	25.800	0	no	southwest	2007.94500
1337	61	female	29.070	0	yes	northwest	29141.36030

1338 rows × 7 columns

In [51]:

```
#Task 1
#How many people are underweight and create a dataframe out of it
underweight_df = df.loc[bmi < 18.6]["gender"].reset_index(name="gender")
print(underweight_df)
underweight_count = underweight_df["index"].count()
print(underweight_count)
```

```
    index  gender
0      28    male
1     128  female
2     172    male
3     198  female
4     232  female
5     250    male
6     380  female
7     410    male
8     412  female
9     428  female
10    680  female
11    684  female
12    821    male
13    950    male
14   1029  female
15   1074  female
16   1085  female
17   1133  female
18   1205    male
19   1226    male
20   1286  female
21
```

In [52]:

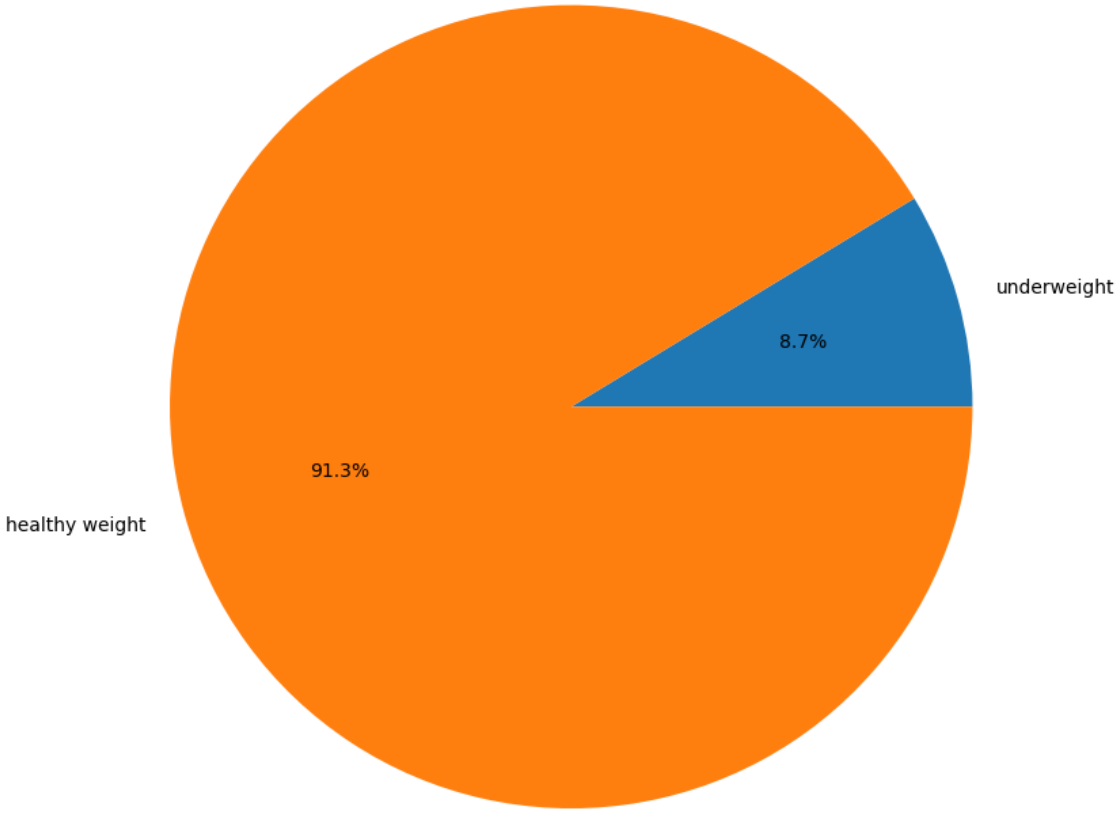
```
#Task 2
#How many people have normal weight and create a dataframe out of it
healthy_weight_dataframe = df.loc[(bmi > 18.5) & (bmi < 24.9)]["gender"].reset_index(nam
print(healthy_weight_dataframe)
healthy_weight_count = healthy_weight_dataframe["index"].count()
print(healthy_weight_count)
```

```
     index  gender
0        3    male
1       15    male
2       17    male
3       26  female
4       35    male
..     ...     ...
216   1304    male
217   1306  female
218   1314  female
219   1316  female
220   1328  female

[221 rows x 2 columns]
221
```

In [53]:

```
#Task 3
#Plot a pie chart as per the percentage of people who are underweight and healthy.
value = [underweight_count, healthy_weight_count]
label = ["underweight", "healthy weight"]
plt.pie(value, labels=label, autopct="%0.1f%%", radius=2)
plt.show()
```



In [ ]:

```

```

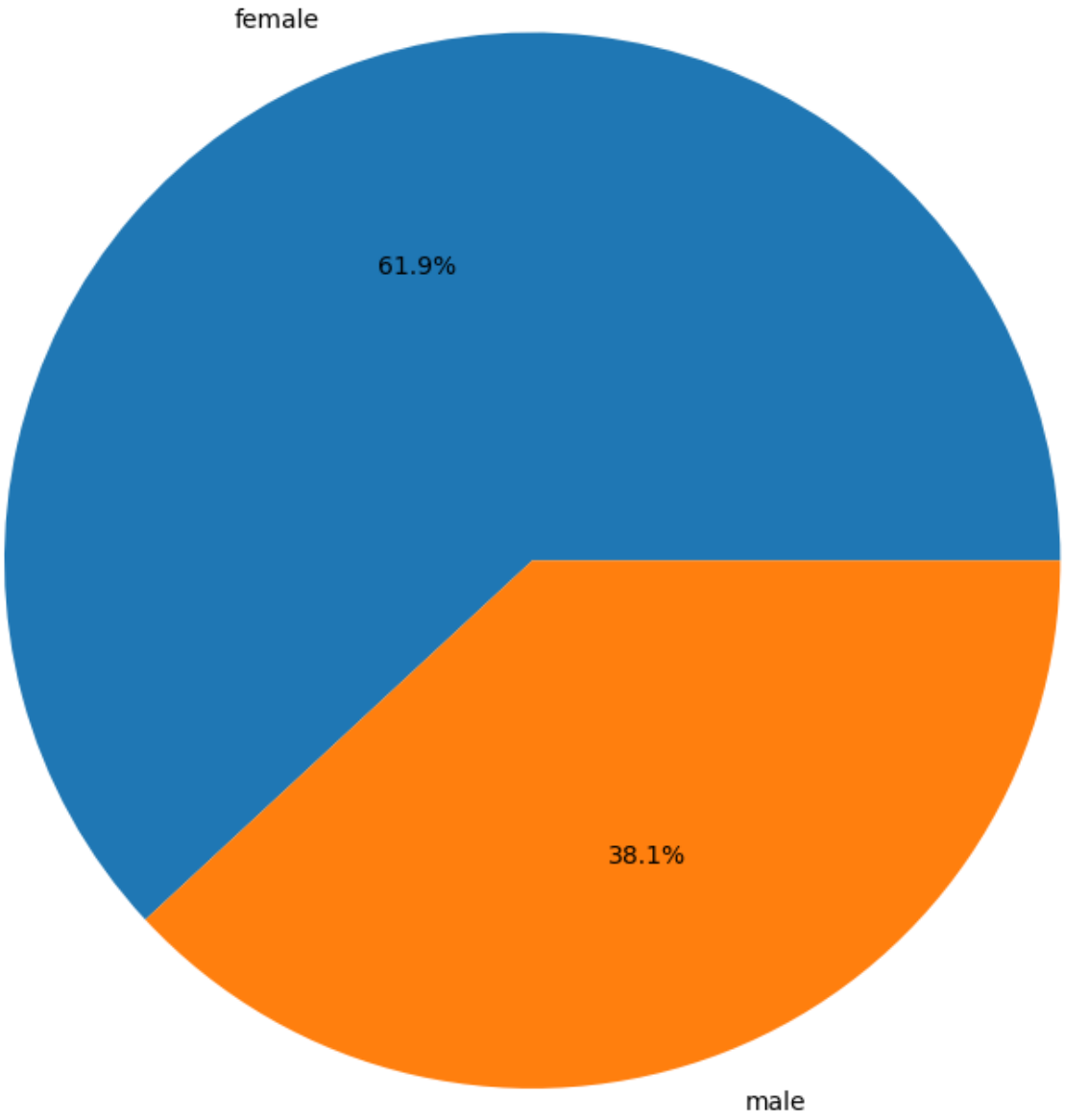
In [54]:

```
#Task 4
#Group by the gender from underweight dataframe and create another data frame out of it
group_underweight = underweight_df.groupby("gender")["gender"].count().reset_index(name=
print(group_underweight)
```

```
   gender  number
0  female      13
1    male       8
```

In [55]:

```
#Task 5
#Plot a pie chart as per the percentage of male and female who are underweight
value = group_underweight["number"]
label = group_underweight["gender"]
plt.pie(value, labels=label, autopct="%0.1f%%", radius=2)
plt.show()
```



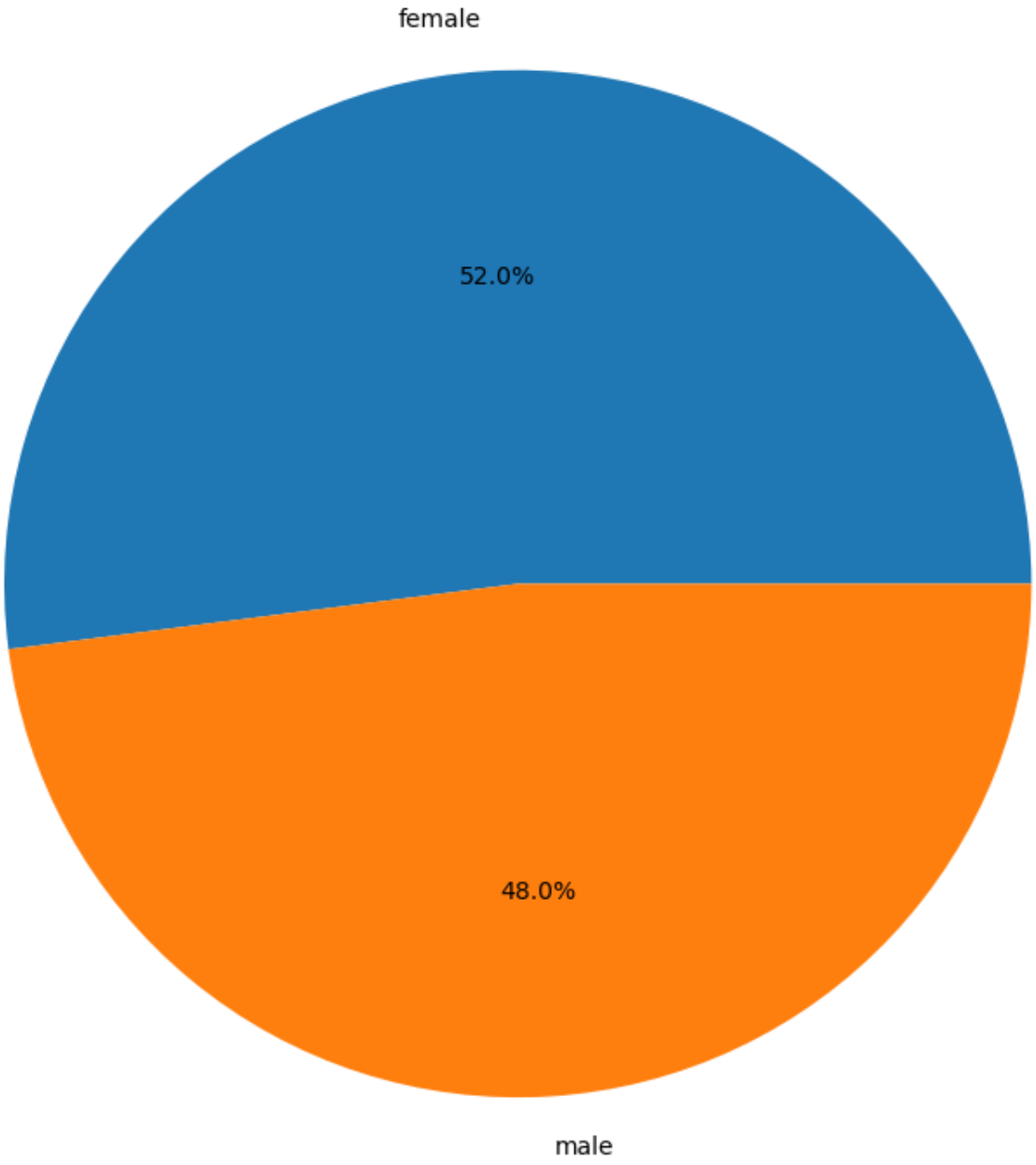
In [56]:

```
#Task 6
#Group by the gender from healthy weight dataframe and create another data frame out of
group_healthy = healthy_weight_dataframe.groupby("gender")["gender"].count().reset_index
print(group_healthy)
```

```
   gender  number
0  female     115
1    male     106
```

In [57]:

```
#Task 7
#Plot a pie chart as per the percentage of male and female who are healthy
value = group_healthy["number"]
label = group_healthy["gender"]
plt.pie(value, labels=label, autopct="%0.1f%%", radius=2)
plt.show()
```



In [ ]: