

# R\_club\_20200320

Cailu lin

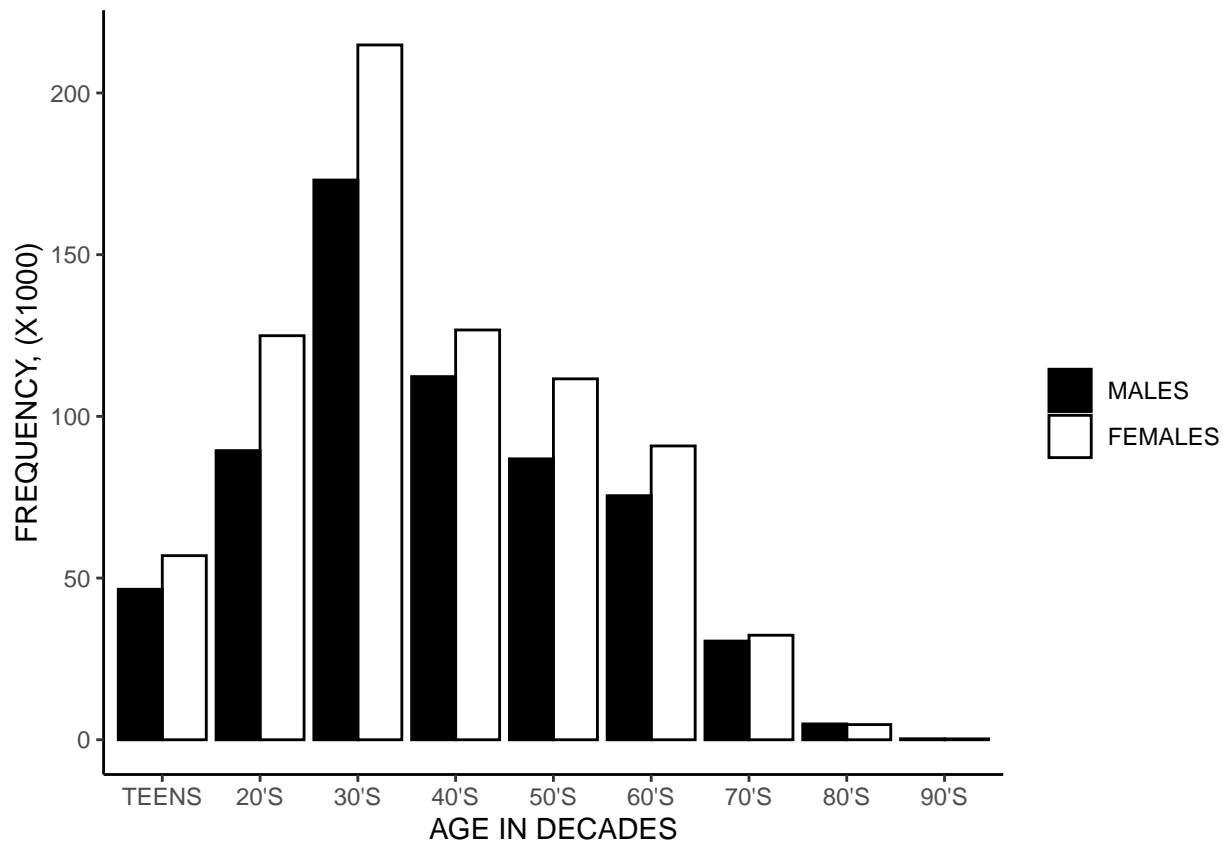
3/20/2020

## R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.

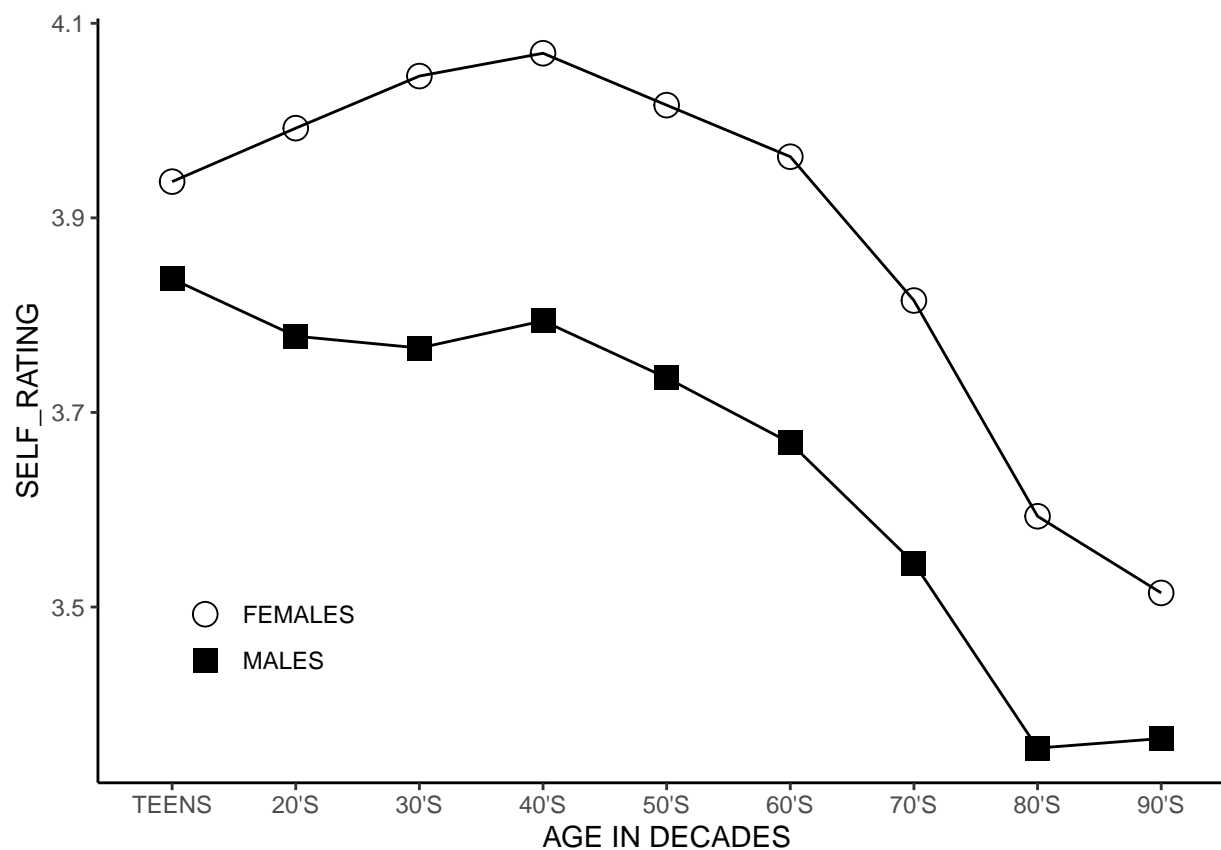
When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

**Fig 1**



```
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```

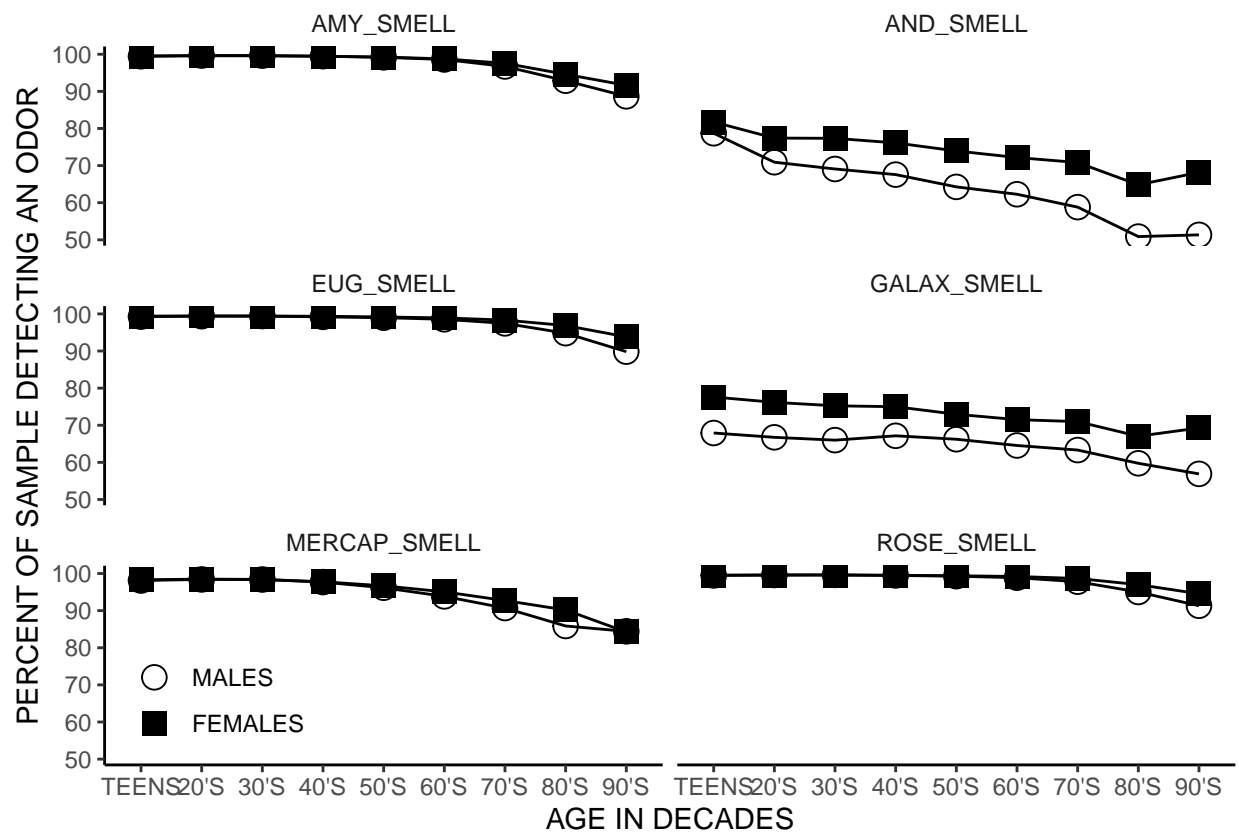
**Fig 2**



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**Fig 3**

#Did you smell something? (Androstenone);Did you smell something? (Amyl acetate);Did you smell something? (Galaxolide);Did you smell something?(Eugenol);Did you smell something? (Mercaptans);Did you smell something?(Rose);1=Yes2=No



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Fig 4

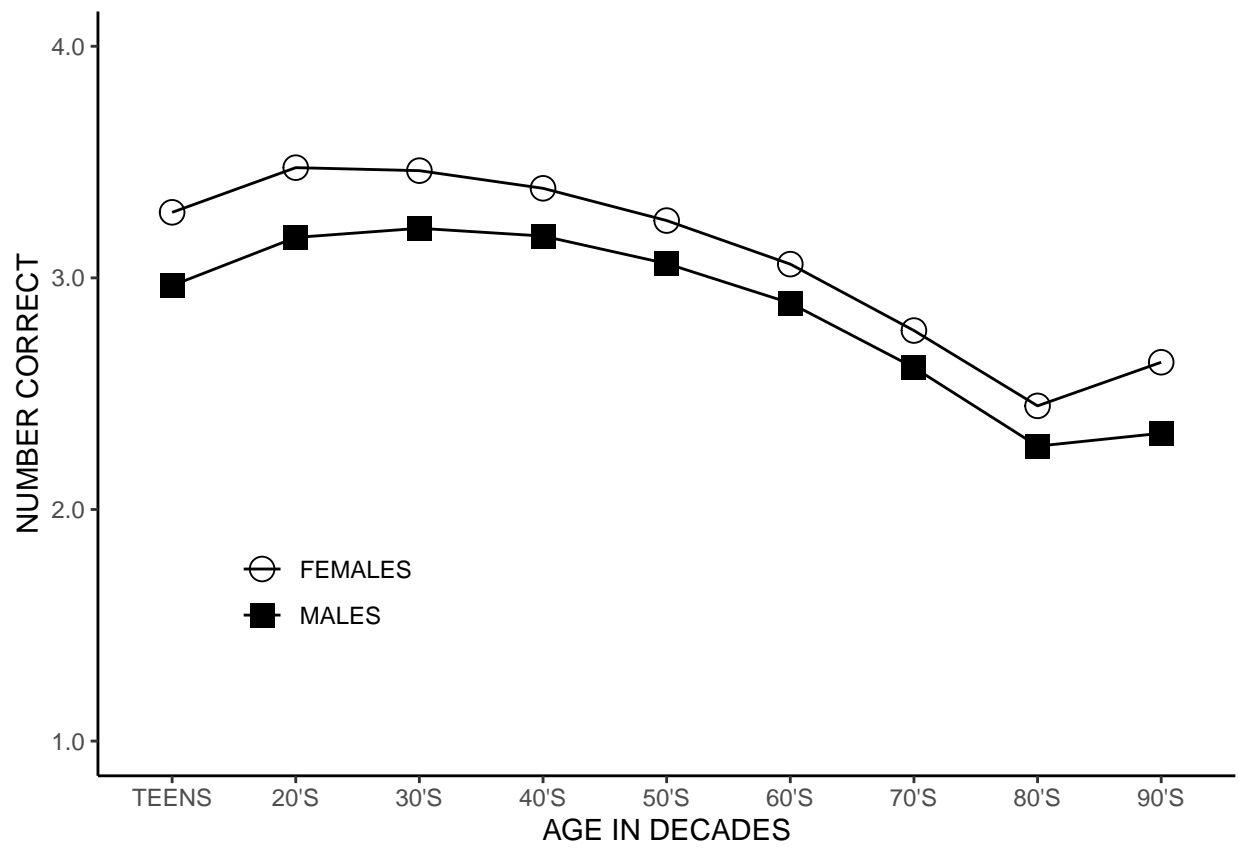
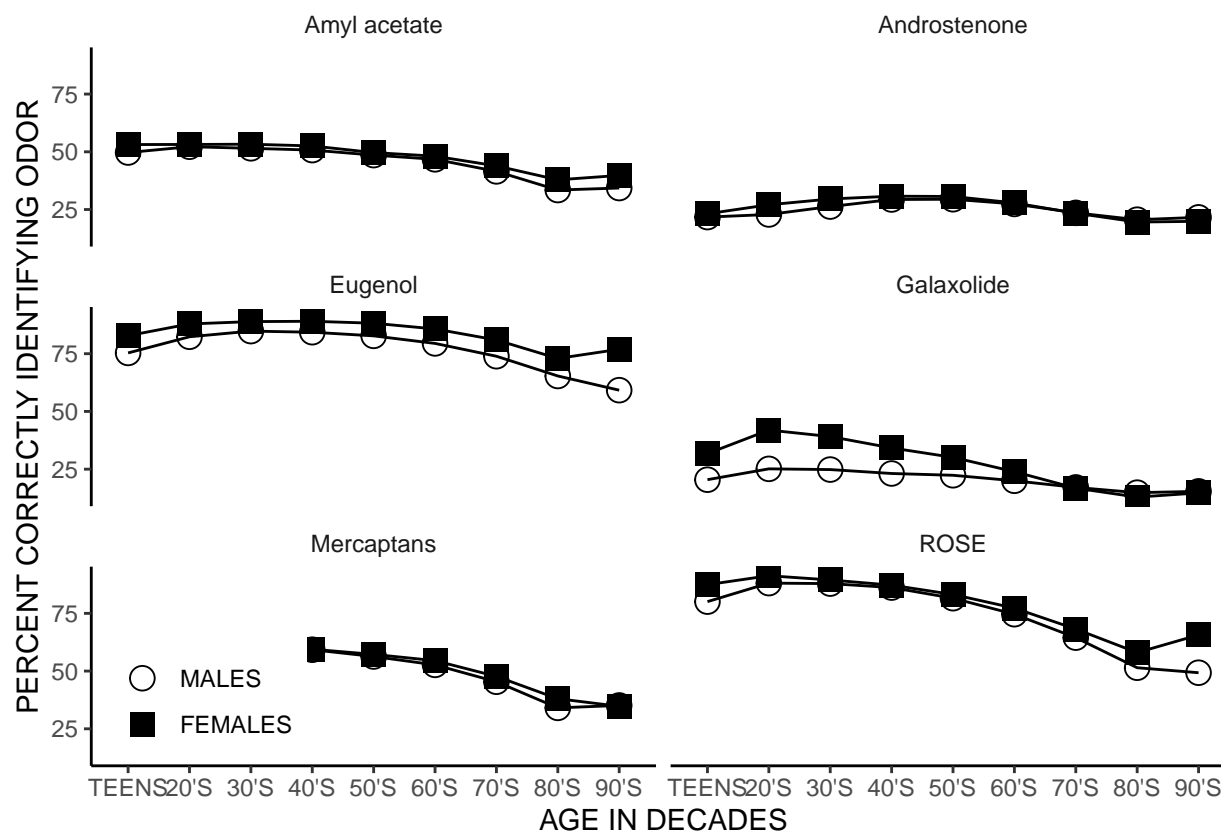


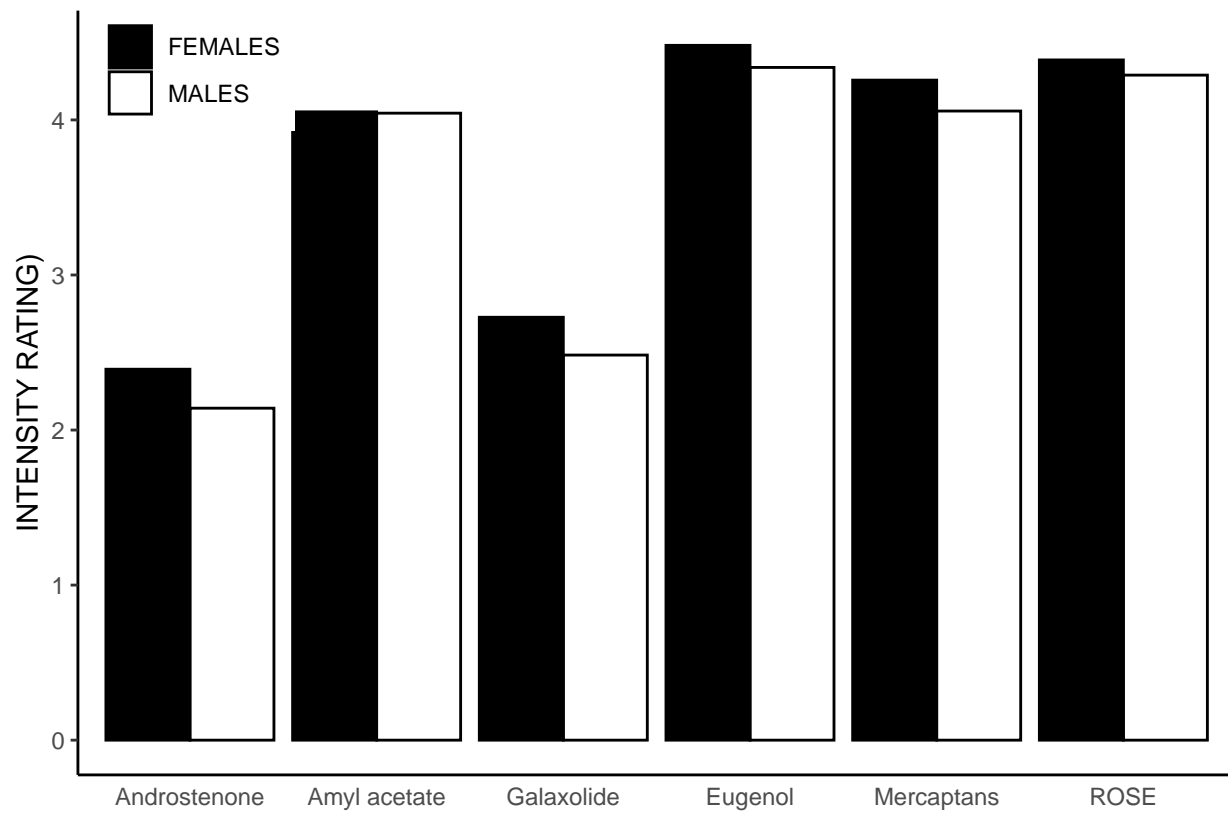
Fig 5, #0=No response 1=Correct 2=Incorrect



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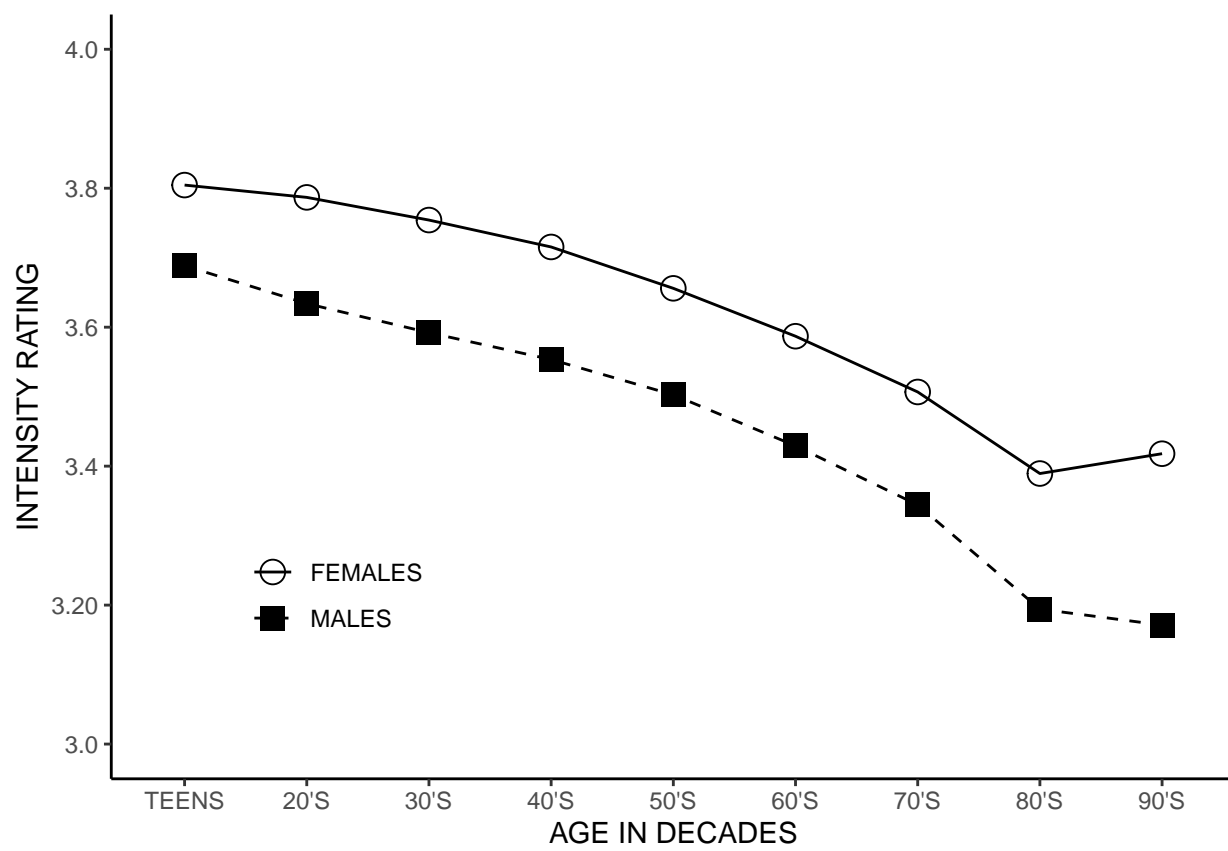
Fig 6

#How intense is the odor? (Androstenone);How intense is the odor? (Amyl acetate);How intense is the odor? (Galaxolide);How intense is the odor?(Eugenol);How intense is the odor? (Mercaptans);How intense is the odor?(Rose)



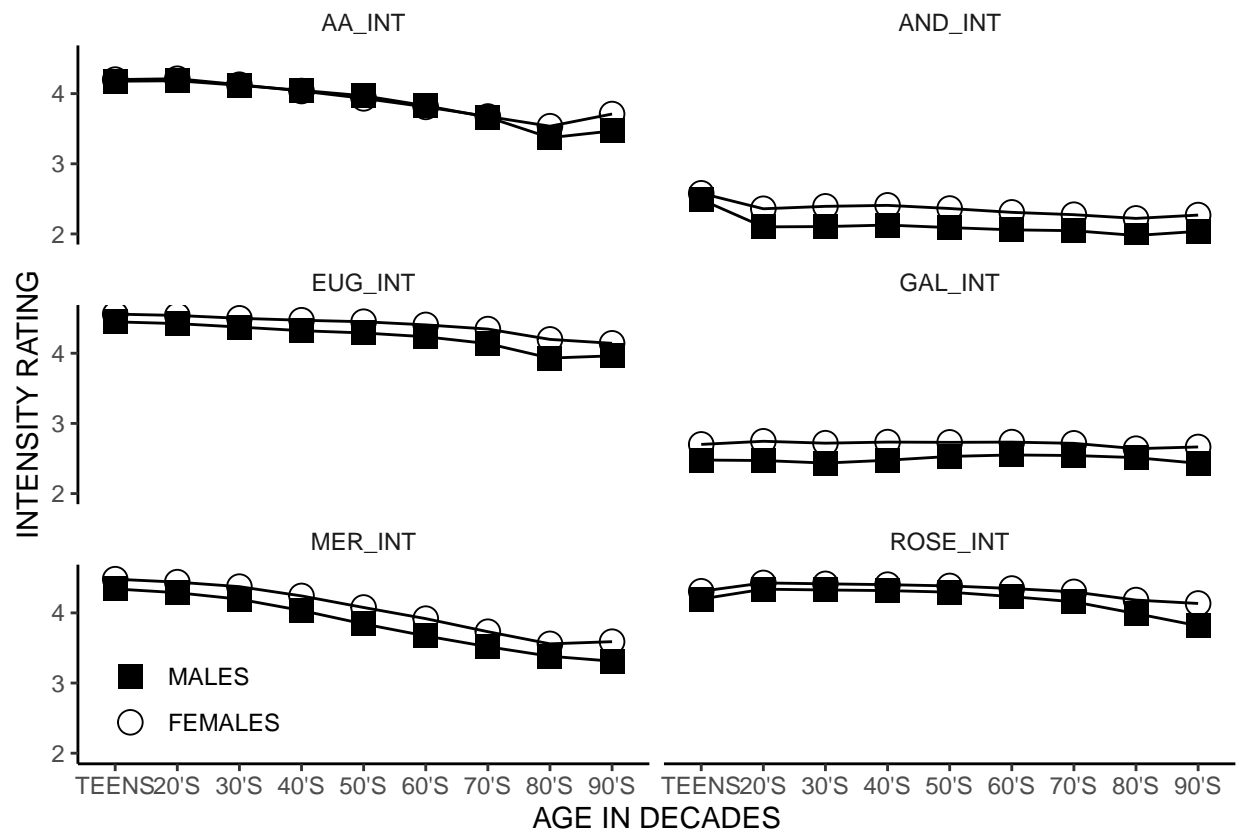
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Fig 7



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Fig 8

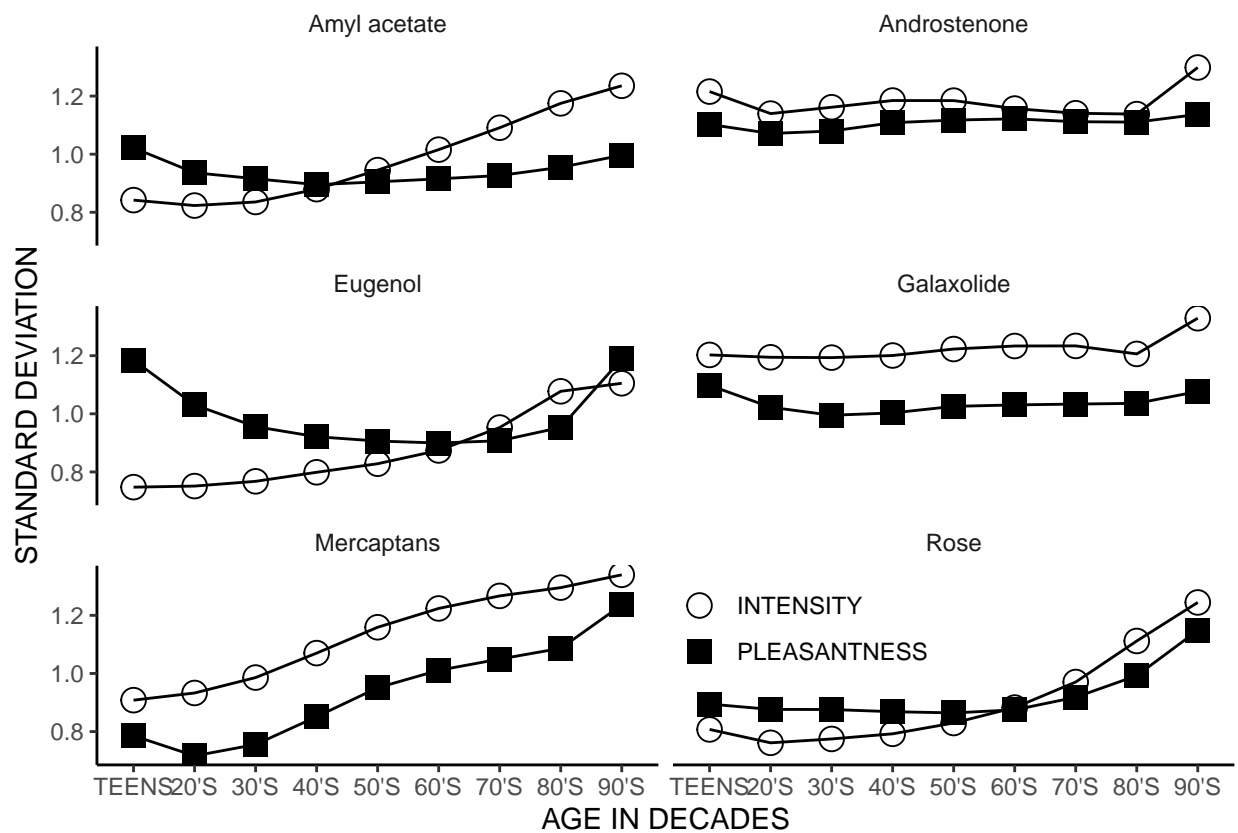


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Fig 9 SD==>INT vs PLEAS.

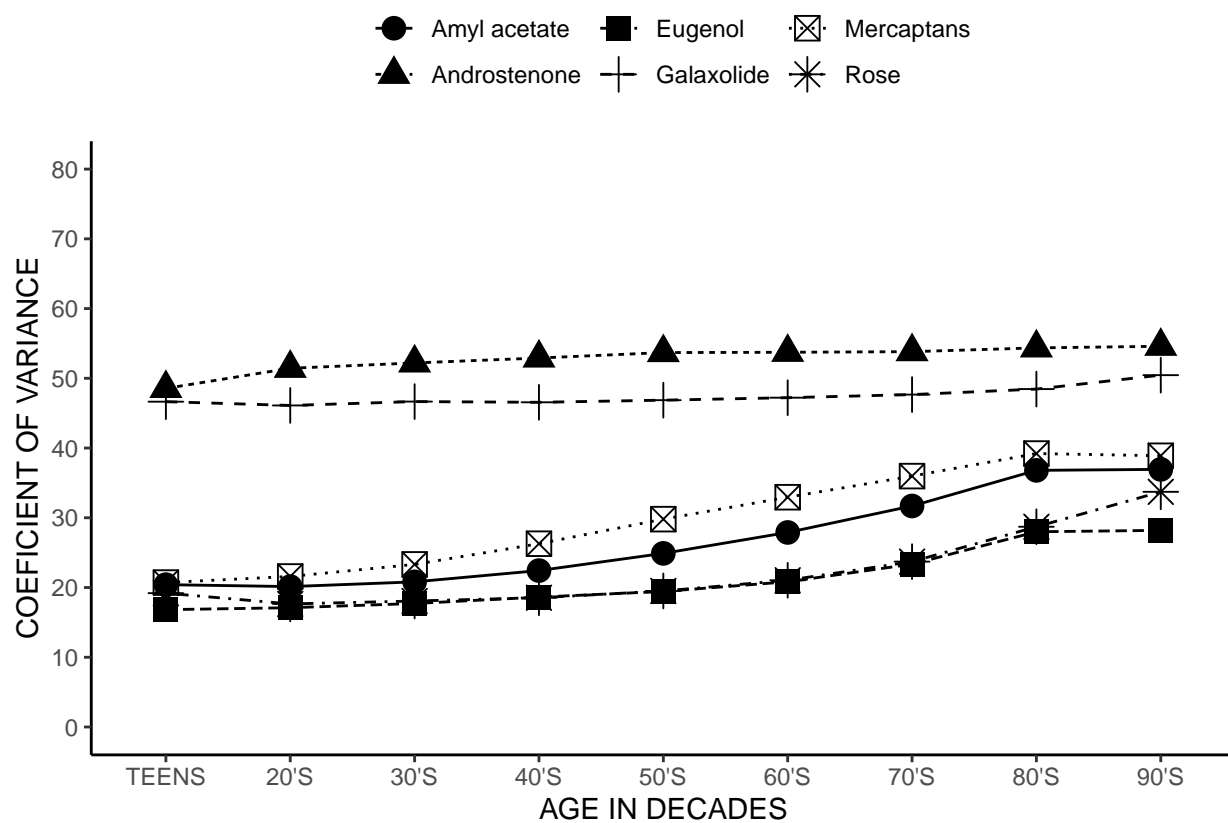
#AND\_QUAL How would you rate the quality of this odor? (Androstenone);AA\_QUAL How would you rate the quality of this odor? (Amyl acetate);GAL\_QUAL How would you rate the quality of this odor? (Galaxolide);EUG\_QUAL How would you rate the quality of this odor? (Eugenol);MERCAP\_QUAL How would you rate the quality of this odor? (Mercaptans);ROSE\_QUAL How would you rate the quality of this odor?(Rose)





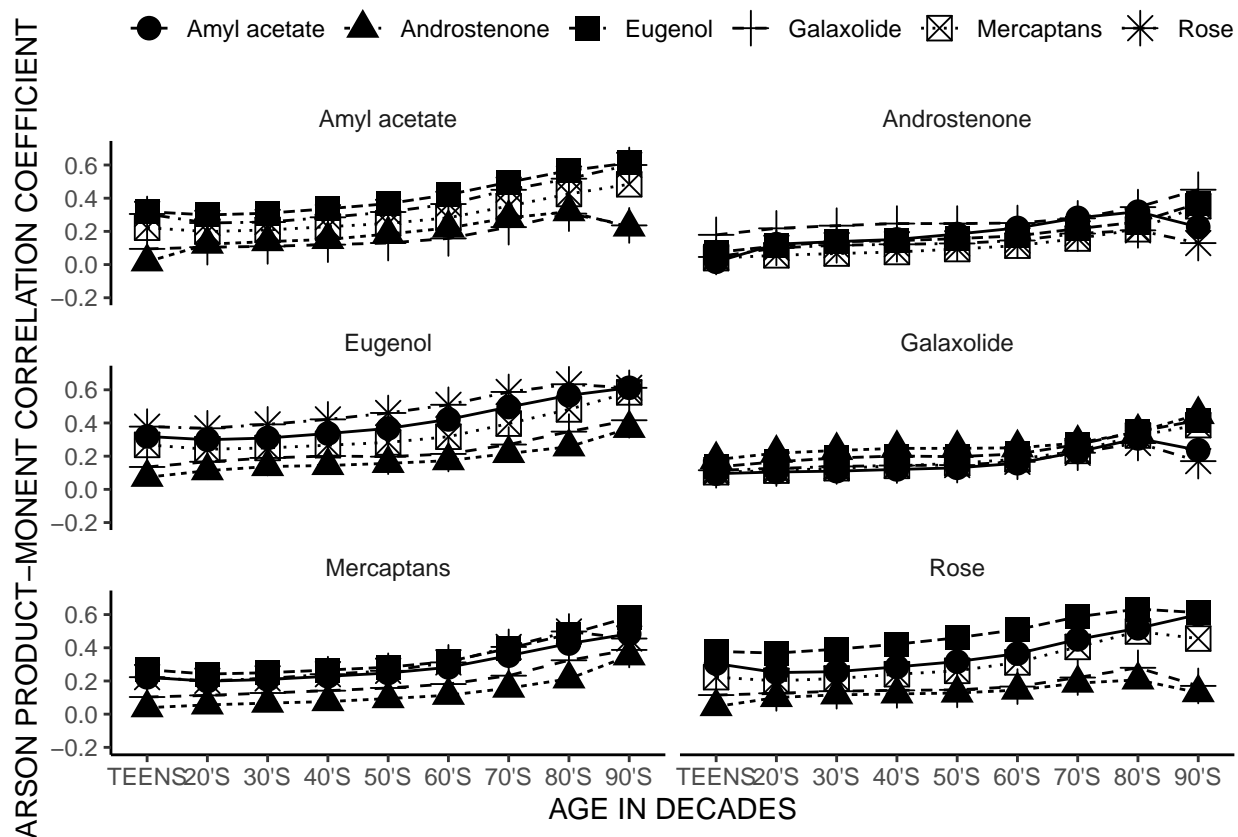
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Fig 10 the coefficient of variation (100 times the ratio between the standard deviation and the mean)



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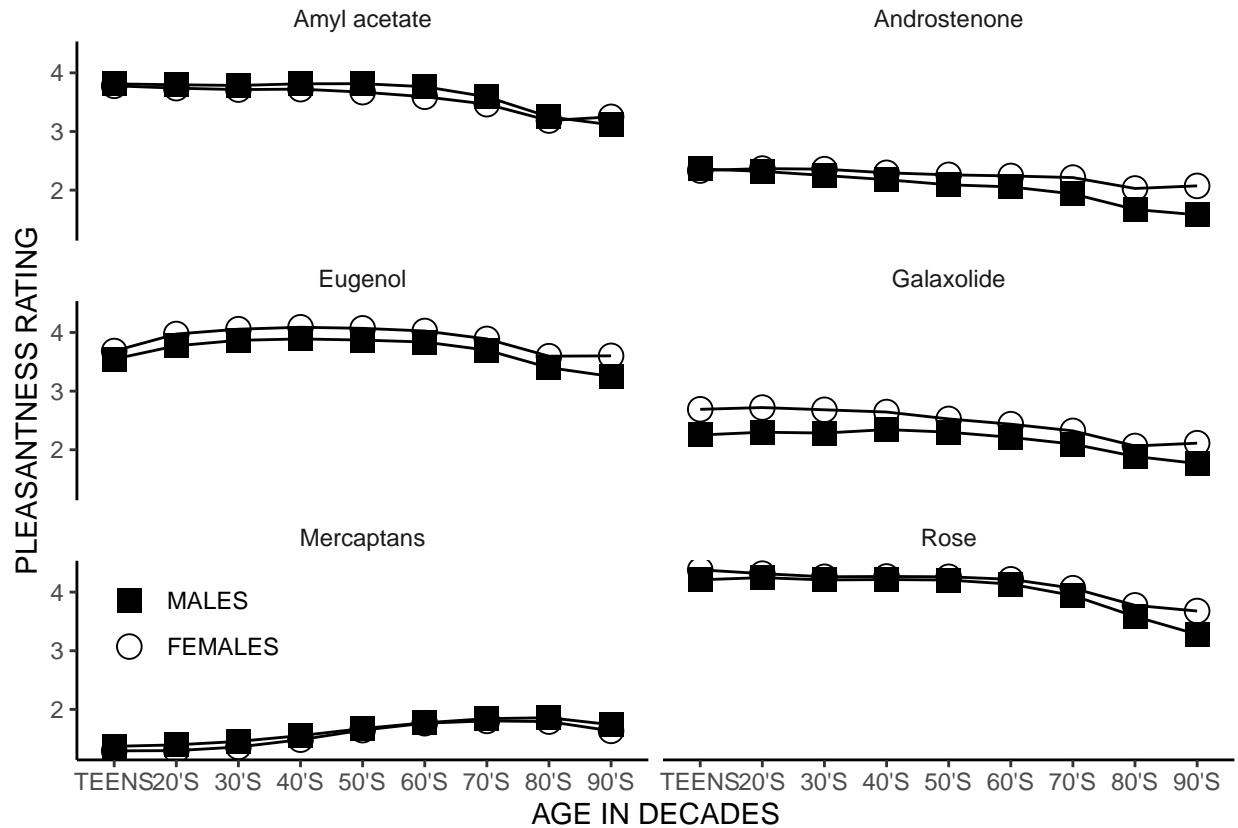
Fig 11, Pearson product-moment correlation coefficient



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Fig 12

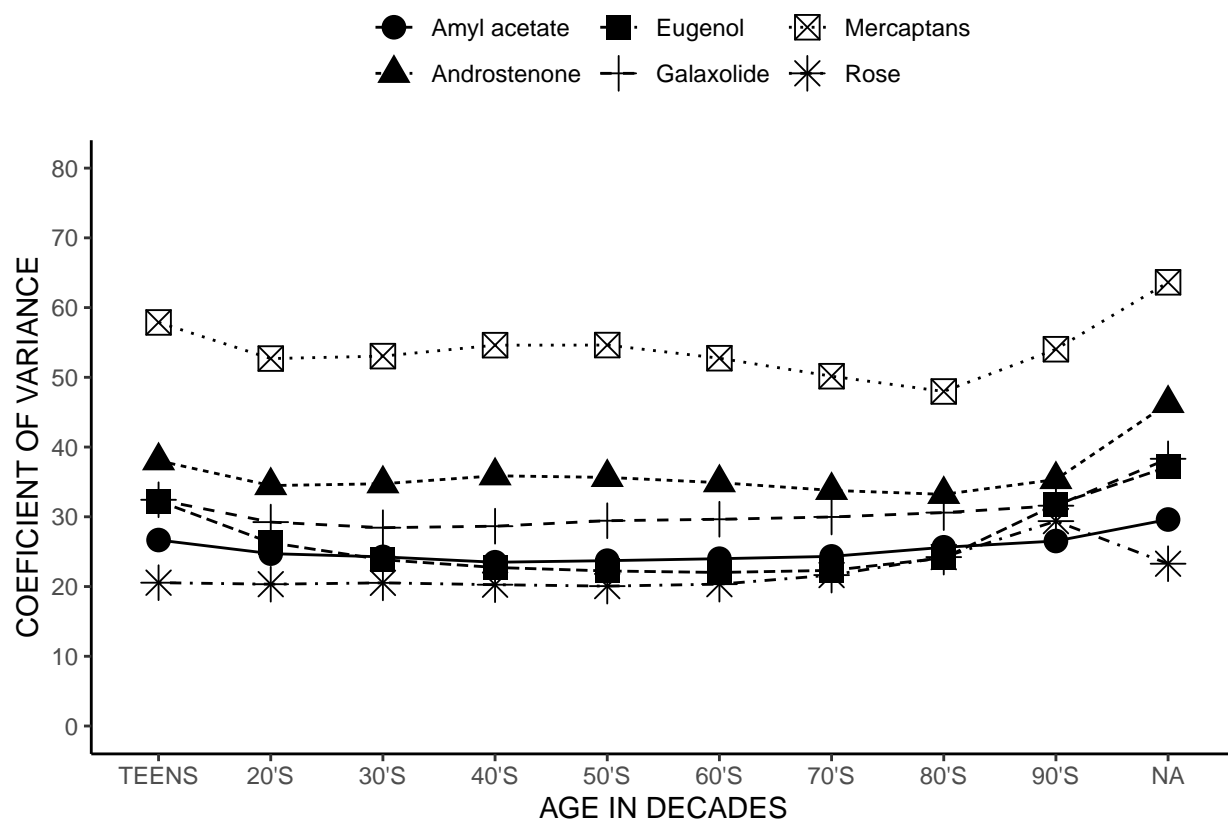
#How would you rate the quality of this odor? (Androstenone);How would you rate the quality of this odor? (Amyl acetate);How would you rate the quality of this odor? (Galaxolide);How would you rate the quality of this odor? (Eugenol);How would you rate the quality of this odor? (Mercaptans);How would you rate the quality of this odor? (Rose);The mean odor pleasantness ratings plotted as a function of age, with data for men and women plotted separately. Subjects were asked to rate odor pleasantness on a 5-point scale (1: unpleasant; 5: pleasant). Samples where no odor was detected are not included. Age was collapsed by decade before the descriptive statistics were generated.



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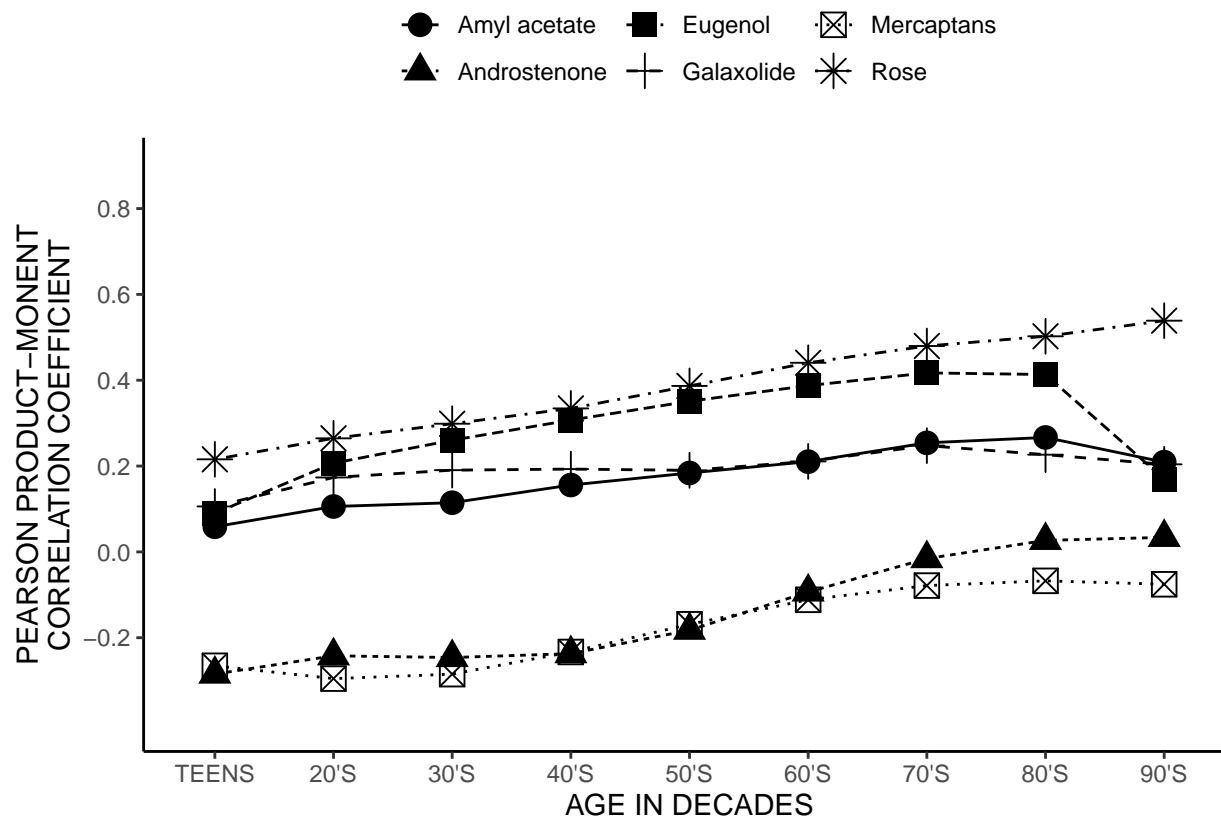
**Fig 13.** The coefficient of variation for perceived pleasantness ratings plotted as a function of age for each of the odorant samples.

```
## Warning: Factor `AGE2` contains implicit NA, consider using
## `forcats::fct_explicit_na`
```



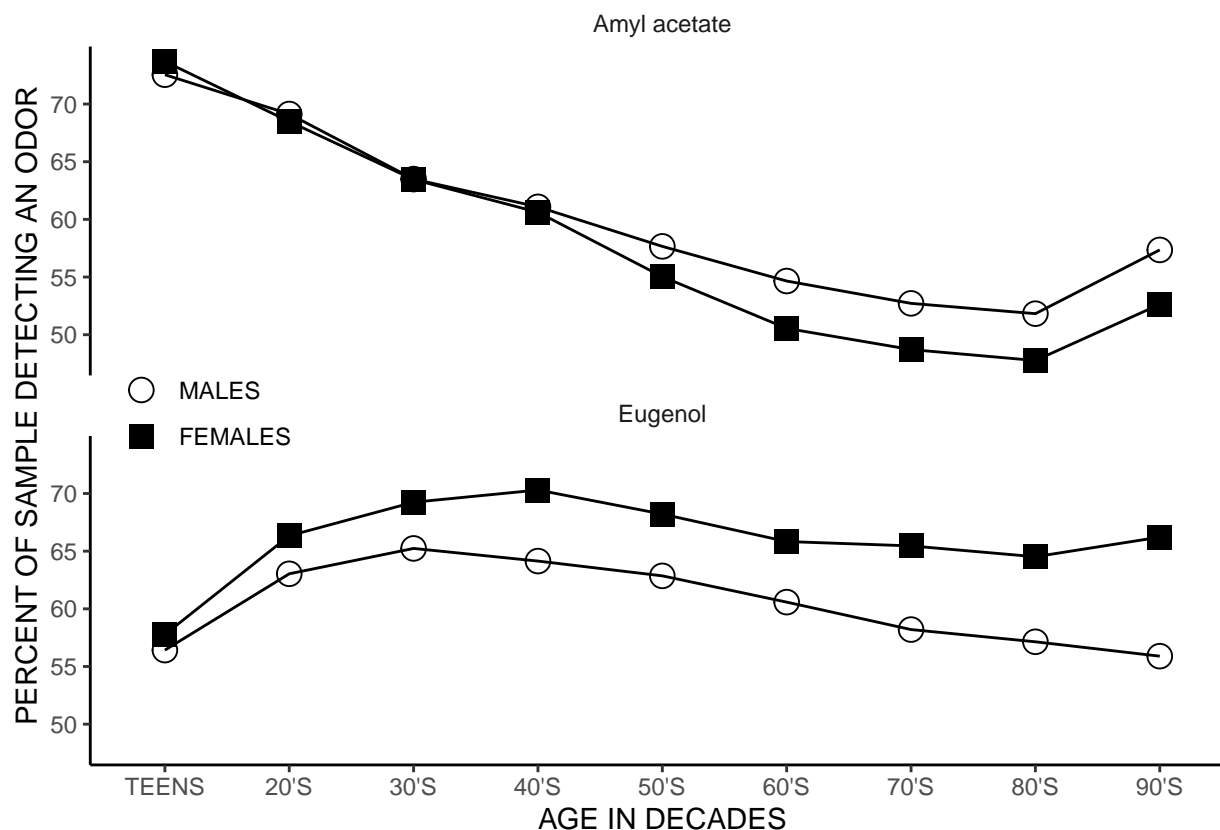
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Fig 14. Pearson product-moment correlations between perceived intensity and perceived pleasantness for each of the odorant samples. Correlations are presented as a function of age



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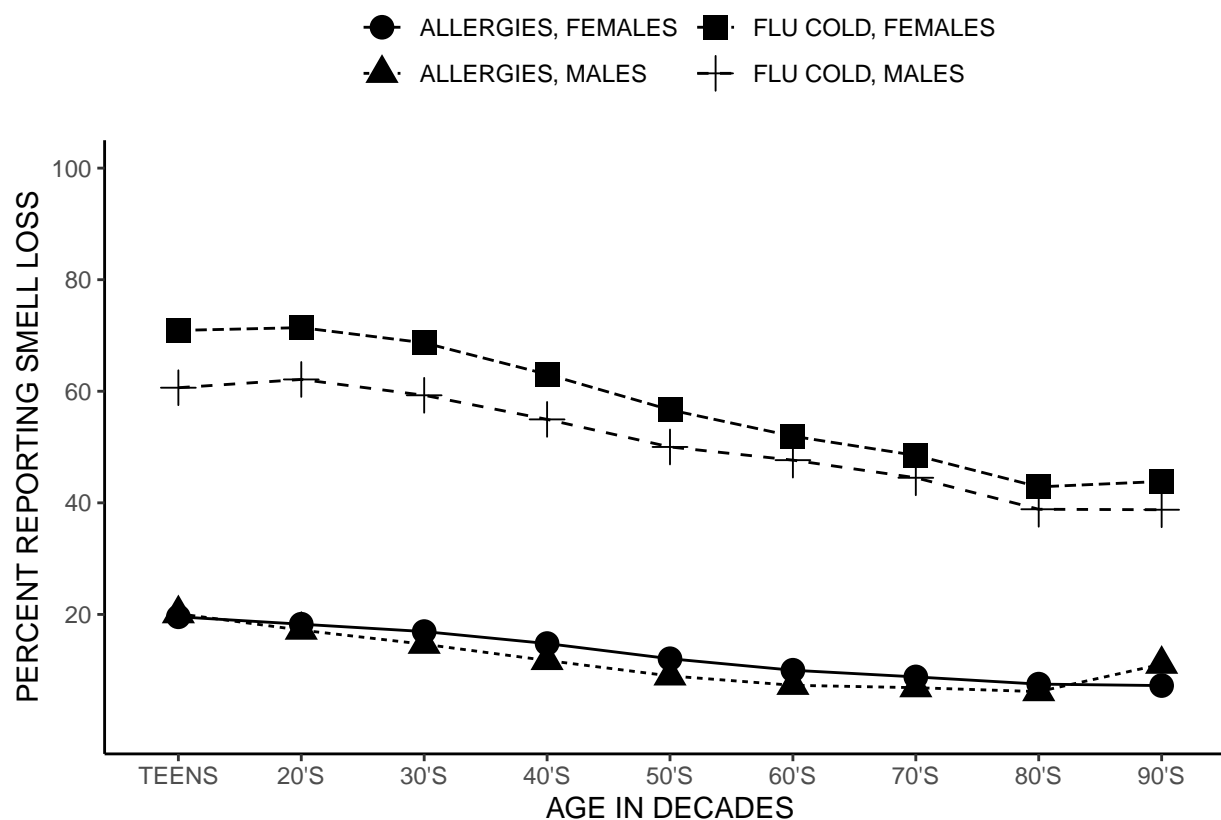
Fig 15. The percentage of respondents answering “yes” to the following question: “Would you eat something that smelled like this?” Only those subjects who reporting smelling an odor are included. Although both odorants are food related (eugenol:cloves; isoarnyl acetate: bananas or pears), neither age nor sex differences in response were equivalent.



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Fig 16. The percentage of respondents with loss of smell attributed to flu/colds/sinus infection or to allergies. The proportion declined with age.

#FLU\_COLD Have you ever experienced a loss of smell due to the following?flu, common cold, sinus infection encoded value 0=No 1=Yes,ALLERGIES Have you ever experienced a loss of smell due to the following?allergy attack encoded value 0=No 1=Yes

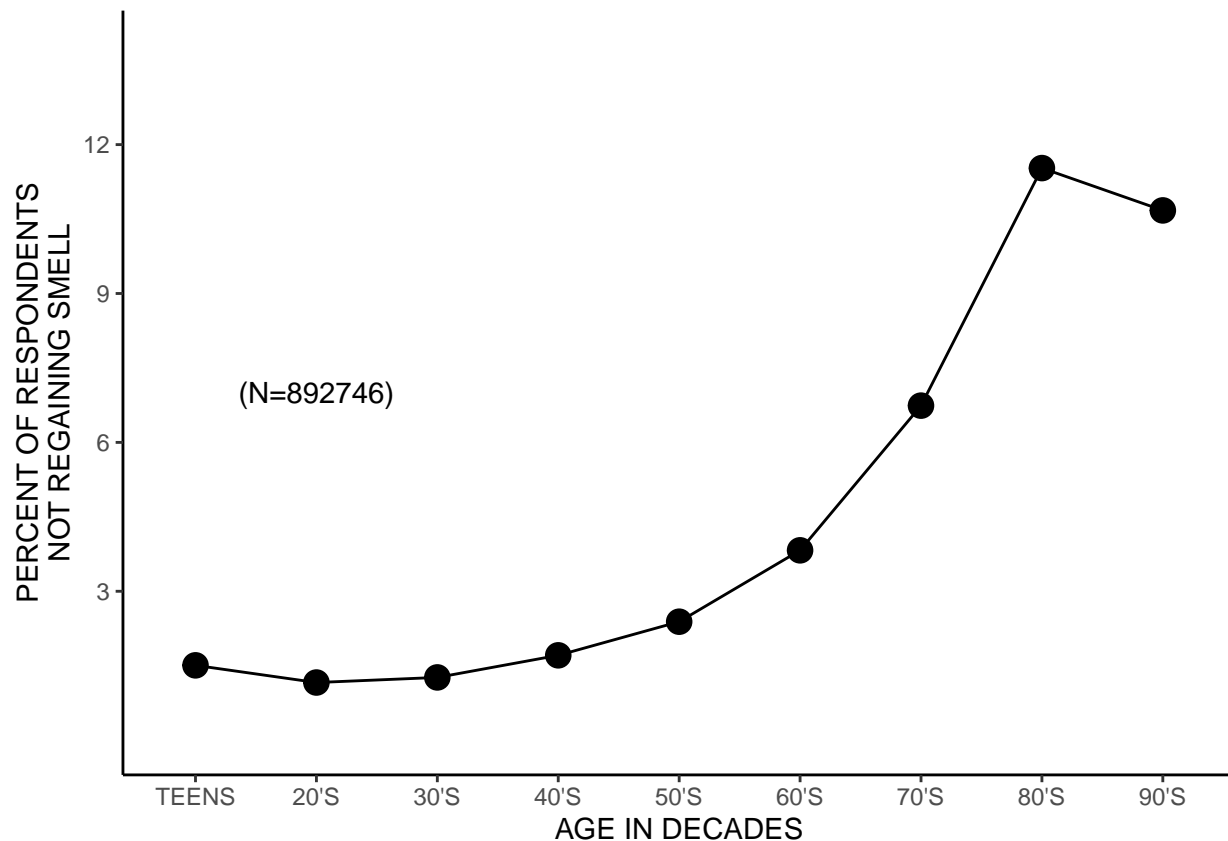


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**FIG 17.**

#The percentage of respondents who had lost and not regained their sense of smell, irrespective of cause. The proportion significantly increased with advancing age. REGAIN\_SMELL If you have lost your sense of smell, have you since regained it? encoded value 0=No response 1=Yes 2=No





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## world mapp

```
## Installing package into 'C:/Users/Ke.Evan/Documents/R/win-library/3.6'
## (as 'lib' is unspecified)

## Warning: package 'zipcode' is not available (for R version 3.6.1)

## Warning: unable to access index for repository http://www.stats.ox.ac.uk/pub/RWin/bin/windows/contrib/
## cannot open URL 'http://www.stats.ox.ac.uk/pub/RWin/bin/windows/contrib/3.6/PACKAGES'

## Warning in p_install(package, character.only = TRUE, ...):

## Warning in library(package, lib.loc = lib.loc, character.only = TRUE,
## logical.return = TRUE, : there is no package called 'zipcode'

## Installing package into 'C:/Users/Ke.Evan/Documents/R/win-library/3.6'
## (as 'lib' is unspecified)

## Warning: package 'albersusa' is not available (for R version 3.6.1)
```

```

## Warning: unable to access index for repository http://www.stats.ox.ac.uk/pub/RWin/bin/windows/contrib/
## cannot open URL 'http://www.stats.ox.ac.uk/pub/RWin/bin/windows/contrib/3.6/PACKAGES'

## Warning in p_install(package, character.only = TRUE, ...):

## Warning in library(package, lib.loc = lib.loc, character.only = TRUE,
## logical.return = TRUE, : there is no package called 'albersusa'

## Installing package into 'C:/Users/Ke.Evan/Documents/R/win-library/3.6'
## (as 'lib' is unspecified)

## Warning: package 'spDataLarge' is not available (for R version 3.6.1)

## Warning: unable to access index for repository http://www.stats.ox.ac.uk/pub/RWin/bin/windows/contrib/
## cannot open URL 'http://www.stats.ox.ac.uk/pub/RWin/bin/windows/contrib/3.6/PACKAGES'

## Warning in p_install(package, character.only = TRUE, ...):

## Warning in library(package, lib.loc = lib.loc, character.only = TRUE,
## logical.return = TRUE, : there is no package called 'spDataLarge'

## Warning in pacman::p_load(tidyverse, readr, zipcode, maps, viridis, ggthemes, : Failed to install/load
## zipcode, albersusa, spDataLarge

##
## Call:
## lm(formula = EUG_QUAL ~ SEX + SMOKE + AGE + COUNTRY, data = dat)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -3.4066 -0.2432  0.0404  0.8873  1.9602
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)  2.721e+00  8.844e-03  307.663  <2e-16 ***
## SEX          1.989e-01  1.659e-03  119.867  <2e-16 ***
## SMOKE        1.979e-02  2.150e-03   9.203   <2e-16 ***
## AGE          5.271e-03  5.142e-05  102.508  <2e-16 ***
## COUNTRY      8.647e-03  9.045e-05   95.604   <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.9583 on 1355303 degrees of freedom
## Multiple R-squared:  0.02586,    Adjusted R-squared:  0.02586
## F-statistic: 8995 on 4 and 1355303 DF,  p-value: < 2.2e-16

```

