

**A SIMPLE TEST LEADS TO SAFER  
MEDICINE**

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**WHY ARE WE INTERESTED IN  
STUDYING CARDIOVASCULAR SIDE  
EFFECTS OF DRUGS?**

# RATIONALE

- Many drugs have been withdrawn from the market due to cardiovascular side effects discovered during post-marketing surveillance.
- We are interested in predicting potential cardiovascular effects of a drug early in the drug development process in order to deliver safer drugs to patients.

# TESTED DRUG MOLECULES

- 40 drugs with cardiovascular side effects
- 9 drugs without cardiovascular side effects



# **LOG P TEST**

# LOG P VALUE

- LogP determines if a drug molecule is more likely to dissolve in water or oil.
- Low logP indicates the drug is more likely to dissolve in water
- High logP indicates the drug is more likely to dissolve in oil

# LOG P RESULTS

	Experimental Group	Control Group
Mean	4	-1
Standard Deviation	±1	±2
Observations	40	9
P (T≤t) two-tail	0.0002 < 0.05	

# CONCLUSION

A high  $\log P$  of a drug may indicate a greater chance of inducing cardiovascular damage.





**THANK YOU!**