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Scientific Writing parts
Result

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What is the Result section?

- The section of the research that reports your study's findings derived from the methods you have applied to gather and analyze information,
- It states the finding of the research and present them in a logical sequence without bias or interpretation from the author.

Where does it go in the paper?

- The Results section is the **third** major section of most scientific paper. It follows the Material and Methods section and it come before Discussion section.

What did you Find?

Introduction

Material and Methods

Result

Discussion

Contents of the result

1. Problem with data collection.
2. Main result of the experiment.
3. Other interesting trends in your data.

Facts ! No interpretation

Elements for showing the result!

❖Tables

Table 1 | **Examples of high cancer risk, oxyradical overload diseases**

Disease	Cancer	Risk*	References
Inherited			
Haemochromatosis	Liver	219	97
Crohn's disease	Colon	3	153
Ulcerative colitis	Colon	6	154
Acquired: viral			
Viral hepatitis B	Liver	88	155
Viral hepatitis C	Liver	30	155
Human papillomavirus infection	Cervix	16	156
Acquired: bacterial			
Helicobacter pylori infection	Gastric	10	157
Urinary bladder catheterization	Bladder	5–28	158
Prostatitis	Prostate	2	179
Acquired: parasitic			
Schistosoma hematobium	Bladder	2–14	134
Schistosoma japonicum	Colon	1.2–6.0	134
Acquired: chemical/physical			
Barrett's oesophagus	Oesophageal	50–100	159
Pancreatitis	Pancreatic	2–3	160

Table 2: Results of statistical analyses of associations between D-loop mtDNA mutation and clinicopathologic parameters in 44 ovarian cancer patients

Parameter	Number of patients	Number of patients with mutated tumour	Number of patients with non-mutated tumour	*P*-value
Overall	44	25	19	
Age (median = 53)				
> 53	19	13	7	
≤ 53	24	12	12	0.3175
Grading				
G2 + G3	31	20	11	
G4	12	5	7	0.3014
FIGO stage				
II-IIIB	10	5	5	
IIIC, IV	34	20	14	0.7233
Residual tumour				
> 2 cm	14	9	5	
0–2 cm	29	16	14	0.534
TP53 mutation				
Yes	23	14	9	
No	20	11	10	0.7613
Response to chemotherapy				
Platinum-based				
Yes	10	5	5	
No	9	5	4	1
Taxane/platinum-based				
Yes	12	9	3	
No	12	6	7	0.2262
Both types of therapy				
Yes	22	14	8	
No	21	11	11	0.5434
Haplogroups				
H	22	14	9	
Others	21	11	10	0.7613

❖Figures

- ➢Graph
- ➢Pictures
- ➢Charts

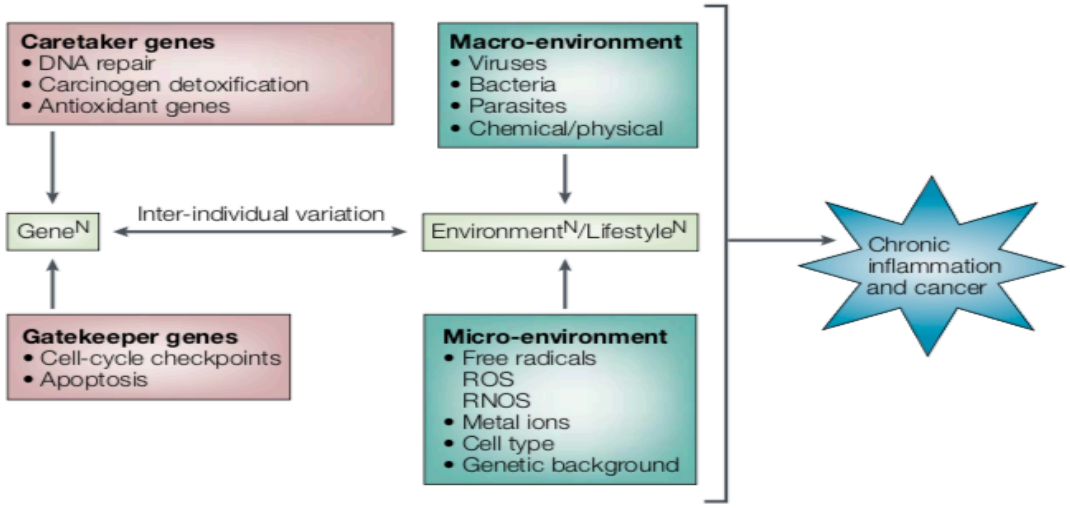

Figure 3 | **Gene–microenvironment interactions in chronic inflammation.** Genes and environmental exposures contribute to the carcinogenic process in chronic inflammatory diseases. The effects can be additive or multiplicative, and are modifiable by inter-individual variation in genetic function. We propose including antioxidant and base-excision DNA-repair genes as caretaker genes involved in maintaining genomic integrity. N, number; ROS, reactive oxygen species; RNOS, reactive nitrogen oxide species.

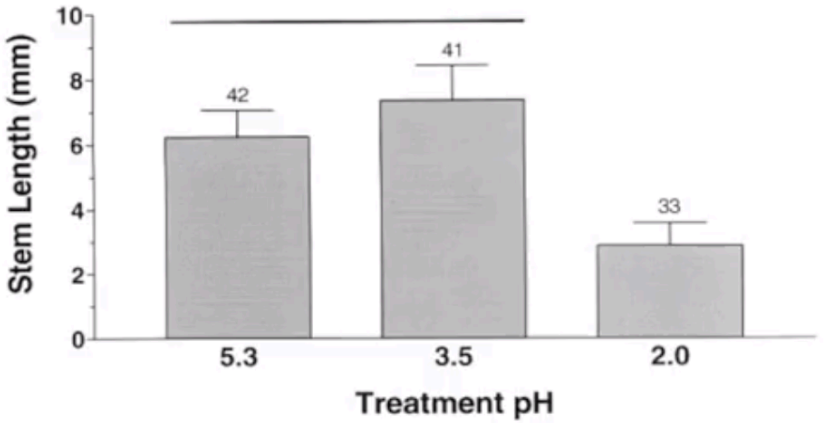

Figure 1. Mean stem length (± 1 SD) of seedling clover watered to soil saturation daily for 2.5 weeks with simulated acid rain of varying pH. The control (pH 5.3) was normal city tapwater. The pH 3.5 and 2.0 water was acidified with 2 M sulfuric/ 1 M nitric acid solution. Line over bars indicates groups which were not significantly different (Kruskal-Wallis Test and Dunn's Multiple Comparison's Tests). Number over bar indicates sample size.

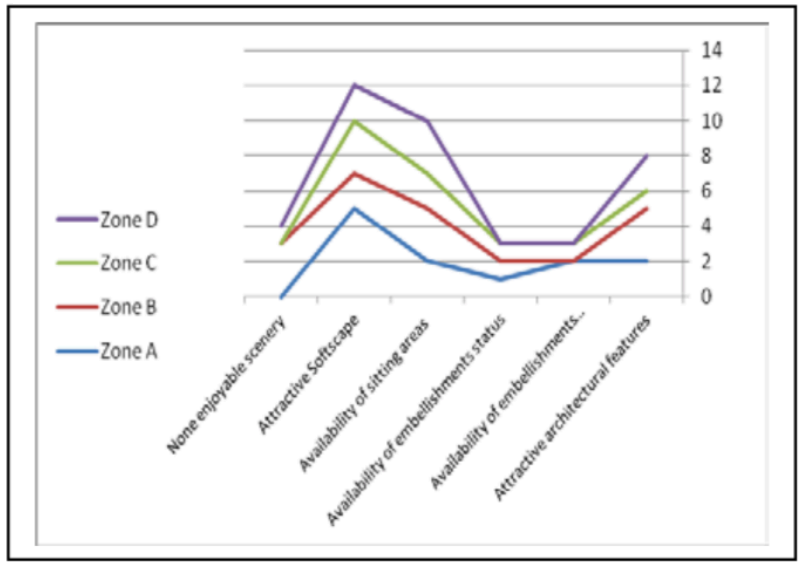

Fig. 6. Possible Values for enjoyable scenery in terms of Connectivity

Fig. 7. Shading of the pathway by trees

Scientific Writing: Results

- The Results section should present what was found in a logical order.
- The author can choose to tell one story or many stories, adding subsections if allowed in the instructions to authors.
- Results should be presented **briefly** and in the **past tense**.
- The most important results should be mentioned first. Negative or trivial findings are best mentioned toward the end of this section.

Scientific Writing: Results

- The author may start the Results section by referring to an experiment that documents the premises of the main scientific problem.

- Although the Results section is not the place to discuss findings, occasionally authors might have to clarify why the experiment was conducted, what the results mean, and how they lead to the next experiment.

Scientific Writing: Results

- Indeed, concise language often is best, as some journals have considerable page charges.
- Hence, the concise “Blood pressure remained constant(Figure 1)” may be preferable to the more verbose “It can be seen from Figure 1 that blood pressure remained constant. . ..”
- In any case, authors should state that representative, not typical, experiments have been selected.

Scientific Writing: Results

- a summary of all experiments can be presented, provided that the data are normalized, for example by setting the median or the mean for the control group at 100%. Of course, in that case the author must also state the absolute value of the 100% figure, such as in a table's footnote: "The 100% values ranged from 32 to 56 mmol/L."

Scientific Writing: Results

- An author should have a good reason for excluding atypical results, and exclusion criteria should be set before the research project starts.
- the author may need to describe the common characteristics of any atypical results at the end of the Results section.

Results

1. Give a *brief* description of the findings, in logical order.
2. *Do not repeat numbers listed in tables or appearing in figures, but describe trends and courses*, citing "Table x" or "Fig y" in parentheses. If possible, state how large the changes are, such as: "... about 25% larger than the control." Real discussion should not be included in the Results section, but some interpretations and explanations are often necessary to facilitate reading.
3. The Results section must sometimes start with a documentation of presumptions (validation of methods or study setup).

(*Continued*)

4. State the *uncertainty of the localization parameter* using the mean ± standard error of the mean (SEM), or the mean or median with a 95% confidence interval. If relevant, give an *effect estimate* (difference between means or medians, relative risk, regression coefficients, etc.) with a 95% confidence interval. Preferably, results are presented in tables or graphs. Now and then the *variation* of the measurements—standard deviation (SD), coefficient of variation (CV), or quartile interval—is stated, but this often is better placed in the Material and Methods section. Present the *P*-values, number of replicated measurements, and number of trials, preferably in connection with tables/figures.

5. Data normalization—conversion of data to percentages of median or mean in a control group, such as to permit combining the results of different trials without including the interexperimental variation—can be taken too far!
6. If the results are the same for five trials, the author can occasionally describe the course of one experiment and say that the other four gave "in principle the same result." Another possibility would be: "A representative result from three trials. . ." and the reason for it.

Summary: The Results section should answer the question: *"What was found?"*