# **NIH Spanish Style Guide**

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# 1. Introduction

# **Purpose**

To provide a resource for National Institutes of Health (NIH) communications professionals, informing best practices for translating and writing Spanish health, science, or clinical research materials. The Spanish Style Guide is a working document that aims to foster uniformity in the construction and comprehension of information.

# **Target Audiences**

Those who serve and provide Spanish-speaking populations with health, science, or clinical research-related information. Each NIH Institute or Center (IC) may have a unique audience depending on its research portfolio. The NIH Spanish Style Guide is designed to be adapted for use.

# 2. Names

# 2.1. NIH, Institutes, and Centers

The official Spanish name of the National Institutes of Health is "Institutos Nacionales de la Salud", and its English acronym "NIH" should be also used in Spanish. The article and verbs used with the name or its acronym should be plural.

# **Example:**

The NIH published a study on immunotherapy.

➡ NIH publicé un estudio sobre inmunoterapia. (Incorrect)
 Los NIH publicaron un estudio sobre inmunoterapia. (Correct)

There is no need to add "de los Estados Unidos" after the NIH's official name if it is not included in the English original.

## **Example:**

"The National Institutes of Health have published... "

"Los Institutos Nacionales de la Salud de los Estados Unidos publicaron..." (Incorrect)

"Los Institutos Nacionales de la Salud publicaron..." (Correct)



The official Spanish translations of NIH ICs are provided below, and their English acronyms are also preserved in Spanish.

# Example:

National Cancer Institute (NCI) Instituto Nacional del Cáncer (NCI)

NIH and ICs			
Acronym	English	Spanish	
OD	Office of the Director	Oficina del Director	
NIAAA	National Institute on Alcohol Abuse and Alcoholism	Instituto Nacional sobre el Abuso del Alcohol y Alcoholismo	
NIAID	National Institute of Allergy and Infectious Diseases	Instituto Nacional de Alergias y Enfermedades Infecciosas	
NIBIB	National Institute of Biomedical Imaging and Bioengineering	Instituto Nacional de Imágenes Biomédicas y Bioingeniería	
NIEHS	National Institute of Environmental Health Sciences	Instituto Nacional de las Ciencias de Salud Ambiental	
NIGMS	National Institute of General Medical Sciences	Instituto Nacional de Ciencias Médicas Generales	
NINDS	National Institute of Neurological Disorders and Stroke	Instituto Nacional de Trastornos Neurológicos y Accidentes Cerebrovasculares	
NIDCR	National Institute of Dental and Craniofacial Research	Instituto Nacional de Investigación Dental y Craneofacial	
NINR	National Institute of Nursing Research	Instituto Nacional de Investigación en Enfermería	
NIAMS	National Institute of Arthritis and Musculoskeletal and Skin Diseases	Instituto Nacional de Artritis y Enfermedades Musculoesqueléticas y de la Piel	
NIDDK	National Institute of Diabetes and Digestive and Kidney Diseases	Instituto Nacional de la Diabetes y las Enfermedades Digestivas y Renales	
NIMH	National Institute of Mental Health	Instituto Nacional de la Salud Mental	
NCI	National Cancer Institute	Instituto Nacional del Cáncer	



NIH and ICs			
Acronym	English	Spanish	
NHLBI	National Heart, Lung, and Blood Institute	Instituto Nacional del Corazón, los Pulmones y la Sangre	
NEI	National Eye Institute	Instituto Nacional del Ojo	
NHGRI	National Human Genome Research Institute	Instituto Nacional de Investigación del Genoma Humano	
NIA	National Institute on Aging	Instituto Nacional Sobre el Envejecimiento	
NICHD	Eunice Kennedy Shriver National Institute of Child Health and Human Development	Instituto Nacional de Salud Infantil y Desarrollo Humano <i>Eunice Kennedy</i> <i>Shriver</i>	
NIDCD	National Institute on Deafness and Other Communication Disorders	Instituto Nacional de la Sordera y Otros Trastornos de la Comunicación	
NIDA	National Institute on Drug Abuse	Instituto Nacional sobre el Abuso de Drogas	
NCCIH	National Center for Complementary and Integrative Health	Centro Nacional de Salud Complementaria e Integral	
NIMHD	National Institute on Minority Health and Health Disparities	Instituto Nacional de la Salud de las Minorías y las Disparidades de Salud	
СС	Clinical Center	Centro Clínico de los NIH	
GARD	Genetic and Rare Diseases Information Center	Centro de Información sobre Enfermedades Genéticas y Raras	
ORWH	NIH Office of Research on Women's Health	Oficina de los NIH para Investigaciones sobre la Salud de la Mujer	
ODS	Office of Dietary Supplements	Oficina de Suplementos Dietéticos	
NLM	U.S. National Library of Medicine	Biblioteca Nacional de Medicina de los Estados Unidos	
CIT	Center for Information Technology	Centro de Tecnología Informática	
CSR	Center for Scientific Review	Centro de Revisión Científica	
FIC	John E. Fogarty International Center	Centro Internacional John E. Fogarty	



NIH and ICs		
Acronym	English	Spanish
NCATS	National Center for Advancing Translational Sciences	Centro Nacional para el Avance de las Ciencias Traslacionales

# 2.2. Names of Countries, States, and Cities

The official names of countries should be used and can be found in all the United Nations languages (including Spanish) at <a href="https://unterm.un.org/UNTERM/portal/welcome.">https://unterm.un.org/UNTERM/portal/welcome.</a>

The United States of America and its Spanish translation "Estados Unidos de América" (short form "Estados Unidos", abbreviation "EE. UU.") should be preceded by the masculine plural definite article "los".

## **Example:**

Instructions to request a visa to visit the United States.

Instrucciones para solicitar una visa a fin de visitar Estados Unidos. (Incorrect)
Instrucciones para solicitar una visa a fin de visitar Ios Estados Unidos. (Correct)

There are only 15 U.S. states that change their spelling when translated into Spanish, and their Spanish name should always be used:

North Carolina	Carolina del Norte	New Hampshire	Nuevo Hampshire
South Carolina	Carolina del Sur	New Jersey	Nueva Jersey
North Dakota	Dakota del Norte	New York	Nueva York
South Dakota	Dakota del Sur	New Mexico	Nuevo México
Hawaii	Haw <b>ái</b>	Oregon	Oreg <b>ó</b> n
Louisiana	L <b>ui</b> siana	Pennsylvania	Pe <b>n</b> s <b>i</b> lvania
Mississippi	Misisipi	West Virginia	Virginia Occidental
Missouri	Mi <b>su</b> ri		

When the state or the country of a city is specified in the text, it should be added in parentheses and not separated by comma. The name of the state should be spelled out in regular texts.

# **Examples:**

The NIH Clinical Center is located in Bethesda, MD.

El Centro Clínico de los NIH está ubicado en Bethesda, Maryland. (Incorrect)
El Centro Clínico de los NIH está ubicado en Bethesda (Maryland) (Correct)



The principal investigator was born in Paris, France.

El investigador principal nació en París, Francia. (Incorrect)
El investigador principal nació en París (Francia). (Correct)

#### 2.3. Addresses

Addresses should not be translated into Spanish, so the two-letter state abbreviation should be used in this case.

#### **Example:**

100 Wisconsin Avenue, Suite 250, Bethesda, MD 20814

100 avenida Wisconsin, oficina 250 Bethesda (MD) 20814 (Incorrect)
100 Wisconsin Avenue, Suite 250, Bethesda, MD 20814 (Correct)

# 2.4. Names of Entities and Institutions

Before translating the name of an entity or institution, a search should be made to verify whether there is an official name in Spanish. In the case of the U.S. government, consult <a href="https://gobierno.usa.gov/agencias-gobierno">https://gobierno.usa.gov/agencias-gobierno.u

If there is no official name in Spanish for an entity or institution, the English name should be used, followed by its Spanish translation in square brackets.

# **Example:**

This is an entity without an official translation in Spanish.

The research study will take place at the University of Texas Southwestern Medical Center

El estudio de investigación se llevará a cabo en el University of Texas Southwestern Medical Center [Centro Médico de la Universidad de Texas Southwestern].

# 2.5. Acronyms and Abbreviations

An English acronym should be translated into Spanish when the Spanish acronym is official (e.g., WHO  $\rightarrow$  OMS) or widely used in authoritative sources of medical literature, such as journals or the references provided at the end of this guide.

#### **Examples:**

DNA (deoxyribonucleic acid) ADN (ácido desoxirribonucleico)

COPD (chronic obstructive pulmonary EPOC (enfermedad pulmonar obstructiva

disease) crónica)

HIV (human immunodeficiency virus)

VIH (virus de inmunodeficiencia humana)

HPV (human papilomavirus)

PVH (papilomavirus humano) OR

VPH (virus del papiloma humano)



If the acronym does not have an equivalent in Spanish, then the English acronym should be used.

#### **Example:**

Dual-energy X-ray absorptiometry (DXA) Densitometría ósea (DXA)

Some acronyms have been incorporated in the *Diccionario de la lengua española* [*Dictionary of the Spanish Language*] as words (e.g., láser, ovni, radar) and should be treated accordingly.

# **Example:**

Laser is used to treat some cancers.

Se usa el <del>LASER</del> para tratar algunos tipos de cáncer. (Incorrect)
Se usa el **láser** para tratar algunos tipos de cáncer. (Correct)

Although the *Dictionary of the Spanish Language* includes "sida" as a word, it is recommended to use the capitalized form "SIDA" to be consistent with the way acronyms are used in the vast majority of syndromes.

## **Example:**

You will undergo a test to determine if you have HIV, the virus that causes AIDS.

Se someterá a una prueba para determinar si tiene VIH, el virus que causa el sida. (Incorrect)
Se someterá a una prueba para determinar si tiene VIH, el virus que causa el SIDA. (Correct)

Acronyms in Spanish should maintain the gender (masculine, feminine) and number (singular, plural) of its original name. An "s" should not be added to the end of an acronym to indicate plural.

#### **Example:**

Tests may include PET and CT.

Las pruebas incluirán TEP y TC/TAC. (Incorrect)
Las pruebas incluirán una TEP y una TC/TAC. (Correct)

Several NGOs participated in the event.

Varias ONGs participaron en el evento. (Incorrect)
Varias ONG participaron en el evento. (Correct)

Abbreviations should be closed by a period or, in a few cases, with a slash sign.

#### **Example:**

Page página pag.
USA Estados Unidos EE. UU.
Street calle c/

For a list of the most common Spanish abbreviations, refer to Ortografía básica de la lengua española.



# 2.6. Latin and Foreign Words

When a term has a Spanish equivalent, the Spanish term should be used, and the foreign term should be avoided.

## **Examples:**

Back-up copia de seguridad E-mail correo electrónico

Scan exploración

When it is necessary to use a foreign word in a Spanish text, this word should be in italics.

#### **Examples:**

The term mittelschmerz refers to pain that occurs during ovulation.

El término mittelschmerz se refiere al dolor que ocurre durante la ovulación. (Incorrect)

El término *mittelschmerz* se refiere al dolor que ocurre durante la ovulación. (Correct)

Latin words and phrases should be written in italics.

#### **Examples:**

in vitro, curriculum, pro tempore, ad hoc, passim, et alii (abbreviated et al.), in situ, post mortem

Latin words and phrases that refer to species of organisms should be written in italics, be capitalized on the first letter of the first element, and have no accent marks.

#### **Examples:**

Staphylococcus aureus

Aedes aegypti

NOTE: Do not follow this rule in documents where health literacy is a priority. However, when translating technical documents, the rules above should be applied.

## 2.7. Titles and Positions

Titles and positions are capitalized when they appear next to the name of the person holding such title or position.

#### **Example:**

Dr. Electron Kebebew, Principal Investigator

Dr. Electron Kebebew, investigador principal (Incorrect)

Dr. Electron Kebebew, Investigador Principal (Correct)

Titles and positions are not capitalized when the name of the person is not present in the phrase or sentence.



# **Example:**

The Director of the Clinical Center made his remarks.

El Director del Centro Clínico hizo sus observaciones. (Incorrect)

El director del Centro Clínico hizo sus observaciones. (Correct)

# 2.8. Names of Drugs and Substances

The names of generic drugs should be written in lower case and preceded by the definite article.

#### **Example:**

Cyclophosphamide is used as a chemotherapy and immunosuppressant drug.

Ciclofosfamida se utiliza como fármaco quimioterapéutico e inmunodepresor. (Incorrect)

La ciclofosfamida se utiliza como fármaco quimioterapéutico e inmunodepresor. (Correct)

The names of drugs with registered or commercial names should by capitalized, and no article should precede them (the registered [ $\mathbb{R}$ ] and trademark [ $^{\text{TM}}$ ] symbols should be used mirroring the original text).

# **Examples:**

The second study arm will receive Synthroid® for six months.

El segundo grupo del estudio recibirá Synthroid® por seis meses.

Tylenol will be allowed for patients to take if they feel pain.

A los pacientes se les permitirá tomar **T**ylenol si sienten dolor.

The complete names of chemical elements should not be capitalized, but their symbols should be.

#### **Examples:**

Gold oro (Au)
Potassium potasio (K)
Sodium sodio (Na)



# 3. Orthography

# 3.1. Use of Slash

The slash (/) can be used to express the existence of two or more options that are opposite or alternative.

# **Example:**

Estimado/a paciente (masculine vs. feminine)

Cardíaco/cardiaco (both spellings are correct)

The expression "y/o" (from and/or in English) is used to make explicit the possibility of choosing both elements or only one. In Spanish, the conjunction "o" can express both values simultaneously. The use of "y/o" should be restricted to cases where it is completely necessary to avoid ambiguities in highly technical texts.

# **Example:**

Tests and/or procedures

Pruebas y/o procedimientos (Incorrect)

Pruebas o procedimientos (Correct)

#### 3.2. Use of Em Dash

The em dash (—) can be used to include a clarification in the text, and its use follows the same criteria as the question or exclamation marks. A closing dash is necessary in Spanish, even if the clarification is followed by a period.

#### **Example:**

Hundreds of patients undergo the procedure every year—most of them are over 18 years old.

Cada año, cientos de pacientes se someten al procedimiento—la mayoría de (Incorrect) ellos tiene más de 18 años.

Cada año, cientos de pacientes se someten al procedimiento—la mayoría de (Correct) ellos tiene más de 18 años—.

# 3.3. Use of Square Brackets

The square brackets ([]) are used if it is necessary to include a clarification in text that is already in parentheses.

## **Example:**

We need you to authorize your doctors to give us information in your medical record, because they may be required by law (for example, by the Health Insurance Portability and Accountability Act [HIPAA]) to have your written permission to disclose that information. →

Necesitamos que autorice a sus médicos particulares para que nos den la información de su expediente médico, porque pueden estar obligados por ley (por ejemplo, por la Ley de Transferencia y Responsabilidad de Seguro Médico [HIPAA]) a tener su autorización escrita para divulgar dicha información.

Square brackets (not parentheses) should also be used to add an element that is not in the original document or an unofficial translation of the name of an institution.

#### **Examples:**

Motor Vehicle Administration Motor Vehicle Administration [Administración de Vehículos Motorizados]

(This is an unofficial translation added to enhance the reader's understanding of the text).

When a signature or a logo appear in the original and cannot be reproduced in the translation, [Firma] or [Logo] should be added.

## 3.4. Use of Colon

The text following a colon should be in lower case unless:

It follows the opening of a letter or e-mail

#### **Example:**

Dear Dr. Skarulis, Estimada Dra. Skarulis:

Through this letter ... Por medio de la presente

When a citation is introduced

#### **Example:**

Dr. Steven M. Holland, Director of the Division of Intramural Research at NIAID, stated: "We are about to achieve very interesting things."

El Dr. Steven M. Holland, Director del Departamento de Investigación Interna del NIAID, afirmó: "Estamos a punto de lograr cosas muy interesantes".



# 3.5. Use of Parentheses and Quotation Marks Coordinated with Other Signs

Period, comma, semicolon, and colon should be placed after a closing parenthesis.

# **Examples:**

Patients had been having side effects for a long time (nausea, vomit, headache, and skin rash); therefore, they decided to leave the study.

Los pacientes llevaban mucho tiempo presentando efectos secundarios (náuseas, vómito, dolor de cabeza y erupciones cutáneas); por lo tanto, decidieron abandonar el estudio.

We expect to recruit 150 patients in the study (120 have already been recruited).

Prevemos inscribir a 150 pacientes en el estudio (ya se han inscrito 120).

When the complete sentence is in parentheses, the period should be placed before the closing parenthesis.

# **Example:**

(Please make sure you bring all your medications.)

(Asegúrese de llevar todos sus medicamentos). (Incorrect)
(Asegúrese de llevar todos sus medicamentos.) (Correct)

A period is usually placed after the closing quotation mark unless the original citation includes a period or the complete sentence is in quotation marks.

# **Examples:**

The investigator said "we will move forward with this study."

El investigador afirmó "procederemos con el estudio". (The text in quotation marks is only a part of the main sentence.)

"We never had this opportunity before," said his mother, "we are very grateful to all the team that has make this possible."

"Nunca antes tuvimos esta oportunidad", afirmó su madre, "estamos muy agradecidos con todo el equipo que hizo esto una realidad." (This quote has been interrupted by a comment from the author; however, it should be treated as a whole sentence quote.)

"God is an awesome mathematician and physicist." – Francis Collins

"Dios es un matemático y un físico maravilloso." Francis Collins (This is a whole sentence quote)



# 3.6. Use of Percent Sign

The percent sign follows the digit with no space in between despite the recommendation of the Real Academia de la Lengua [Royal Academy of Language].

# **Example:**

```
10% (Correct)

10% (Incorrect)
```

As recommended by the *Ortografía de la Lengua Española*, the percent sign should only be used with digits and not combined with the spelled numbers. The word "porcentaje" should not be combined with a digit.

# **Example:**

10% (Correct)
Diez porciento (Correct)

Diez % (Incorrect)

40 perciente (Incorrect)

The percent sign should be repeated when an interval is expressed for clarity.

# **Example:**

Entre el 15% y el 35% de los pacientes ... (Correct)
Entre el 15 y el 35% de los pacientes ... (Incorrect)

# 3.7. Use of Capital Letters

Demonyms (names to denote the natives or inhabitants of a country, state, city, region, etc.) and names of languages are not capitalized:

#### **Examples:**

Only a small percentage of Americans have the disease.

Solo un pequeño porcentaje de Estadounidenses tiene la enfermedad. (Incorrect)
Solo un pequeño porcentaje de estadounidenses tiene la enfermedad. (Correct)

The information is only available in English.

La información solo está disponible en Inglés. (Incorrect)

La información solo está disponible en Inglés. (Correct)



In titles and subtitles, the initial capitalization rule applies (only the first letter of the first word is capitalized).

#### **Example:**

Information on Specific Procedures

Información sobre Procedimientos Específicos (Incorrect)
Información sobre procedimientos específicos (Correct)

The months of the year and the days of the week are not capitalized, except when they are the first word of a sentence or title.

## **Examples:**

January **e**nero Thursday **j**ueves

Titles of books, periodic publications, and scientific journals should be written in *italics*, and only the first letter of the first word should be capitalized (proper names that require capitalization should remain capitalized).

# **Examples:**

Human Anatomy Atlas Atlas de anatomía humana

Dorland's Illustrated Medical Dictionary **D**iccionario **D**orland **i**lustrado de **m**edicina

Nature Nature

Titles of chapters, articles, presentations, speeches, and exhibitions should be written in quotation marks, and only the first letter of the first word should be capitalized (proper names that require capitalization should remain capitalized).

#### **Examples:**

"Multi-centric Epidemiologic Study on Lung Cancer in Spain"

"Estudio multicéntrico epidemiológico sobre cáncer de pulmón en España"

"Toxicities in Immunosuppressed Patients"

"Efectos tóxicos en pacientes inmunodeprimidos"

# 3.8. Units and Temperature Degrees

Units should be expressed after the digit that quantifies them, preceded by a non-breaking space (Ctrl+Shift+Space).

## **Examples:**

8I (Incorrect) 23mm (Incorrect) 8 I (8 liters) (Correct) 23 mm (23 millimeters) (Correct)



Temperature degrees should be expressed by a circle (°) next to the unit and separated from the digit by a non-breaking space (Ctrl+Shift+Space).

## **Examples:**

24 °C (24 degrees Celsius)

17 ∘F (17 degrees Fahrenheit)

# 3.9. Decimals and Thousands (Use of Periods and Commas

Despite the recommendation of the *Ortografía básica de la lengua española* to separate decimals with a comma and thousands with a period, the recommendation of the Academia Norteamericana de la Lengua Española [North American Academy of the Spanish Language] should be followed: Periods should be used to separate decimals, and commas should be used to separate thousands, consistent with the English use.

NOTE: A translator's note explaining this use may be added to the translated document when the IC considers it appropriate, especially in the case of medication doses.

# **Examples:**

0.45 mg 0.45 mg

2,000 dollars 2,000 dólares

1.5 rem 1.5 rem

1,500 study subjects 1,500 sujetos de estudio

# 3.10. Digits with Multiple Zeros

A billion and a trillion in English are not "un billón" and "un trillón" in Spanish:

Digit	Number of zeros	English	Spanish
1,000,000	6	one million	un millón
1,000,000,000	9	one billion	mil millones
1,000,000,000,000	12	one trillion	un billón
1,000,000,000,000,000,000	18	one quintillion	un trillón

## **Example:**

Our molecular methods are incredibly sensitive and require nanograms (billionths of a gram) of DNA.

Nuestros métodos moleculares son muy sensibles y requieren nanogramos (billonésimas partes de un gramo) de ADN. (Incorrect)

Nuestros métodos moleculares son muy sensibles y requieren nanogramos (milmillonésimas partes de un gramo) de ADN. (Correct)

## 3.11. Use of Italics and Boldface

Italics are used in Spanish to designate Latin words (not incorporated in the *Diccionario de la lengua española* [Dictionary of the Spanish Language]) and foreign words, book titles, and gene names.

# **Examples:**

Ex officio

Software

Diccionario de medicina interna

BRCA1

Do not use italics to give emphasis. Instead, use boldface.

# **Example:**

Patients will *not* be compensated for participating in the study.

Los pacientes *ne* recibirán pago por participar en el estudio. (Incorrect)

Los pacientes *ne* recibirán pago por participar en el estudio. (Correct)

#### 3.12. Itemized Lists

Each item of an itemized list should be separated by a comma when the elements are single words or short phrases. The items are not capitalized.

#### **Example:**

The inclusion criteria are: Los siguientes son los criterios de inclusión:

- Be 18 years or older tener 18 años o más,

- Have a good health condition tener un buen estado de salud,

- Be a non-smoker **n**o ser fumador,

- Do not consume alcohol **n**o consumir alcohol.



Each item of an itemized list should be separated by a semicolon when the elements are longer phrases or include commas in them. The items are not capitalized.

## **Example:**

The study will include the following visits:

- A screening visit involving a physical exam, which is not painful and will take a few minutes, and a blood draw
- A second visit involving several imaging tests, which will be explained in this consent form
- Follow up visits involving several tests and procedures, which will be explained in detail to you by your nurse

El estudio incluirá las siguientes consultas:

- una consulta de selección que incluye un examen físico, que no es doloroso y dura unos minutos, y una extracción de sangre;
- una segunda consulta que incluye varias pruebas con imágenes, que se explicarán en este documento de consentimiento;
- consultas de seguimiento que incluyen varias pruebas y procedimientos, y que el enfermero le explicará en detalle.

Each item of an itemized list should be separated by a period when the elements are full sentences. Each sentence should be capitalized.

# **Example:**

These steps will be followed:

- The patient will go to the Clinical Center in the early morning.
- The Clinical Center staff will admit the patient.
- The nurse will explain the protocol consent to the patient and his/her family, and answer any questions they may have.
- The patient will undergo surgery.

Se seguirán estos pasos:

- El paciente irá al Centro Clínico temprano en la mañana.
- El personal del Centro Clínico le dará ingreso al paciente.
- El enfermero le explicará el documento de consentimiento al paciente y a sus familiares, y contestará cualquier pregunta que tengan.
- El paciente se someterá a cirugía.



# 3.13. Diacritical Accent Marks

The diacritical accent mark (') in "solo" ("only" or "by himself/herself") is no longer required when there is no risk of ambiguity (according to *Ortografía de la lengua española*).

## **Example:**

Only patients will have access to their records.

Sólo los pacientes tendrán acceso a sus expedientes. (Incorrect)

Solo los pacientes tendrán acceso a sus expedientes. (Correct)

Trajo solo los medicamentos.

This sentence could be interpreted in two ways: "he/she only brought the medications" or "he/she brought the medications by himself/herself." In this case, "solamente" or "únicamente" should be used to avoid ambiguity.

The diacritical accent mark (´) of demonstrative pronouns ("este", "esta", "estos", "estas", "estas", "ese", "esa", "esos", "esas", "aquella", "aquellos", and "aquellas") is no longer required when there is no risk of ambiguity (according to *Ortografía de la lengua española*).

#### **Example:**

Individuals with or without the disease are eligible to participate in the study.

Las personas con la enfermedad o sin <del>ésta</del> son aptas para participar en el estudio. (Incorrect)

Las personas con la enfermedad o sin **esta** son aptas para participar en el estudio. (Correct)

# 3.14. Numbers (Spelled vs. Digits)

In general texts, numbers from 1 to 9 should be spelled out, and numbers 10 or more should be expressed in digits. When a sentence starts with a number (which is not correct but is often seen in English), this number should be spelled out (even if it is 10 or more) or the order of the sentence should be modified to avoid having the number at the beginning.

#### **Example:**

11 patients underwent surgery at the Clinical Center.

41 pacientes se sometieron a cirugía en el Centro Clínico. (Incorrect)

Once pacientes se sometieron a cirugía en el Centro Clínico. (Correct)

OR

En el centro clínico, 11 pacientes se sometieron a cirugía. (Correct)



When the number refers to duration in years, use digits even if the number is less than 10.

# **Examples:**

The patient will attend follow-up visits for one year.

El paciente asistirá a consultas de seguimiento por <del>un</del> año. (Incorrect)

El paciente asistirá a consultas de seguimiento por 1 año. (Correct)

The study included 4–18-year-old patients.

En el estudio se incluyó a pacientes de <del>cuatro</del> a 18 años. (Incorrect)

En el estudio se incluyó a pacientes de 4 a 18 años. (Correct)

In technical texts, all numbers should be expressed in digits for clarity.

# 3.15. Prefixes

Prefixes should be attached to the word and not separated by a space or a dash.

# **Example:**

Vice President

vice presidente(Incorrect)vice-presidente(Incorrect)vicepresidente(Correct)

When the prefix precedes an acronym, a digit, or a name, it should be followed by a hyphen (-).

#### **Examples:**

Anti-HIV Anti-VIH
Sub-16 Sub-16

Pro-Europa Pro-Europa



# 4. Grammar

# 4.1. Use of Gerund

In Spanish, the use of the gerund (constructed with the endings "-ando" or "-endo" ["-ing"]) is incorrect in the following cases:

1. When it functions as an adjective.

# **Example:**

An article was published describing the method.

Se publicó un artículo describiendo el método. (Incorrect)

Se publicó un artículo en el que se describe el método. (Correct)

2. When it refers to an action happening after the main verb of the sentence.

#### **Example:**

The speaker ended his presentation leaving the podium.

El conferencista/conferenciante/presentador terminó su presentación abandon<del>ando</del> el atril. (Incorrect)

El conferencista/conferenciante/presentador terminó su presentación y abandonó el atril. (Correct)

3. When, in presence of the verb "estar" ("to be"), it is used to indicate an instantaneous action.

#### **Example:**

The investigator is turning on the centrifuge.

El investigador está encendiendo la centrífuga. (Incorrect)

El investigador **enciende** la centrífuga. (Correct)

#### Other cases:

Concluding that Concluyendo que... y concluyó que ...

Including Includendo incluido/a, incluso, entre ello/a(s)

By removing etirando al retirar

The use of gerund is correct in Spanish in the following cases:

1. When it follows verbs like "continuar" ("to follow") or "sequir" ("to continue")

#### **Example:**

The patient continued having nausea.

El paciente continuó/siguió presentando náuseas.



2. When it denotes a simultaneous or previous action from the main verb.

# **Example:**

When the doctor entered the room, the patient was waking up.

Cuando el médico entró en la habitación, el paciente se estaba despertando.

3. When the action expressed by the gerund is a circumstance of time, mode, or condition.

# **Examples:**

The patient arrived driving.

El paciente llegó conduciendo.

Patients have lost weight by fasting.

Los pacientes han bajado de peso ayun**ando**.

#### 4.2. Use of Definite and Indefinite Articles

When the definite or indefinite article is used in the first item of a list, each element of that list should be preceded by its corresponding article.

#### **Examples:**

This message is addressed to providers, staff, visitors, and patients of the Clinical Center.

Este mensaje está dirigido a los proveedores, personal, visitantes y pacientes (Incorrect) del Centro Clínico.

Este mensaje está dirigido a **los** proveedores, **el** personal, **los** visitantes y **los** pacientes del Centro Clínico. (Correct)

The report must include an introduction, a data analysis, and a conclusion.

El informe debe incluir una introducción, análisis de los datos y conclusión. (Incorrect)
El informe debe incluir una introducción, un análisis de los datos y una conclusión. (Correct)

As the definite article is not used in English as frequently as it is used in Spanish, it is very common in English to find sentences starting with a noun. In Spanish, either an article, a noun, or an adjective needs to precede the noun.

#### **Example:**

Researchers are testing a new treatment for cancer patients.

Investigadores estudian un nuevo tratamiento para los pacientes de cáncer. (Incorrect)

Los investigadores estudian un nuevo tratamiento para los pacientes de cáncer. (Correct)

OR

Un grupo de investigadores estudia un nuevo tratamiento para los pacientes de cáncer. (Correct)

OR



Algunos investigadores estudian un nuevo tratamiento para los pacientes de cáncer. (Correct)

The definite article should be used when expressing percentages.

# **Example:**

Among the study participants, 15% had severe side effects.

De los participantes del estudio, 15% presentó efectos secundarios graves. (Incorrect)

De los participantes del estudio, el 15% presentó efectos secundarios graves. (Correct)

Years should be preceded by the preposition "de" without the definite article "el".

# **Examples:**

January 20, 2018

20 de enero del 2018 (Incorrect)
20 de enero de 2018 (Correct)

March 1967

marzo del 1967 (Incorrect)
marzo de 1967 (Correct)

# 4.3. Appositions

In English, a noun is frequently used as an adjective to modify another noun. The apposition of two nouns in Spanish is uncommon and is limited to very restricted cases.

#### **Examples:**

Stem cells Células madre

Room temperature Temperatura ambiente

Kinase activity Actividad cinasa

Appositions can be avoided by replacing the noun qualifying the other noun with an adjective or by adding a preposition between both nouns.

#### **Examples:**

transmembrane protein proteina transmembrana

proteína transmembranaria

nucleotide analog análogo nucleótido

análogo nucleotídico

DNA dependent polymerase polimerasa ADN dependiente

polimerasa dependiente de ADN

drug resistant fármaco resistente



resistente al fármaco

tissue specific tejido específico

específico del tejido

placebo group grupo placebo

grupo de placebo

case-control studies estudios caso-control

estudios de casos y controles

# 4.4. Use of Prepositions

Unlike English, prepositions in Spanish need to be accompanied by the element they modify. It is not correct to coordinate different prepositions using the same element.

#### **Examples:**

Patients had the same side effects with or without the medication.

Los pacientes presentaron los mismos efectos secundarios <del>con o sin</del> el medicamento. **(Incorrect)** 

Los pacientes presentaron los mismos efectos secundarios **con** el medicamento o **sin** él/este. **(Correct)** 

The preposition "de" ("from") should be combined with the preposition "a" ("to").

The preposition "desde" ("from") should be combined with the preposition "hasta" ("to").

Intervals should be expressed as "entre ... y ..." ("between ... and ...").

#### **Examples:**

Patients from 2 to 18 years were included. Se incluyó a pacientes **de** 2 **a** 18 años.

The study was conducted from 1998 to 2003. El estudio se llevó a cabo **desde** 1998 **hasta** 2003.

OR El estudio se llevó a cabo de 1998 a 2003.

Cancer incidence is estimated between 10% and 20%.

La incidencia del cáncer se calcula **entre** el 10% **y** el 20%.

It is very important that an effective form of birth control be used **before**, **during**, and **after** sirolimus therapy.

Es muy importante que se use un método anticonceptivo eficaz <del>antes, durante y después</del> de la terapia con sirolimús. **(Incorrect)** 

In this case, the adverbs "antes" and "después" need to be followed by the preposition "de", but "durante" is a preposition by itself that cannot be combined with "de".



Es muy importante que se use un método anticonceptivo eficaz **antes de** (Correct) la terapia con sirolimús, **durante esta** y **después de** esta.

to detect changes that may cause or contribute to infections.

para detectar cambios que pudieran <del>causar o contribuir a</del> infecciones. (Incorrect)

In this case, the verb "causar" does not need a preposition, but the verb "contribuir" does need the preposition "a"; therefore, they cannot be coordinated.

para detectar cambios que pudieran causar infecciones o contribuir a estas. (Correct)

When two or more nouns or verbs have the same preposition, they can share it.

#### **Example:**

Increase and decrease of leukocytes El aumento y la disminución **de** leucocitos

# 4.5. Order of Adjectives and Nouns

In Spanish, an adjective usually follows a noun. When an adjective precedes a noun, the quality of the adjective tends to be enhanced more than the meaning of the noun. Exceptions to this rule are the adjectives "único" ("unique" or "only"), "nuevo" ("new"), and "gran" ("great"), which usually can precede the noun.

# **Examples:**

A **high number** of patients had adverse effects.

Un **número elevado** de pacientes presentó efectos adversos.

[noun] [adjective]

This involves a **new therapy** to treat colorectal cancer.

Esto implica una **nueva terapia** para el tratamiento del cáncer colorrectal.

[adjective] [noun]

In technical texts, the adjective preceding the noun should be avoided.

#### 4.6. Passive Voice

In Spanish, it is uncommon to use the passive voice, which should be avoided in many cases and replaced by the active voice.

#### **Example:**

Samples and data were collected by the researchers.

Las muestras y los datos <del>fueron obtenidos</del> por los investigadores. (Incorrect)

Los investigadores **obtuvieron** las muestras y los datos. (Correct)



When the subject is not directly identified in the sentence, due to the impersonality of scientific language, the impersonal "se" should be used.

## **Example:**

The treatment was administered by mouth.

El tratamiento fue administrado por vía oral. (Incorrect)
El tratamiento se administró por vía oral. (Correct)

# 4.7. Uses of "Negations

In English, it is usual to use "non-" to negate many words (including nouns and adjectives), but in Spanish the adverb "no" is only used with verbs and participles, not with adjectives or nouns. If an adjective or noun needs to be negative, it should be translated using an antonym, the preposition "sin", or prefixes such as "des-"," a- "or " in ".

# **Examples:**

	(Incorrect)	(Correct)
non-compliant	no cumplidor	que no cumple
non-penetrative	<del>no</del> penetrador	sin penetración
non-specific	no específico	<b>in</b> específico
non-organic	<del>no</del> orgánico	<b>in</b> orgánico
non-scientific	no científico	<b>a</b> científico
non-alcoholic drinks	bebidas <del>no</del> alcohólicas	bebidas <b>sin</b> alcohol
non-homogeneous model	modelo <del>no</del> homogéneo	modelo <b>heterogéneo</b>
non-obese patient	paciente <del>no</del> obeso	paciente <b>que no es</b> obeso

# 4.8. False Friends/Cognates

False friends/cognates are pairs of words that seem to have the same meaning because they sound or look similar in two languages but that have different meanings.

Although this is not intended to be a comprehensive list of false friends/cognates, it includes the most common ones in medical texts. Please note that although some of the examples are not strictly false friends/cognates, avoid their literal translation and use the options presented according to the context.

interruptor molecular

constipated	constipado	estrenido
assist	asistir	ayudar
embarrassed	embarazada	avergonzado
actual	actual	real
arm	arma	brazo

cambio molecular



molecular switch

المحاد حائد مادح

molest molestar abusar sexualmente

sane sano cuerdo

consistent consistente consecuente, congruente, compatible, en

concordancia, coherente

similar similar parecido assume asumir suponer

severe severo grave, intenso

involved in involucrado en de

invasive invasivo molesto, incómodo, cruento, agresor

(only when referring to cancer)

commonly comúnmente, habitualmente, con frecuencia,

por lo común

pathology patología afección, enfermedad, trastorno level nivel concentración, cantidad, contenido

vacuum <del>vacunar</del> aspiradora

**Result in**  $\rightarrow$  resultar en  $\rightarrow$  dar por resultado, producir. (In some cases, only the verb can be used.)

#### **Example:**

results in increased blood pressure ... aumenta la presión arterial.

#### Decade

In English, "decade" means either any period of 10 years or a historic period, for example, the 60s, the 90s. In Spanish, the term "decenio" is used to convey the first meaning, and the term "década" is used to convey the second.

# **Examples:**

The study lasted for more than three decades.

El estudio duró más de tres <del>décadas</del>. (Incorrect)
El estudio duró más de tres <del>decenios</del>. (Correct)

OR

El estudio duró más de 30 años. (Correct)

In the 60s



En la década de los 60's

En la década de los 60s

(Incorrect)

En la década de los sesentas

(Incorrect)

En la década de los 60

(Correct)

En la década de los sesenta

(Correct)

## 4.9. Use of the Possessive Article

In Spanish, the possessive articles ("mi", "tu", "su", "nuestro/a", and "sus") are not usually used with the parts of the body. Instead, the definite article should be used.

# **Examples:**

We will take pictures of your lungs, heart, and brain.

Le tomaremos imágenes de <del>sus</del> pulmones, <del>su</del> corazón y <del>su</del> cerebro. (Incorrect)

Le tomaremos imágenes de los pulmones, el corazón y el cerebro. (Correct)

We will draw blood from his arm.

Le extraeremos sangre de su brazo. (Incorrect)
Le extraeremos sangre del brazo. (Correct)

I am brushing **my** teeth.

Me cepillo mis dientes. (Incorrect)
Me cepillo los dientes (Correct)

Take care of **your** heart.

Cuídese su corazón (Incorrect)
Cuídese el corazón (Correct)

# 4.10. Impersonal Sentences

When the impersonal "se" is used in a sentence, followed by the preposition "a", the verb should be conjugated in third person singular (as the sentence lacks a subject) even though the object is in plural.

# **Examples:**

Study patients were interviewed.

Se entrevistaron a los pacientes del estudio. (Incorrect)

[Verb in plural] [Object in plural]

Se entrevistó a los pacientes del estudio. (Correct)

[Verb in singular] [Object in plural]

120 patients were randomly assigned.

Se asignaron al azar a 120 pacientes. (Incorrect)

[Verb in plural] [Object in plural]

Se **asignó** al azar a 120 pacientes. (Correct)

[Verb in singular] [Object in plural]

# 4.11. Adverbs Ending in -mente

Although it is correct in Spanish to form adverbs adding the ending "-mente" ("-ly") to an adjective, their use is not as frequent as in English. Using more than one adverb ending in "-mente" in the same sentence should be avoided. Instead, it could be replaced by a shorter synonym or use expressions such as "de forma", "de modo", or "de manera".

#### **Examples:**

Highly muy

Apparently en apariencia

Considerably de modo considerable

Currently en la actualidad

Excessively en exceso
Particularly sobre todo

Possibly tal vez, quizás, acaso

Previously antes, primero
Rapidly con rapidez
Theoretically en teoría

Immediately de inmediato
Urgently con urgencia

#### 4.12. Personal Pronouns

The English pronoun "you" can be translated as "usted" (formal) or "tú" (informal) in Spanish. The formal pronoun is generally preferred, as it conveys respect for the reader; however, when the content is targeted to minors (in the case of protocol assents or education materials), the informal pronoun is preferred.

# **Example:**

When you turn 18, we will ask you for your written consent to stay in the study.

Cuando cumplas 18 años, te pediremos tu consentimiento por escrito para que sigas en el estudio.

Although in English it is necessary to use personal pronouns (I, you, he, she, it, we, they) because verbs are not conjugated (except in third person singular), in Spanish the ending of the conjugated verb indicates the personal pronoun it refers to (yo, tú, él, ella, nosotros, ustedes/vosotros, ellos); therefore, in many cases it is redundant to use the personal pronoun in Spanish unless it is absolutely necessary to clarify the subject or the object of an action.

# **Example:**

You will remain under the care of your own physicians during your participation in the research.

Usted estará a cargo de su médico particular mientras participe en la investigación. (Incorrect)

Estará a cargo de su médico particular mientras participe en la investigación. (Correct)

Your doctor may withdraw you from the study if he/she thinks it is in your best interest.

El médico puede retirarlo <del>a usted</del> del estudio si <del>él o ella</del> piensa que es lo que más le conviene. **(Incorrect)** 

El médico puede retirarlo del estudio si piensa que es lo que más le conviene a usted. (Correct)

Here, there is no need to use the pronouns "usted" or "él o ella", as it is clear by the conjugated verb that they refers to "you" and "the doctor"; however, it is not clear whose best interest it refers to: the doctor's or the patient's.



# 5. Resources/References

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- Medline Plus: https://medlineplus.gov/spanish/
- <u>Vocabulario inglés-español de bioquímica y biología molecular (Tremédica):</u> http://www.medtrad.org/glosarios/bio\_molecular/Glosario/index.html