

Word-Formation Processes in E4BT

1. Compounding

In English, there are three main ways of putting two nouns together:

- ✓ noun + 's + noun: Andrew's car, my husband's name, the board's decision, New York's libraries, yesterday's lesson;
- ✓ noun + of + noun: a word of advice, an item of news, a phial of blood, the theory of relativity, the laws of physics;
- ✓ noun + noun → **compound nouns**.

A **compound word** (also called a **compound**) is a new word made up of two or more other words – that is, formed by joining two or more existing words.

It means that each part of a compound must be able to occur on its own as a word.

Here follow some examples of **compound nouns**:

- ✧ *blood* [n] *analysis* [n]: compound noun
- ✧ *blood* [n] *test* [n]: compound noun
- ✧ *blood* [n] *clot* [n]: compound noun in the form of a two-noun sequence
- ✧ *blood* [n] *clot* [n] *causes* [n]: compound noun in the form of a three-noun sequence
- ✧ *cell wall*, from *cell* (n) and *wall* (n)
- ✧ *food allergies*, from *food* (n) and *allergies* (n, plural form of *allergy*)
- ✧ *food intolerance* from *food* (n) and *intolerance* (n)
- ✧ *goldfish*, from *gold* (n) and *fish* (n)
- ✧ *healthcare providers* / *workers* / *professionals*: (noun + noun) + noun
- ✧ *life cycle*, from *life* (n) and *cycle* (n)
- ✧ *messenger RNA*, from *messenger* (n) and *RNA* (n, initialism)
- ✧ *paperwork*, from *paper* (n) and *work* (n)
- ✧ *sandfly*¹, from *sand* (n) and *fly* (n)
- ✧ *SARS*² *epidemic* from *SARS* (proper name) and *epidemic* (n)

¹ **Sandfly** (also written **sand fly**) is a colloquial name for any species or genus of flying, biting, blood-sucking dipteran (fly) encountered in sandy areas. **Italian equivalent**: “flebotomo”, “mosche della sabbia”.

The final part of a typical compound is **the head** (also called **the modified**) of the construction, determining its word-class and much of its semantic properties, and is preceded by the modifier.

The following examples, in *italics*, show some patterns of **compound adjectives**:

- ✧ *antibiotic-resistant* [n + adj = adj] strains: compound adjective + noun
- ✧ *blood sucking* [n + adj = adj] insects: compound adjective + noun
- ✧ *disease-causing* [n + verbal adj = adj] agent: compound adjective + noun
- ✧ *drug-resistant* [n + adj = adj] strains: compound adjective + noun
- ✧ *evidence-based* [n + verbal adj = adj] prevention: compound adjective + noun
- ✧ *foodborne*³ [n + verbal adj = adj] illnesses: compound adjective + noun
- ✧ *insecticide-treated* [n + verbal adj = adj] mosquito nets: compound adjective + compound noun
- ✧ *malaria-free* [n + adj = adj] countries: compound adjective + noun
- ✧ *needle-free* [n + adj = adj] vaccines kick off: compound adjective + compound noun
- ✧ *vaccine-preventable* [n + adj = adj] diseases: compound adjective + noun
- ✧ *warm-blooded* [adj + adj = adj] animals: compound adjective + noun

As to the spelling of compounds, there are three forms:

- ✧ **hyphenated compounds**, such as *flu-like symptoms*, *Blue-Tongue disease*⁴, *off-label drug use*⁵ or *meat-and-bone meal*⁶;

² **Severe Acute Respiratory Syndrome (SARS)** is a viral respiratory disease of zoonotic origin that surfaced in the early 2000s caused by the first-identified strain of the SARS coronavirus. **Italian equivalent:** “SARS”, “grave sindrome respiratoria acuta”.

³ “**borne**” is one of the two past participles of the transitive, irregular verb *to bear, bore, born / borne, bearing*: **Italian equivalents in a specifically-scientific context:** “portare”, “sostenere”, “trasmettere”, “generare”. Other compound adjectives based on ‘-borne’ are *air-borne transmission*, *animal-borne disease*, *blood-borne pathogens*, *blood-borne/insect-borne/mosquito-borne/tick-borne/vector-borne/water-borne illness/disease/virus*.

⁴ **Bluetongue disease** is a non-contagious, insect-borne, viral disease of ruminants, mainly sheep and less frequently cattle, goats, buffalo, deer, dromedaries, and antelope. It is caused by the Bluetongue Virus (BTV), transmitted by the midge *Culicoides imicola*, *Culicoides variipennis*, and other culicoids. Swelling of the lips and tongue gives the tongue its typical blue appearance, though this sign is confined to a minority of the animals. **Italian equivalents:** “febbre catarrale; *Bluetongue*; malattia della lingua blu”.

⁵ The **off-label drug use** (sometimes abbreviated in **OLDU**) involves prescribing currently available and marketed medications but for an indication (e.g., a disease or a symptom) that has never received Food and Drug Administration (FDA) approval. Hence, the specific use is “off-label” (i.e., not approved by the FDA and not listed in FDA-required drug-labelling information). The term OLDU can also apply to the use of a marketed medication in a patient population (e.g., paediatric, geriatric, pregnant or psychiatric patients), dosage (e.g., taking two tablets daily rather than the approved one tablet daily dosing) or route of administration (e.g., giving it intravenously versus its approved oral capsule form) that do not have FDA approval. Off-label use is generally legal unless it violates ethical guidelines or

- ✧ open compounds, such as *Blue Tongue disease, blood test/analysis, bone marrow, crop protection products, food reactions, gene therapy, side effects or meat and bone meal*;
- ✧ solid compounds, such as *Bluetongue disease, bloodstream, seasickness, wildlife, jellyfish or workshop*.

The logical relations between two nouns side by side include, but are not limited to, the following:

- ✧ the first noun answers the question ‘what kind of?’ (compare *finger fish*⁷ and *fish finger*⁸; other examples: *elbow dysplasia, blood pressure, HIV infection, National Health Service*);
- ✧ the second noun is about the first noun (e.g. *Food Safety and Inspection Services*)
- ✧ the second noun comes from the first noun (e.g. *a CDC⁹ report, FDA Information Service, WHO emergency situation reports*)
- ✧ the first noun makes clear where and/or when the action, exemplified by the second noun, happens: (e.g., *2024 Dengue fever cases, 2023 Shingles vaccination programme*).

N.B. 1! Remember that, except for some fixed expressions, the first noun of a compound is always singular even when a numerical expression (often hyphenated) is present, as in the examples below:

safety regulations. Both prescription drugs and over-the-counter drugs (OTCs) can be used in off-label ways, although most studies of off-label use focus on prescription drugs. **Italian equivalents:** “uso di farmaci al di fuori delle condizioni autorizzate dagli enti preposti per patologia, popolazione o posologia”, “uso di farmaci in modalità *off-label*”. Its opposite is **on-label**.

⁶ **Meat and bone meal (MBM)** is a product of the rendering industry. It is typically about 48–52% protein, 33–35% ash, 8–12% fat, and 4–7% water. It is primarily used in the formulation of animal feed to improve the amino acid profile of the feed. Feeding of MBM to cattle is thought to have been responsible for the spread of BSE (mad cow disease); therefore, in most parts of the world, MBM is no longer allowed in feed for ruminant animals. However, it is still used to feed monogastric animals. **Italian equivalent:** “farine di origine animale”.

⁷ More commonly known as *star fish*.

⁸ More commonly known as *fish stick*.

⁹ **CDC, Centers for Disease Control and Prevention** (**Italian equivalents:** “Centri per il controllo e la prevenzione delle malattie”, based in the USA). The corresponding agency in Europe is the **ECDC, European Centre for Disease Prevention and Control**.

- ✧ a **five-year** dog
- ✧ a **six-million-dollar** research project
- ✧ a **four-year** plan
- ✧ a **three-month** internship

N.B. 2! This word-building process may also act as a tool to express plural quantities of an uncountable noun (in blue, in the examples below) – such as:

- ✧ **blood** test/s, **blood** analysis/es, ...
- ✧ **exposure** control/s, ...
- ✧ **malaria** outbreak/s, ...
- ✧ **morbidity** rate/s, ...
- ✧ **research** facility/ies, ...
- ✧ **surveillance** level/s, ...
- ✧ **yeast** cell/s, ...

N.B. 3! A longer compound made up of a sequence of two or more lexical words can be referred to as **lexical chain**. Be careful both in interpreting the correct logical relation between each item and in translating such chain into Italian. Let's try with the following examples in blue:

- ✧ **allergen advisory labels**¹⁰
- ✧ **FDA**¹¹ **off-label drug use marketing policy**¹²
- ✧ **mammalian red blood cells**
- ✧ **membrane-bound transport protein**
- ✧ **CDC 2022-2023 Flu Vaccination Campaign Kickoff**
- ✧ **European Antibiotic Awareness Day**
- ✧ **Youth Risk Behaviour Surveillance System**
- ✧ **Morbidity and Mortality Weekly Report (MMWR)**

¹⁰ Such expression can be paraphrased as follows: “**labels that advice on allergens**”.

¹¹ **FDA, Food and Drug Administration (Italian equivalents:** “agenzia statunitense per il controllo dei prodotti farmaceutici, alimentari e cosmetici prima della loro commercializzazione”); in Europe, the corresponding body is the **EMA, European Medicines Agency**, and in Italy it corresponds to **AIFA, Agenzia Italiana del Farmaco**.

¹² Such expression can be paraphrased as follows: “**a policy on marketing made by the FDA dealing with the use of drugs in an off-label way**”.