

CORRECTION

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# Correction to: The action of herbal medicine on the libido: aspects of nutritional intervention in increasing sexual desire

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## Correction to: *NutrIRE* (2017) 42:29 DOI: 10.1186/s41110-017-0051-0

The original version of this article [1], published on 5 November 2017, contains a mistake. The abbreviation “NO” has been incorrectly translated as “nitrous oxide”. The correct translation is “nitric oxide”. A list of the affected text parts is given below. The corrected terminology is marked in bold.

- Some herbal medicines stood out, including *Tribulus terrestris*, used to increase testosterone serum levels; *Eurycoma longifolia*, which, in addition to the increased testosterone serum levels, also leads to an increased biosynthesis of several androgens; *ginseng*, which increases energy levels and stimulates smooth muscle relaxation with **nitric oxide**; Maca (*Lepidium meyenii*), which improves sexual performance, in addition to having androgenic effects; and *Mondia whitei* (ginger), which improves the libido and erection.
- Studies referring to neurotransmitters in the sexual response for both genders have demonstrated that they are released by autonomic nervous terminations, such as acetylcholine, dopamine, noradrenalin, melanocortin (VIP), and **nitric oxide** (NO) [8, 9].
- This occurs through the increase in the number of several hormone and serum testosterone concentrations, which, in turn, stimulated the dopamine receptor, through mechanisms, such as vasodilation, the generation of **nitric oxide**, increased androgen, and gonadotropin [12].

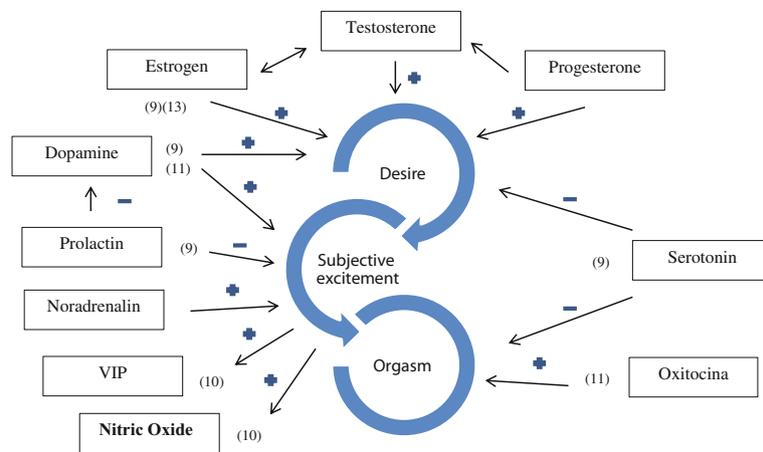
- Meanwhile, the saponin content acts to form **nitric oxide** and may lead to the relaxation of the smooth muscle by means of L-arginine/**nitric oxide** [12].
- Use of *ginseng* has a relaxation effect that modulates the relation between **nitric oxide** and the cavernous smooth muscle [23]. In this reaction, **nitric oxide** is released through the vasomolecular endothelium, which leads to the relaxation of the cavernous smooth muscle through the metabolism of calcium and potassium. Both reactions are mediated via **nitric oxide**-cyclic guanosine monophosphate (NO-GMPc), and the hyperpolarizing action takes place through the K channels activated by Ca<sup>2+</sup>.
- Some studies report that ginsenosides may lead to an increased release of **nitric oxide** from the cavernous tissue smooth muscles, thus increasing sexual desire [20].
- Some herbal medicines stood out, including *T. terrestris*, for increasing testosterone serum levels, and *E. longifolia*, which also leads to an increased biosynthesis of several androgens; *ginseng*, which increases energy levels and stimulates smooth muscle relaxation with **nitric oxide**; Maca (*L. meyenii*), which improves sexual performance, in addition to having androgenic effects; and *Mondia whitei* (ginger), which improves the libido and erection.
- NO: **nitric oxide** [in the ‘Abbreviations’ section]
- ↑ Relaxation of the vascular Smooth muscle, ↑ vascular flow to the genitalia, acts on prostaglandin, **nitric oxide** acts on the guanylate cyclase enzyme. [in the third column of Table 1]
- Figure 2
- Figure 4

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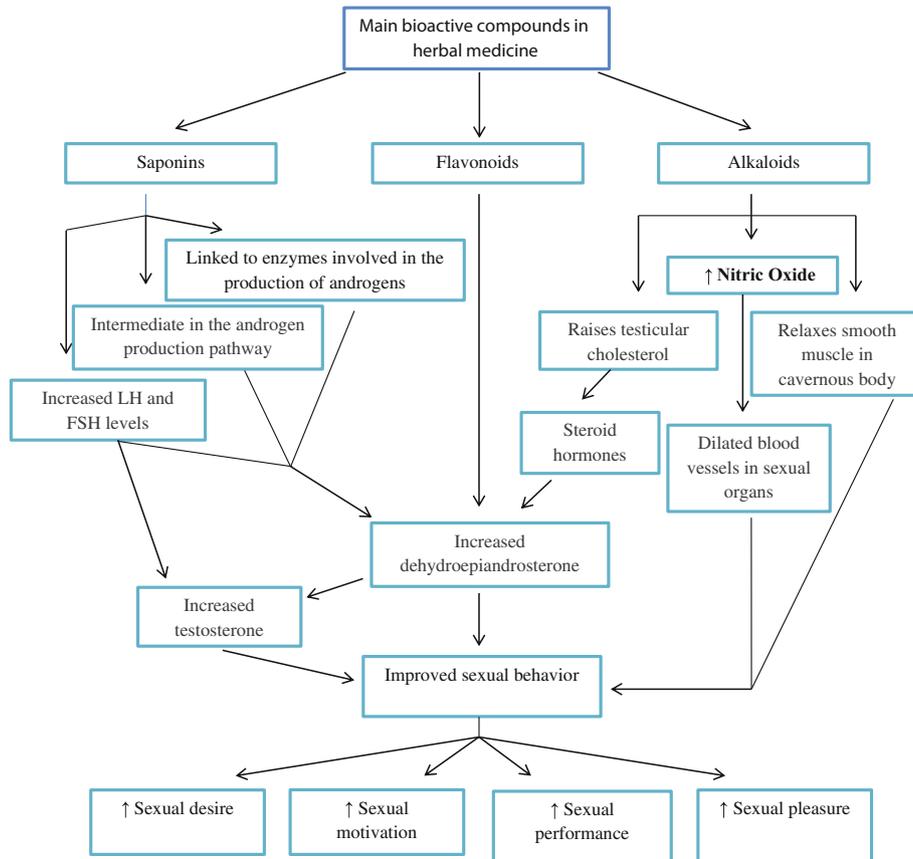
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The references which are cited in the above passages can be reviewed in the original article.



**Fig. 2** Central effects of neurotransmitters (dopamine, noradrenaline, VIP, nitric oxide, serotonin, and oxytocin) and hormones (testosterone, estrogen, prolactin, and progesterone) in desire, sexual arousal, and orgasm



**Fig. 4** Main bioactives of the phytotherapeutics cited in the studies selected through the keywords "libido, food, and nutrient" in the PUBMED, Scielo, and EMBASE databases

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