

MEDIA RELEASE

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Scientists Confirm: Essential Oils Unrelated to Hormone Disruption

Epidemiological Research Debunks the Long-Held Myth That Lavender and Tea Tree Oils Cause Endocrine Disruption in Children.

Results of a study by Franklin Health Research Centre (USA) conclusively rule out Tea Tree Oil as an endocrine disrupter.

The results of this large prospective epidemiological study conducted in the USA conclusively rules out any purported links between Tea Tree Oil and breast development in young boys, a medical condition called gynecomastia, also known as premature thelarche in young girls.

Previous studies by close associates Henley & Korach (2007), Diaz (2016) and Ramsey & Korach (2018) purported a causal link between Tea Tree Oil, Lavender Oil and endocrine disruption in children. Those studies were refuted by many others including Carson et al (2014) either due to limited data, potential contamination of experimentation methods or using products which did not contain either essential oil. However, without solid epidemiological evidence to refute these claims, the sensationalist headlines remained and were widely publicised.

In 2007 Henley et al called for further studies saying *“Until epidemiologic studies are performed to determine the prevalence of gynecomastia associated with exposure to lavender oil and tea tree oil, we suggest that the medical community should be aware of the possibility of endocrine disruption and should caution patients about repeated exposure to any products containing these oils.”*

That solid epidemiological evidence is now in hand and the results are clear. A paper, published by Hawkins *et al* in the International Journal of Pediatrics and Adolescent Medicine, titled *“Prevalence of Endocrine Disorders Among Children Exposed to Lavender Essential Oil and Tea Tree Essential Oils”* has unequivocally confirmed that no such association with these Essential Oils exists. The authors stated:

“This study provides evidence that lavender essential oil and tea tree essential oil are safe ingredients in formulations for personal care products used on children.”

The authors concluded:

“The proposed links between these ingredients and endocrine disruption cannot be substantiated in epidemiological studies.”

The cross-sectional, prospective study was designed to identify the lifetime prevalence of endocrine disruption, including but not limited to prepubertal gynecomastia and precocious puberty, among children who are exposed to Lavender and Tea Tree essential oils, compared with the prevalence in the general population. A study cohort of 556 children, aged 2 to 15 years old was enrolled, powering the study’s statistical analysis above a 95% confidence interval of 2%.

The study confirmed the following:

- Prevalence of endocrine disorders among children exposed to these ingredients (Tea Tree and Lavender) is consistent with the general population and proposed links between these ingredients and endocrine disruption cannot be substantiated in epidemiological study.
- Warnings raised by Henley, Ramsey, Diaz, and Korach (National Institute of Environmental Health Sciences) in publications since 2007 purporting the link between endocrine disruption and

essential oils (and their individual constituents) were premature, caused undue concern, and erroneously misled the medical community and countless concerned parents.

This exhaustive study by Hawkins *et al.* concluded that Tea Tree Essential Oil is a safe ingredient and presented no risk of endocrine disruption in formulations for personal care products used on children.

“This is great news as it once and for all clears up misinformation about Australian Tea Tree Oil, allowing parents to feel comfortable using products that contain this highly efficacious natural ingredient.” Tony Larkman – CEO, ATTIA Ltd

LINKS

1. Dr Jessie Hawkins, who led this research released a statement confirming the findings to debunk the long-held myth that Lavender and Tea Tree Oils cause endocrine disruption in children: <https://franklinhealth.org/research-team-confirms-essential-oils-unrelated-to-endocrine-disruption/>
2. Henley et al (2007) "Prepubertal gynecomastia linked to lavender and tea tree oils": <https://pubmed.ncbi.nlm.nih.gov/17267908/>
3. Carson et al (2014) "Lack of evidence that essential oils affect puberty": <https://pubmed.ncbi.nlm.nih.gov/24556344/>
4. Diaz et al (2016) "Prepubertal gynecomastia and chronic lavender exposure: report of three cases": <https://pubmed.ncbi.nlm.nih.gov/26353172/>
5. Ramsey et al (2018) "Essential Oils and Health": <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7309671/>
6. Hawkins et al (2020) "The relationship between lavender and tea tree essential oils and pediatric endocrine disorders: A systematic review of the literature": <https://www.sciencedirect.com/science/article/abs/pii/S0965229919316760>
7. Hawkins et al (2021) "Prevalence of endocrine disorders among children exposed to Lavender Essential Oil and Tea Tree Essential Oils": <https://www.sciencedirect.com/science/article/pii/S2352646721000855>

ABOUT PURE AUSTRALIAN TEA TREE OIL

Tea Tree Oil (TTO) is the steam distilled essential oil of *Melaleuca alternifolia* (Myrtaceae) that conforms to the ISO 4730: 2017 standard. *M. alternifolia* is a tree native to the East Coast of Australia. Australian Tea Tree Oil is one of the most extensively researched essential oils in the world. Over 1,000 peer reviewed, scientific and medical papers have been published on the natural antimicrobial efficacy and safety of Australian Tea Tree Oil.

ABOUT ATTIA

The Australian Tea Tree Industry Association (ATTIA) is a not-for-profit organisation formed as the peak body to represent the Australian tea tree industry from the grower/producer through to the manufacturer of off-the-shelf products. ATTIA aims to develop a stable, cohesive, environmentally friendly, and internationally competitive Tea Tree Oil industry producing Tea Tree Oil that meets or exceeds international standards. ATTIA manages a unique Code of Practice (COP) quality management system – the only essential oil in the world with this system in place.

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