

Pathologizing Aging: Risks and Concerns with Botox in Youth

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LAY SUMMARY

Botox was originally developed to treat medical conditions, but is also used now to prevent wrinkles, even for people in their late teens and early twenties. This paper argues that the growing popularity in preventative Botox amongst youth isn't just a cosmetic choice, it's part of a larger trend in society that treats visible aging as a medical issue. There are concerns regarding these trends that need to be tackled, especially regarding the lack of long-term research on Botox for younger people, how treatments are increasingly done outside of medical settings without proper supervision, and the ethical questions this popularity raises about autonomy.

ABSTRACT

The growth in preventative Botox for younger demographics as a treatment for wrinkles reflects a cultural shift where aging is no longer seen as a natural life process, but a medicalized condition that requires interventions. This paper argues that there are some serious concerns with this trend regarding safety, ethics, and autonomy which must be addressed. Using sociological perspectives along with medical considerations, this paper highlights how there is a need for better regulations of off-label procedures in informal settings, more long and short-term research into how Botox affects younger populations physically and psychologically, as well as a recognition that for the majority of individuals, outward signs of aging are not pathological.

Keywords: Botox, aging, medicalization, youth, risks, regulations

1. INTRODUCTION

Botulinum toxin, often referred to as Botox, is a neurotoxin that can relax targeted muscles by blocking acetylcholine release at the neuromuscular junction.¹ Originally developed in the 1970s as a treatment for strabismus—a condition causing misalignment of the eyes—it also gained popularity in the field of aesthetic medicine because of its ability to minimize dynamic wrinkles.² In a 2023 report by the International Society of Aesthetic Plastic Surgery, Botox comprised 46.3% of all non-surgical aesthetic procedures done globally.³ While it's most popular for adults aged 35–50, the usage as a “prejuvenation” or preventative treatment for younger adults aged 18–34 and even minors is gaining popularity.³ While in 2019, rhinoplasty was the most common procedure for minors, by 2023, Botox became the most common procedure for this age group.^{3,4}

This paper argues that the increase in popularity and normalization for youth reflects more than just an autonomous cosmetic trend but is part of a larger phenomenon: the growing medicalization of aging. Sociologist Irving Kenneth Zola has argued that medicalization can act as a strong form of social control.⁵ Experts are able to pathologize natural life processes such as aging by claiming neutrality and objectivity in their statements, and this perceived neutrality gives their authority more legitimacy in society.⁵ This allows them to redefine natural processes as medical issues that immediately require intervention. As a

result, visibly aging can be seen as a deviation from wellness and health, with youth oppositely seen as a marker of health. With the growing popularity of Botox throughout the years, access can be increasingly found not just at regulated medical settings but also informal settings like hotels and spas.⁶ There is a need to explore the lack of informed consent, safety concerns with the growing number of off-label procedures being offered in unqualified locations, as well as the clinical research gaps for younger age demographics.

2. AGING AS A PATHOLOGY

Zola describes medicalization as a process that allows for typical aspects of life or experiences to be labelled in medical terms.⁵ Using this definition, aging—which is an expected part of an individual's life—can become constructed as a pathology that requires intervention. Medicalization may not be inherently harmful, but it can become concerning when natural life experiences are pathologized in a way that fuels societal pressure. This perspective encourages preventative Botox as a treatment for the societally constructed problem that wrinkles are markers of a health decline that must be treated before they are visibly present. Aquino has described the concept of this phenomenon using the term “hybridization loop”.⁷ This loop describes how culturally constructed ideas of desirable features, for example smooth, youthful skin, become seen as an indication of health.⁷ At the same time, biological or medical statistical norms of physical features—for example nose shapes or facial symmetry—become treated as features

individuals need to upkeep to maintain ‘beauty’.⁷ Through this loop, cosmetic ideals become seen as clinical expectations, and in return these expectations further reinforce cultural beauty standards.⁷

This blurring of health and beauty is evident in the way dermatology clinics often market Botox using scientific or therapeutic-related terms. A study by Merianos et al. looks at the marketing materials in cosmetic clinics and finds a significant use of medical terms like “clinically proven,” “physician,” and “treatment” in brochures and websites of clinics.⁸ (p9) Procedures like Botox were described to be healthy, safe options to enhance the body, and the female body was often medicalized, portraying aging as a medical problem that can be fixed with treatment.⁸ This medical framing can cause Botox procedures to be seen as a necessity rather than an elective choice, even for youth.⁸ As clearly stated by The American Society of Dermatologic Society, there has been an increase by 50% from 2012-2016 of patients aged 30 years or younger using Botox.⁹ In addition, research shows that social media plays complex, intertwined roles in youths’ identity development and exploration.¹⁰ Since the concepts of image and identity are still developing among youth, as well as their ongoing growth in media literacy, advertisements using medical framing can have a stronger impact on their demographic.¹¹

3. RISKS AND AUTONOMY OF YOUTH

When it comes to the use of Botox for aesthetic purposes, only two indications have been formally approved by the FDA: 1) treatment of glabellar lines (wrinkles located between the eyebrows) and 2) treatment of lateral canthal lines (crow’s feet wrinkles).¹² Thus, other treatments are considered off-label, such as the treatment of eyebrow lifts, gummy smiles, and even the wide range of “prejuvenation” injections targeting youth.¹³ While off-label treatments can be safe, they are often supported primarily by smaller cohort studies and case series.¹³ There is still a big gap when it comes to larger, randomized, and long-term studies, especially for younger demographics.¹⁴ In one 2023 literature review by Michon, it was found that only 4 studies focused on a younger demographic, most of which being observational analyses. Existing studies are mostly focused on older adults, and as a result, questions about muscle atrophy, resistance to treatments, and dosing are still yet to be answered in depth for individuals considering preventative Botox treatments.^{14, 15} These gaps should not be ignored, especially considering that current patients are starting Botox treatments at significantly younger ages than previous generations.¹² In fact, a survey by Freeman et al. regarding individuals who have undergone Botox finds that for every 10 year gap in respondents’ ages, the age of first injection is an average of 8.8 years younger.¹² As the demographic of Botox patients shifts toward a younger audience, the focus of research must also evolve to study the specific long-term effects on this group.

Another concern with the growing popularity of Botox among youth is the growing extension of informal locations individuals get procedures done. While Botox is generally safe when performed at medical offices with licensed individuals, it is also possible to get procedures done outside of clinical environments.¹² The existence of Botox parties—occasions in which Botox injections are administered as part of a group setting, often in salons, spas, or even homes—serves as a prominent example.¹⁴ It’s important to place more importance regarding patient safety and oversight in these settings, especially when adverse reactions occur without medical oversight to mitigate them.¹⁶ In April 2024 alone, there were 22 cases of iatrogenic botulism linked to Botox in the United

States.¹⁶ Iatrogenic botulism is a form of botulism resulting from medical treatment, in this case Botox, and 20 of the 22 cases occurred outside of a formal healthcare setting.¹⁶ This is concerning especially given the growing popularity of such procedures in younger groups who may be influenced further by agents like media and peers.¹⁷

Furthermore, many frame Botox as an act of personal autonomy and even empowerment. While there can be genuine psychological benefits, such as an increase in self-esteem, body image, and social opportunities, it is important to ask what “autonomous” means in this context.¹⁸ After all, how autonomous can this decision be when the idea of youth is deeply intertwined with health?



4. CONCLUSION

Overall, it’s important to see preventative Botox as not just an autonomous cosmetic procedure individuals partake in, but as a key example of how the lines between aging and health are being blurred in today’s age. As youthful skin becomes viewed with the lens of wellness, and individuals feel compelled to self-manage youth in the name of health, Botox can be increasingly framed as more than an elective cosmetic procedure.⁸ This pathological framing can narrow the space that visible aging can be considered acceptable societally. When aging is intertwined with health and portrayed as something to delay and manage, framing preventative Botox as just a cosmetic trend ignores how deeply medicalization plays a role in society’s perception of aging.

Furthermore, while Botox can be safe when administered by qualified professionals in professional settings, the increasing use outside such settings raises some ethical questions and concerns.¹⁶ To address the concerns raised in this paper, three objectives must be pursued. First, conducting more robust research on the effects of repeated Botox use in youth. Second, strengthening regulatory oversight of its off-label applications, particularly in informal settings. Finally, it’s important that younger demographics interested in Botox are educated on risks of having procedures done in such settings, and the importance in finding reputable areas to get procedures done at.

In the end, what we should reflect on is not about whether youth can choose preventative Botox, but about whether the growing popularity reflects the increasing view of aging as a medicalized issue. If this is the case, then we should consider the potential implications, as well as recognize that as a whole, there should be a better cultural representation of aging in society. After all, automatically linking youth with

wellness oversimplifies a very complex experience, and being able to challenge this can help us move towards a more balanced, understanding view of aging in society.

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