



Driving
innovation
for patients

The XEOMIN Difference

Antibody-Induced Treatment Failure is a Trending Conversation

Articles included here are examples of recently published data and are not meant to represent a complete list of publications on this topic.

Journal of Neural Transmission:

**Clinical relevance of
botulinum toxin
immunogenicity**

Benecke R, 2012;26(2):e1-e9.

BioDrugs:

**Immunogenicity of
botulinum toxins**

Naumann M, et al. 2013;120(2):275-290.

Neurology:

**High prevalence of
neutralizing antibodies
after long-term
botulinum neurotoxin
therapy**

Albrecht P, et al. 2019;92(1):e48-e54.

U.S. Food & Drug Administration:

**Immunogenicity Testing
of Therapeutic Protein
Products —Developing
and Validating Assays for
Anti-Drug Antibody
Detection**

Guidance for Industry - January 2019

Neurology:

**Frequency and risk factors of
antibody-induced secondary
failure of botulinum
neurotoxin therapy**

Walter U, et al. 2020;94:e1-e12.

Movement Disorders | Clinical Practice:

**High Botulinum Toxin-
Neutralizing Antibody
Prevalence Under Long-Term
Cervical Dystonia Treatment**

Hefter H, et al. 2016;3(5):500-506.

Expert Review:

**Immunological aspects of
botulinum toxin therapy**

Dressler D, et al. 2017;17(5):487-494.

Clinical Therapeutics:

**Formation of neutralizing
antibodies in patients
receiving botulinum toxin
type A for treatment of
poststroke spasticity: a
pooled-data analysis of
three clinical trials**

Yablon SA, et al. 2007;29(4):683-690.

U.S. Food & Drug Administration:

**Immunogenicity Assessment
for Therapeutic Protein
Products**

Guidance for Industry - August 2014

BMJ Open:

**Prospective analysis of
neutralising antibody
titres in secondary
non-responders under
continuous treatment with
a botulinumtoxin type A
preparation free of
complexing proteins—a
single cohort 4-year
follow-up study.**

Hefter H, et al. 2012;2(4). pii: e000646.

Journal of Neurology:

**Botulinum toxin treatment
failures in cervical
dystonia: causes,
management, and
outcomes**

Jinnah HA, et al. 2016;263(6):1188-1194.

Neurology:

**Comparison of efficacy
and immunogenicity of
original versus current
botulinum toxin in
cervical dystonia**

Jankovic J, et al. 2003;60(7):1186-1188.



Menu

Prescribing Information

Medication Guide

Important Safety Information

References