

## 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.

**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.

**U.S. Food & Drug  
Administration:**

### Immunogenicity Assessment for Therapeutic Protein Products

Guidance for Industry - August 2014