

# Autogenous vaccine

## What are autogenous vaccines?

In general, vaccines are referred to as industrially made sera, which are applied to the major part of a population for the purpose of immunizing people against a certain disease-causing agent or its toxins. The main idea of this is the prevention of a particular infectious disease e.g. Hepatitis, influenza. Opposed to that, autogenous vaccines are individual, tailor-made immunostimulants. They have been known for over 100 years, but lost significance over the broad installation of antibiotics<sup>1</sup>. Autogenous vaccines are made from pathogens, which are causative for a chronic infection and which are frequently multiresistant against antibiotics.

These pathogens are obtained from the infected patient by swab (in case of furuncle) or other sample (urine, sputum, punctate), are carefully inactivated and finally administered to the patient again. By this procedure the patient's immunity is influenced in a way so that the infection gets healed or at least alleviated. In addition to this effect, further episodes of infection can be avoided in cases of recurrent abscesses, urinary tract infections and gingivitis after application of autogenous vaccines.

They can also be applied after infection and therapy with antibiotics to maintain the lasting effect of the therapy.

Autogenous vaccines are

- Patient individual
- Pathogen directed
- Stimulators of the immune system

The success of a therapy with autogenous vaccines thus depends on the capture of the "right" pathogen and the ability of the individual patient to build up humoral and cellular defense mechanisms. Like other immunologically based strategies (HPV-, HCV-, Tumor-Vaccines) autogenous vaccines are presently enjoying a renaissance, especially because of the worldwide increase of resistances (MRSA, VRE, ESBL etc.) and the lack of reinforcement of antibacterial substances<sup>2</sup>.

## What autogenous vaccines are not?

Autogenous Vaccines are no prophylactical vaccines. They are not made from stool-bacteria but from germs of the infection site. They do not in a classic sense consist of body material but of pathogens which by infectiological criteria are causative for an individual infection.

## What are the indications for autogenous vaccines?

As the scheme can be applied in many different chronic or recurrent infections, autogenous vaccines are an alternative treatment option:

1. in cases where pathogens are involved which are highly resistant to antibiotics.
2. when the patient has allergies against the needed antibiotics
3. to avoid repeated, unsuccessful antibiotic therapies in cases of recurrent infections

## Chronic infections:

- Urogenital tract  
(e.g. urinary tract infection, prostatitis, vaginosis)
- Skin and interfaces  
(e.g. furuncles/abscesses, acne, wound-healing impairment, osteomyelitis)
- Nasopharyngeal space  
(e.g. Sinusitis, tonsillitis, otitis media, periodontitis)
- Respiratory system  
(e.g. bronchitis, acute exacerbation of chronic bronchitis (AECB) in chronic obstructive pulmonary disease (COPD))
- Multiresistant bacteria  
(e.g. MRSA, VRE, ESBL, Pseudomonas)

## How are autogenous vaccines made?

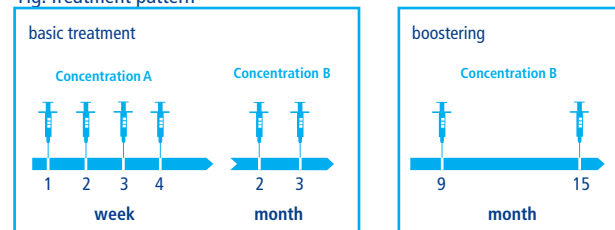
The attending physician obtains a specimen from the site of infection (e.g. swab, sputum, urine, punctate) which is examined in a medical-microbiological laboratory. Disease related pathogens are multiplied, bottled under clean room conditions in different quantified solutions ( $10^5 - 10^7$  CFU/ml sodium-chloride) and then inactivated. No preserving or any other toxic agents are added.

After control of sterility over a period of 14 days the autogenous vaccine is supplied for use. The process of production takes three weeks altogether.

## How are autogenous vaccines applied?

Eight injections with increasing concentration of inactivated bacteria are required. The basic treatment is started with four ampoules at concentration "A" and administered subcutaneously (in gramnegative bacteria) or intracutaneously (in grampositive bacteria) in weekly intervals, followed by two ampoules with concentration "B" in monthly intervals and a boosting by two ampoules with concentration "B" in half-year intervals. All in all, the procedure takes 15 months.

Fig. Treatment pattern



## Are autogenous vaccines dangerous?

Of the over 1,000 of our own patients who were treated with the UniVaccin product no side-effects were observed that would have led to breaking off the treatment. Occasionally skin irritation can occur at the site of injection. After the first injections there can be a temporary increase of clinical symptoms (eg in acne, furunculosis).

In correlation with the application of so called "autovaccines" of other manufacturers who produce differently (higher concentration of inactivated bacteria, addition of preservatives, inactivation with formaldehyde etc.), in two cases out of several 10,000s more severe side-effects have been reported<sup>3</sup>. As a general principal it is necessary in any case of stronger local or general reaction to ask the attending physician for further advice.

## What are the costs of a therapy with autogenous vaccines?

The production of an autogenous vaccines costs 250,- EUR plus tax. It is delivered to the pharmacy which is chosen by the patient. The pharmacy will charge a certain additional fee.

<sup>1</sup> Nolte, O., Mikrobiologie 11 (2001) 11-16

<sup>2</sup> Nolte, O., Chemother J (2009); 18:18-23

<sup>3</sup> Arznei-Telegramm 34 (2003) 23

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