

## LISOZIMA

Il lisozima trova ampie indicazioni antinfettive e immunostimolanti per le sue capacità di lisare molte varietà di virus, protozoi e batteri, oltre che per l'attivazione dell'immunità naturale, di cui è un componente. È estremamente maneggevole per l'assenza di tossicità e di rischio di sovradosaggio. Queste caratteristiche, unitamente all'ampio spettro d'azione e all'efficacia, ne consigliano l'applicazione in ogni infezione, soprattutto in situazioni di immunodepressione e virosi recidivanti che spesso precedono e favoriscono l'insorgenza di patologie neoplastiche. Il suo ruolo nell'incremento della resistenza alle flogosi batteriche e virali è scientificamente documentato così come l'associazione della sua carenza alla fragilità degli epitelii aerodigestivi superiori e alla frequenza ed intensità di recidive. Anche se non svolge un'azione antitumorale diretta, può agire indirettamente attivando macrofagi e cellule immunitarie e l'immunogenicità delle popolazioni neoplastiche. Attraverso la lisi di cellule batteriche e virali, può liberare molecole ad attività immunitaria e antitumorale. Potenzia decisamente l'effetto antibatterico degli antibiotici, che a seconda delle condizioni, in alcuni, casi può anche sostituire e sempre integrare e potenziare. Nelle patologie neoplastiche limita notevolmente il deficit immunitario indotto dai trattamenti chemioterapici. È sempre indicato nei tutte le infezioni virali con particolare efficacia in quelle Erpetiche, sia dell'Herpes Simplex che Zoster, (comunemente noto come Fuoco di S. Antonio). Agisce anche sui Papilloma virus (HPV) Epstein-Barr virus (EBV), Citomegalovirus (CMV), Adenovirus (ADV), Virus influenzali. Si è rivelato efficace anche nelle infezioni dovute a protozoi quali Trichomonas, Treponema e Spirochete. Nelle lesioni del cavo orale o delle vie aerodigestive superiori, è consigliabile fare sciogliere in bocca lentamente una compressa da 500 mg nell'arco della giornata, anche 10 al dì, un dosaggio maggiore non sarebbe tossico, ma inutile. Le sue proprietà antibatteriche sono dovute all'attività enzimatica e a lisi delle capsule dei germi, può infatti distruggere in pochi minuti alcuni ceppi batterici gram positivi. La presenza di questo enzima, che Fleming battezzò Lisozima, in alte concentrazioni nel liquido lacrimale, spiega perché l'occhio raramente è infettato dai germi. Il Lisozima è presente nel sangue, nei tessuti e nelle secrezioni, specialmente nel latte della donna (mentre manca nel latte di mucca) e si trova in concentrazione elevatissima nel cervello e nel surrene. I meccanismi d'azione antinfettivi del Lisozima sono molteplici: lisanti, flocculanti, agglutinanti e decapsulanti. Svolge un'effetto disintossicante su diverse tossine elaborate nell'organismo nel corso di malattie infettive tra cui sulla tossina difterica, oltre che sui pirogeni endogeni della febbre. Il ruolo del Lisozima nell'immunità naturale è confermato da indagini elettroforetiche che evidenziano la sua influenza diretta sulle globuline plasmatiche, con un incremento della frazione gamma globulinica, nonché della properdina e dall'aumento dei tassi serici di agglutinine, evidenti già dopo la somministrazione di dosi relativamente modeste di lisozima (25-50 mg pro die). Migliora la fagocitosi leucocitaria; (interessante poi la presenza di lisozima nel nucleo attivo della molecola della stessa properdina, che svolge un rilevante ruolo nei processi immunitari).

Il lisozima nell'organismo non si trova libero, ma in forma combinata, formando sali complessi con altri enzimi, con ormoni, con l'eparina, con vitamine, con glicoproteine e con lipoproteine. Ciascuno di questi complessi acquista proprietà peculiari di rilevanza fisiologica e terapeutica svolgendo attività :

- antivirale;
- diretta come proteina basica elettropositiva sui virus, elettronegativi;
- per interazione con gli acidi nucleinici (RNA);
- per interazione con le lipoproteine, elementi costitutivi essenziali di tutti i virus;
- enzimatica sopra substrati glicoproteici necessari per lo sviluppo dei virus;
- essendo una proteina fortemente basica denatura il virus a contenuto acido per il DNA;

- antiflogistica;
- antibatterica, antiprotozoaria;
- eutrofica ed anticachettica;
- cicatrizzante delle ferite;
- agglutinante;
- antifebbre;
- emostatica e coadiuvante antiemofilica;
- normalizzatrice della flora batterica intestinale.

Lo stesso **Fleming** constatò l'azione lisante dell'enzima sulla Brucella abortus e, successivamente, sopra il bacillo del carbonchio; **Wolff** sopra lo stafilococco, lo streptococco emolitico, il meningococco, il gonococco e il Microbacterium tubercolosis. **Gohar** riscontò il lisozima attivo sopra le forme vegetative di germi sporigeni; **Melnik e coll.** confermarono le osservazioni sopra il Perfringens oedematiens ed altri clostridi; **Cabezas e Vacaro** controllarono l'attività sopra stafilococchi, gonococchi, meningococchi, pneumococchi, streptococchi; **Albano** sopra lo Shigellas e il bacillo difterico. **Cavallo, Myrvick e coll.**, infine, confermarono una evidente azione battericida sul bacillo di Koch dopo un prolungato contatto con l'enzima, **Giacardi e Baricalla** sul Trichomonas vaginalis e **Costa e Casciano** sul Treponema pallidum ". La pediatria è una delle specialità mediche che può trarre maggior profitto dall'impiego del Lisozima dal punto di vista immunologico, nella terapia delle infezioni virali e batteriche, per regolarizzare la flora batterica intestinale e per la sua favorevole influenza sopra una migliore digestione del latte vaccino e in polvere. Il Lisozima, aggiunto al latte vaccino, provoca la formazione di un coagulo più fine e uniformemente disperso. L'enzima permette ai fermenti proteolitici di esercitare più facilmente la loro azione sopra coaguli più frazionati, facilitando una più completa e facile digestione del latte, che determina un incremento dell'assorbimento intestinale delle proteine, espresso come un aumento della percentuale di azoto totale ingerito. Questi fatti spiegano il benefico influsso del Lisozima sul decorso clinico dei disturbi della nutrizione, la più pronta risoluzione dei sintomi tossici e permettono di considerarlo come un fattore fisiologico anabolizzante di notevole interesse pediatrico.

Grazie all'aggiunta del lisozima ad un regime di alimentazione artificiale, si può ottenere:

- un predominio di forme bifide dei germi saprofitici come avviene normalmente nel bambino alimentato al seno;
- una migliore digestione del latte, con conseguente facilitazione dell'assorbimento degli aminoacidi oltre che degli idrati di carbonio dei grassi;
- un incremento ponderale;
- una minore incidenza di morbilità infettiva;
- una maggiore protezione dal punto di vista immunologico.

<https://www.dibellainsieme.org/2020/01/19/in-principio-dio-creo-il-cielo-la-terra-e-il-lisozima/>

Mio fratello Adolfo Di Bella in questo articolo sul Lisozima ha riportato le basi scientifiche per cui il Prof Luigi Di Bella e allievi hanno da oltre 50 anni usato con effetti costantemente positivi il Lisozima

**Dosaggio consigliato, per bocca almeno 4 cpr al dì, da sciogliere lentamente in bocca (con malattia in atto ogni 2 ore circa) . E' indicata anche l'applicazione come spray nasale (sarà disponibile a breve in alcune farmacie) e per os almeno 3 volte al dì , dopo lavaggi nasali.**

**Le banche dati medico-scientifiche riportano, ad oggi, oltre 32.800 pubblicazioni di studi/lavori scientifici sul Lisozima.**

Potete verificare e consultarle su PubMed, qui: <https://pubmed.ncbi.nlm.nih.gov/?term=Lysozyme>

Avendo il Lisozima il ruolo più rilevante nella prevenzione delle malattie virali, infettive riporto per esteso le pubblicazioni più significative:

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