

So now you see,  
The control of breathing,  
Is more complex,  
Than you first might think...  
The chemoreceptors,  
Detect changes in the blood,  
How's a little clearer than mud,  
But it occurs before you can blink.

In closing,  
I'd like to say,  
Without chemoreceptors,  
I don't know what I'd do...  
They take care,  
of most of my breathing,  
allowing me to keep reading,  
So I can learn 422...  
2... 2... 2... 2... 2... 2...

Yes,  
It's those...  
Chemo-receptors...  
The chemical sensors...  
Hey DUDE!!!

There,  
Responsible for...  
Controlling your breaths...  
Above all the rest...  
Hey DUDE!

*-Repeat last two verses as often and as  
loud as you feel necessary!*

**By Ben Sporer**

**Long lost lyrics of “Hey Dude” as written by Fernando de Castro y Rodriguez**  
**- A respiratory tribute sung to the tune of “Hey Jude” by the Beatles**

Hey Dude,  
It aint so bad,  
You were made to...  
Respond no matter,  
There's a reason,  
For changes in your wind,  
It comes from under your skin,  
From the chemoreceptor.

It's clear,  
The research shows,  
You'll find them central...  
And in the periphery,  
But exactly,  
The mechanism of action,  
Is not so matter of faction,  
As you soon will see.

Centrally,  
There's the medulla oblongata,  
With 3 chemo zones,  
From tail to nose...  
When assaulted,  
By  $H^+$  or  $CO_2$ ,  
It results in you,  
Increasing your blows.

- Chorus like -

But were not exactly sure,  
From where this assault occurs,  
 $H^+$  from the CSF,  
Blood  $CO_2$  or both...  
But it's absolutely clear,  
If hypercapnea is here,  
To get rid of  $CO_2$ ,  
Higher  $V_E$  goes...

Da, Da, Da, Da, Da, Da, Da

Hey Dude,  
Like I said,  
There's also receptors,  
In the periphery.....  
There located,  
Underneath your ear,  
With less importants less near,  
Carotid and aortic bodies.

Less important,  
Are  $H^+$  and  $CO_2$ ,  
That cause these peripheral,  
Sensors to fire...  
But a decrease,  
In  $PO_2$  in the blood,  
It's a hypoxic method,  
Of taking your  $V_E$  much higher.

These receptors,  
Have 2 types of cells,  
Type I, the glomus,  
Type II, the sustentacular,  
The glomular cells  
Are key in detection,  
A simple case of protection,  
With Type II's less spectacular.

- Chorus like -

There are a few hypotheses,  
Some less likely to believe,  
For transmission from the cell,  
Up to the brain...  
It's not metabolic and cholinergic,  
Acidic and dopaminergic,  
It's likely a protein,  
Sitting on the membrane...

Da, Da, Da, Da, Da, Da, Da