

## IN THEIR OWN WORDS: LISA LONGO, HOW I QUIT SMOKING WITH ABA

My name is Lisa Longo and I am an animal behavior consultant in France. My job is to help pet owners live in harmony with their dogs, cats and/or parrots. I started learning about applied behavior analysis (ABA) about 5 years ago and this passion has never left me since.

I started smoking at the age of 13. Since I was very young, I have always been surrounded by smokers. When I was a kid, I begged my father every day to quit smoking, already aware of the danger that this behavior represented. Nevertheless, growing up, I simply "followed the fashion" of the high school I was in. These last 17 years, I absolutely loved smoking. I loved everything about the cigarette, the taste, the smell, the effect it had on me and all the various consequences it gave me.

Beyond the "chemical" reaction that filled my lack of nicotine (sometimes), smoking a cigarette allowed me to take a break in the office, go out of the restaurant, chat privately with my girlfriend, leave a conversation that I disliked, ...). At no time during those 17 years did I have the urge to quit smoking. Yet, without knowing exactly when, how, or even why, one day I felt tired of smoking. I realized that I was addicted to a more than toxic product that would definitely affect my health one day or another, that smoking cost me more and more, and that I fed a lobby system that I hated.

During an absolutely banal conversation with my stepfather (who has no knowledge of behavior analysis), he asked me, "You can change the behavior of animals, but why do not you change yours for tobacco?" At first, I just smiled, ready to reply it wasn't possible, but quickly realized that I had no argument of contradictory answer to provide him. So, I simply told him it was a good idea.

When I got home, I concentrated for a moment, thought long and hard and wondered how I was going to proceed. After all, I did this every day for my clients and their pets, I had only to repeat the same process for my own smoking behavior. What was immediately very important to me was to put aside the idea that smoking was "a bad habit", "just a gesture to eliminate" or "an addiction" but to see that only as an overt behavior, observable and measurable. After thinking, it became obvious that the very first thing to do was to record some baseline data. Without having a precise idea of the frequency of my behavior, I would have been unable to evaluate the improvements. Therefore, I set myself the goal of simply tracking the time of each cigarette that I smoked during the day for a week.

Convinced that the result would be an average between 14 and 18, I was slightly shocked to discover that the average per day was actually 22 cigarettes. But I was on my way, I had started to analyze my behavior. On the other hand, I wanted to keep this experience private in order to reduce my reactivity and not to see my behavior influenced by fears of failure, frustrations and possible justifications that worried me.

My story begins on July 31, 2018:

To better understand my smoking behavior, I needed more information. I decided to add a parameter to my data. Of course I had to note the time of each of my smoked cigarettes every day, but I also wanted to know if each one of them was really "important" to me. The emotion associated with each of the smoked cigarettes was also to be considered, as it involved a covert but measurable behavior (I know my own emotions). Thus, I added a parameter to my table: a color code. Green for the cigarettes I really wanted (needed?), orange for the cigarettes that could have been avoidable but that I enjoyed (and whose antecedent was environmental - someone else lights a cigarette, for example), and red for absolutely useless cigarettes in my day (smoked exclusively due to an environmental antecedent – smoking one or two cigarettes now because I know I won't be able for an extended period, for example).

31-july.	9h15	9h45	10h30	11h15	11h40	12h06	12h32	13h08	13h57	14h20	15h40	16h12	16h46	17h45	18h30	18h57	19h55	20h45	21h52	22h22	23h19	00h30	Total	22
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On the first day of collecting data: more than half of my cigarettes consumed are in orange in my table. Two more in red. That's 16 cigarettes whose consumption were not obviously of "capital importance." I was subjugated!

This first week of evaluation was simply to help me get more accurate data on my behavior but the fact is that just by observing what I was doing, an interesting phenomenon was happening. At the end of the first week of analysis, I had "unintentionally" reduced my consumption by more than 27%!

7-aug	8h46	9h42	10h31	11h18	12h23	13h27	16h42	17h28	18h44	19h58	20h27	21h02	22h02	23h38	00h46	Total	16
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Research on the "reactive effects of self-monitoring" has shown that self-monitoring tends to decrease the frequency of the smoking behavior in the same way as usual anti-smoking treatments do (McFall, RM (1970), Mcfall, RM, & Hammen, CL (1971)).

"Effects of Self Monitoring on Normal Smoking Behavior" McFall, Richard M., J Clin Clin Clin, 35, 2, 135-42, 1970, states the following:

"This study of the effects of self-monitoring on normal smoking behavior indicates that the frequency and duration of smoking are significantly affected by this self-monitoring, indicating that self-monitoring is a reactive data collection procedure. (K J)."

Additionally, the Hawthorne effect describes the situation in which the results of an experiment are due to the fact that the subjects are aware of participating in an experiment in which they are tested, which generally results in greater motivation (Elton Mayo, Fritz Roethlisberger, William Dickson). This particular decrease, which is affected by self-monitoring, is still under study.

In one week I had therefore eliminated "red" cigarettes (useless cigarettes) and a large part of orange cigarettes (avoidable cigarettes).

After this first week of analysis, I felt ready to continue the experiment but without a precise long-term objective. The reason for this was that I did not want to put unnecessary pressure on myself with a time goal. Finally, when we talk about behavior change in pets, the importance is not only in the result but also and primarily in the process. I wanted to have the same compassion for myself as I have for my pets or those of my clients.

Quitting smoking overnight is feasible, it is doable, but the effects of this sudden stop seemed too aversive and coercive to me. For pets, I commit to always using the most positive, least intrusive process for them and the effectiveness of these approach is clearly demonstrated, so I wanted to apply the same standards to myself.

Analyzing my consumption for the week of July 31 to August 7, I realized that almost every day I smoked a cigarette an hour. My goal was to maintain this result: limit myself to one cigarette per hour. Again, without any timeline, without pressure.

After two weeks of analysis and data collection, I had decreased my daily consumption of 8 cigarettes on average.

14-aug	7h51	9h14	10h29	11h21	12h22	13h31	14h22	16h05	17h10	18h20	19h19	20h22	21h29	22h59	Total	14
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The next two weeks allowed me to realize that certain environmental contexts and events definitely influenced my behavior immensely. The days that included "restaurants," "outings with friends," or other "home visits" included more orange and red cigarettes than days spent mostly at home. For more success, it was therefore necessary to work on the distant antecedents. I decided to privilege the days "work and back home" and reduced entering environments that are too "tempting" (outside the house). Subsequently, I would generalize my behavior to all environments, and all situations. By paying attention to the distant antecedents and continuing to take data daily, two weeks later, I had consolidated and improved my reduced smoking behavior to one cigarette every hour and a half on average.

28-aug. 9h35 11h04 12h25 13h54 14h54 16h12 17h20 18h36 19h50 21h15 22h06 23h42 Total 12

From August 28 to September 11, I tried to set a clear goal but still with no deadline: to smoke a cigarette every two hours, on average. So, I needed a strategy to be able to positively reinforce my expectations in order to see my waiting behavior not only maintain but increase. The reinforcer I wanted was easy to find: smoke a cigarette! Smoking a cigarette will reinforce my waiting behavior to smoke a cigarette. This strategy was an application of the Premack Principle! High probability behavior can reinforce a low probability behavior. This is the same principle used to help children eat vegetables: If you eat your vegetables, then you have a dessert.

Fifteen days after starting to work on my goal with the Premack Principle, I managed to reduce my consumption of 4 more cigarettes. For the first time in almost 18 years, I smoked less than 10 cigarettes a day!

11-sept. 9h54 11h51 13h43 15h41 17h55 19h46 21h20 22h59 Total 8

In addition to the self-monitoring I used for collecting my data, I had a great feeling of self-satisfaction. Of course, this was because I saw my consumption of tobacco decreasing, but also (and perhaps especially) because I did it in joy and a good mood, without frustration.

My close family (some of whom are smokers) began to realize that I smoked less than before, so I confessed to them that I was actually in the process of reducing my behavior and asked them to worry about it as little as possible for the moment.

From September 11th, my goal was to increase gradually (but still without a deadline) the wait between my morning awakening and the first cigarette of the day, gradually eliminating the first one (which took place between 8 and 10am), as well as the second (which was smoked between 11:30 am and 12:30 pm), while maintaining a wait of about 2 hours between each cigarette. By October 4, I was smoking only 6 cigarettes a day.

4-oct. 11h00 14h19 16h29 18h37 20h48 21h53 Total 6

After only 3 days of smoking 6 cigarettes a day, data collection allowed me to realize that the cigarette usually smoked around 14:30 came out in orange (avoidable cigarettes), so I deleted it from my routine. At only 5 cigarettes per day, I started putting each line under 5 cigarettes of my graph in bold. It added an additional reinforcer! Very quickly, the 5 cigarettes turned into 4 and barely 8 days after consolidating the intake of 4 cigarettes a day, I had reduced my behavior to 3 cigarettes a day.

19-oct. 13h44 17h49 21h09 Total 3

As with the beginning of my process, I have not set any specific goal of when to go down to 2, 1 or 0 cigarettes. The 3 cigarettes I continued to smoke each day were definitely in green (important cigarettes) in my table. In green, GREEN, GREEN! They were absolutely necessary to my "well-being." It took over than a month for my data to start showing a nice orange (avoidable cigarettes)!

24-nov. 16h32 20h27 23h53 **Total 3**

A week later, on December 1st, my consumption was down to 2 cigarettes a day. This new frequency lasted only one day!

1-déc. 16h32 21h13 **Total 2**

From December 2, I only smoked one cigarette in the evening, around 10:30 pm. This unique cigarette was my only reinforcer of the day, the only reinforcer of my very long waiting behavior. At this point, I was still living in a "protected environment", with arranged antecedents to promote my good waiting behavior. About 2 weeks after consolidating the one and only daily cigarette, I tried to generalize my behavior by going out with a friend. Obviously, adding difficulty was not gradual enough as I experienced a resurgence in my smoking behavior.

15-déc. 19h23 21h35 22h55 00h11 2h07 2h42 3h53 **Total 7**

In the last 17 years, whenever I was asked, "Would you come to smoke a cigarette with me?" I always answered "yes" to my friends, whether I really wanted to smoke or not. The cigarette had a social function. So, when my friend asked me that same question that evening, she had just given the cue to make my "unwanted" behavior reappear: smoking. Instead of being disappointed or sad about this "failure" and this red line in my table, I took the opportunity to learn. I understood that if I did not add distractions and if I did not work on old cues, the risk was to be left with only two options : to stay locked at home in my environment, protected from all my smoking cues for the rest of my life, or to risk a failure in each new environment or each new situation.

From December 15 to 24, I started gradually adding old smoking antecedents (old cues) to my waiting behavior: drinking a glass of wine, going to the restaurant, going shopping, etc. I was able to consolidate 1 cigarette a day despite the growing difficulties (cues for smoking).

23-déc. 23h11 **Total 1**

Christmas Eve was a difficult event to manage. Most of my smoking cues were gathered right there, surrounded by all my family, including some smokers, consumed alcohol, had good meal, laughs, music, ...  
It was too much.

24-déc. 19h20 20h11 21h18 22h11 23h15 **Total 5**

On December 25th, I learned a lesson. I needed to add a strategy for environments that were too attractive for my smoking behavior. I had to find a way to "block" my unwanted smoking behavior and promote an alternative behavior that would be reinforced by a stimulus with a similar function. I chose chewing strawberry gum. I chose sugarless gum in order to preserve my dental health but nevertheless very fruity so that the reinforcer is strong enough to maintain my behavior. The behavior "chewing gum" would necessarily be incompatible with smoking a cigarette. The two behaviors "chew" or "smoke" will be cued by the same antecedent: simply the desire to smoke or a social antecedent (someone asks me to accompany him for a cigarette, for example). The behavior of chewing gum will now be performed at each presentation of the

smoking cues. This differential reinforcement component allowed me to spend the Christmas holidays without any failure, maintaining my consumption at 1 cigarette per day.

On December 30, I made the decision to reduce my consumption on January 1st, 2019. It was the first time since I started this journey on July 31th, 2018 that I set myself a clear goal with a specific date.

On January 1, 2019, I stopped filling in my chart.

On January 1, 2019, I quit smoking.

**1-jan. Total 0**

